



José Manuel Cano Rodríguez

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Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

José M. Cano (1971) es Ingeniero Industrial (2000) y doctor en Ingeniería Industrial por la Universidad de Oviedo (UO), premio extraordinario de doctorado en 2001. Desde 2019 es Catedrático de Universidad en el Departamento de Ingeniería Eléctrica, Electrónica, de Comunicaciones y Sistemas (DIEECS) de la UO. Su actividad investigadora se centra en el campo de los sistemas de potencia, con especial énfasis en las redes inteligentes y la interconexión de recursos distribuidos a través de convertidores electrónicos. Cuenta con 4 evaluaciones positivas por parte de la CNEAI de su actividad investigadora y una de su actividad de transferencia de tecnología. Es autor de 37 publicaciones indexadas en el JCR en las revistas más prestigiosas de su campo (26 en Q1) y de más de 90 contribuciones a los congresos más relevantes de la especialidad. De acuerdo a Google Scholar, sus trabajos han sido citados en más de 2000 ocasiones, y su índice h es de 24. Ha participado en numerosos proyectos de investigación financiados en convocatorias competitivas, incluyendo proyectos europeos, y destaca su participación en el Plan Nacional de Investigación, en el que ha sido IP de 8 proyectos. Ha participado en más de 80 contratos de transferencia de tecnología, siendo IP de 21 de estos trabajos. Es inventor de 3 patentes, un modelo de utilidad y un producto software registrado y licenciado. Ha sido contratado por la Comisión Europea como evaluador de proyectos en distintas convocatorias (programas HORIZON - 2021 y CETPartnership - 2022 y 2023). También ha evaluado, de forma recurrente, proyectos para la Agencia Estatal de Investigación (AEI), y ha desempeñado el papel de experto (evaluador presencial) en distintas comisiones científico-técnicas (Retos - 2021 y TED - 2022). Desde el 1 de Enero de 2024 es Gestor de la AEI en el área de Energía y Transporte. Ha sido coordinador del Master's Degree in Electrical Energy Conversion and Power Systems en el periodo 2019-2023. Desde el año 2014 es secretario académico del programa de doctorado en Ingeniería Eléctrica y Electrónica (programa conjunto entre la Universidad Politécnica de Madrid y la Universidad de Oviedo). En el periodo 2008-2012, desempeñó el cargo unipersonal de Director de Área de Mantenimiento y Sostenibilidad como adjunto al Vicerrector de Infraestructuras de la UO. Ha sido profesor visitante en la Universidad de British Columbia (Canadá) en los años 2012 y 2014 (9 meses). Así, mantiene una estrecha relación investigadora con el Electric Power and Energy Systems Group de esta universidad, con el que ha colaborado en numerosas publicaciones (algunas con un destacado impacto, e.g. DOI: 10.1109/TPWRD.2013.2251912 con 293 citas ó DOI: 10.1109/TPWRD.2014.2308431 con 133 citas en IEEE Xplore). Desde 2012. también colabora de forma regular con profesores de la Universidad de Nottingham (UK), tanto en tareas investigadoras que dan lugar a publicaciones conjuntas como en tareas docentes. Es un miembro activo de diferentes grupos de trabajo del IEEE, tales como la IEEE Task Force on Dynamic Average Modeling o la IEEE Task Force on Power System Dynamic State and Parameter Estimation. Desde 2017 es editor asociado de la revista IET Power Electronics.



General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

Sexenios de investigación: 4

Sexenios de transferencia: 1

Tesis dirigidas: 4

Publicaciones en Q1: 26

Publicaciones en Q2: 10

Publicaciones en Q3: 1

Índice h: 24 (Google Scholar), 20 (Scopus), 17 (Web of Science)

Citas totales: 2317 (Google Scholar), 1575 (Scopus), 1089 (Web of Science)



José Manuel Cano Rodríguez

Surname(s): **Cano Rodríguez**
Name: **José Manuel**
ORCID: **0000-0002-5576-613X**
ScopusID: **56669307700**
ResearcherID: **J-6585-2014**
Date of birth: **17/01/1971**
Gender: **Male**
Nationality: **Spain**
Aut. region/reg. of birth: **Asturias, Principado de**
City of birth: **Oviedo**
Contact aut. region/reg.: **Asturias, Principado de**
Email: **jmcano@uniovi.es**

Current professional situation

Employing entity: Universidad de Oviedo

Department: Ingeniería Eléctrica, Electrónica, de Comunicaciones y Sistemas, Escuela Politécnica Superior de Ingeniería de Gijón

Professional category: Catedrático de Universidad

Start date: 25/09/2019

Type of contract: Civil servant

Dedication regime: Full time

Primary (UNESCO code): 330609 - Transmission and distribution

Secondary (UNESCO code): 330600 - Electrical technology and engineering

Identify key words: Electronic converters for network qualities; Scada and communications; Integration of renewable energy sources; Optimal operation of electric systems; Compensation of reactive distribution networks; Active and pasive filters; Distributed generation

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidad de Oviedo	Profesor Titular de Universidad	31/07/2003
2	Universidad de Oviedo	Miembro Electo del Claustro de la Universidad de Oviedo en Representación del Colectivo/Sector A	05/06/2008
3	Universidad de Oviedo	Director de Área de Instalaciones y Servicios Externos	13/04/2012
4	Universidad de Oviedo	Director de Área de Mantenimiento y Sostenibilidad	19/05/2008
5	Universidad de Oviedo	Secretario del Departamento de Ingeniería Eléctrica, Electrónica de Computadores y Sistemas	19/11/2004
6	Universidad de Oviedo	Profesor Titular de Universidad Interino	31/10/2000
7	Universidad de Oviedo	Profesor Asociado Tipo 2	01/12/1996



	Employing entity	Professional category	Start date
8	Universidad de Oviedo	Profesor Asociado Tipo 1	01/11/1996
9	Unión Fenosa - Central Térmica del Narcea	Ingeniero en prácticas	01/07/1996
10	Robert BOSCH GmbH	Ingeniero en prácticas	01/11/1995

- 1** **Employing entity:** Universidad de Oviedo **Type of entity:** University
Department: Ingeniería Eléctrica, Electrónica de Computadores y Sistemas
Professional category: Profesor Titular de Universidad
Start-End date: 31/07/2003 - 24/09/2019 **Duration:** 16 years - 1 month - 25 days
Type of contract: Civil servant
Dedication regime: Full time
Performed tasks: Actividad Docente e Investigadora
- 2** **Employing entity:** Universidad de Oviedo
Professional category: Miembro Electo del Claustro de la Universidad de Oviedo en Representación del Colectivo/Sector A
Start-End date: 05/06/2008 - 12/11/2012 **Duration:** 4 years - 5 months - 15 days
Area of leadership and/or management activity: University
- 3** **Employing entity:** Universidad de Oviedo
Department: Vicerrectorado de Campus, Centros y Departamentos
City employing entity: Spain
Professional category: Director de Área de Instalaciones y Servicios Externos
Start-End date: 13/04/2012 - 21/05/2012 **Duration:** 29 days
Performed tasks: Adjunto al Vicerrector de Campus, Centros y Departamentos.
Area of leadership and/or management activity: University
- 4** **Employing entity:** Universidad de Oviedo
Department: Vicerrectorado de Infraestructuras, Campus y Sostenibilidad
City employing entity: Spain
Professional category: Director de Área de Mantenimiento y Sostenibilidad
Start-End date: 19/05/2008 - 12/04/2012 **Duration:** 3 years - 10 months - 32 days
Performed tasks: Adjunto al Vicerrector de Infraestructuras, Campus y Sostenibilidad.
Area of leadership and/or management activity: University
- 5** **Employing entity:** Universidad de Oviedo
Department: Ingeniería Eléctrica, Electrónica de Computadores y Sistemas
Professional category: Secretario del Departamento de Ingeniería Eléctrica, Electrónica de Computadores y Sistemas
Start-End date: 19/11/2004 - 16/05/2008 **Duration:** 3 years - 5 months - 28 days
Area of leadership and/or management activity: University
- 6** **Employing entity:** Universidad de Oviedo **Type of entity:** University
Department: Ingeniería Eléctrica, Electrónica de Computadores y Sistemas
Professional category: Profesor Titular de Universidad Interino
Start-End date: 31/10/2000 - 30/07/2003



Duration: 2 years - 8 months - 31 days

Dedication regime: Full time

Performed tasks: Actividad Docente e Investigadora

- 7** **Employing entity:** Universidad de Oviedo **Type of entity:** University
Department: Ingeniería Eléctrica, Electrónica de Computadores y Sistemas
Professional category: Profesor Asociado Tipo 2
Start-End date: 01/12/1996 - 30/10/2000 **Duration:** 3 years - 11 months
Dedication regime: Full time
Performed tasks: Actividad Docente e Investigadora
- 8** **Employing entity:** Universidad de Oviedo **Type of entity:** University
Department: Ingeniería Eléctrica, Electrónica de Computadores y Sistemas
Professional category: Profesor Asociado Tipo 1
Start-End date: 01/11/1996 - 30/11/1996 **Duration:** 1 month
Dedication regime: Full time
Performed tasks: Actividad Docente e Investigadora
- 9** **Employing entity:** Unión Fenosa - Central **Type of entity:** Business
Térmica del Narcea
City employing entity: Soto de la Barca, Tineo, Asturias, Principado de, Spain
Professional category: Ingeniero en prácticas
Start-End date: 01/07/1996 - 31/08/1996 **Duration:** 2 months
Type of contract: Trabajo en Prácticas
Dedication regime: Full time
Performed tasks: Labores en el Departamento Mecánico de Mantenimiento
- 10** **Employing entity:** Robert BOSCH GmbH
City employing entity: Bühl, Baden-Wurtemberg, Karlsruhe, Germany
Professional category: Ingeniero en prácticas
Start-End date: 01/11/1995 - 31/03/1996 **Duration:** 5 months
Type of contract: Contrato en prácticas
Performed tasks: Ciclo formativo en fábrica de motores de la empresa en Alemania.



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

University degree: Higher degree

Name of qualification: Ingeniero Industrial Línea Curricul. Ingeniería Eléctrica

Degree awarding entity: Universidad de Oviedo **Type of entity:** University

Date of qualification: 27/09/1996

Doctorates

Doctorate programme: Programa Oficial de Doctorado en Control de Procesos, Electrónica Industrial e Ingeniería Eléctrica

Degree awarding entity: Universidad de Oviedo **Type of entity:** University

Date of degree: 11/10/2000

Thesis title: Funciones de Transferencia para el Análisis en Distintas Condiciones de Funcionamiento de la Distorsión Armónica Asociada a Rectificadores Trifásicos

Thesis director: A. Orcajo, Gonzalo

Obtained qualification: Sobresaliente cum Laude por unanimidad de los miembros del tribunal

Special doctorate award: Yes **Date of award:** 2001

Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

- 1 Type of training:** Webinar
Training title: Power System Dynamic State Estimation using Synchrophasor Measurements
City awarding entity: United States of America
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Abedalsalam Bani-Ahmed
End date: 10/05/2019 **Duration in hours:** 1 hour
- 2 Type of training:** Course
Training title: Matlab Fundamentals
City awarding entity: Natick, Massachusetts, United States of America
Awarding entity: The MathWorks
Training manager: Cleve Moler
End date: 15/12/2018 **Duration in hours:** 20 hours
- 3 Type of training:** Course
Training title: LFS101x: Introduction to Linux
City awarding entity: United States of America
Awarding entity: The Linux Foundation
Training manager: Jerry Cooperstein



End date: 02/09/2017

Duration in hours: 50 hours

- 4** **Type of training:** Webinar
Training title: On-Board Energy Storage and Another Technological Solutions for Catenary Free Light Trains and Trams
City awarding entity: United States of America
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Pablo Arboleya Arboleya
End date: 02/06/2017 **Duration in hours:** 1 hour
- 5** **Type of training:** Webinar
Training title: Phase Shifter Technology and Applications
City awarding entity: United States of America
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Daniel Durbak
End date: 18/05/2017 **Duration in hours:** 1 hour
- 6** **Type of training:** Course
Training title: How to Get Published in an International Journal
City awarding entity: Spain
Awarding entity: Elsevier
Training manager: Fernanda Ogochi
End date: 26/04/2017 **Duration in hours:** 2 hours
- 7** **Type of training:** Webinar
Training title: Architecture and Algorithms for Distributed Generation Control of Inertial-Less AC Microgrids
City awarding entity: United States of America
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Alejandro Dan Domínguez García
End date: 23/02/2017 **Duration in hours:** 1 hour
- 8** **Type of training:** Course
Training title: Machine Learning
City awarding entity: United States of America
Awarding entity: Stanford University - Coursera **Type of entity:** University
Training manager: Andrew Ng
End date: 03/10/2016 **Duration in hours:** 40 hours
- 9** **Type of training:** Tutorial
Training title: Linearized Modeling and Stability Analysis of AC Power Electronic Based Power Systems
City awarding entity: United States of America
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Frede Blaabjerg
End date: 18/09/2016 **Duration in hours:** 4 hours
- 10** **Type of training:** Tutorial
Training title: Predictive Control - A simple and Powerful Method of Control Power Converters and Drives
City awarding entity: United States of America
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Ralph Kennel
End date: 18/09/2016 **Duration in hours:** 4 hours



- 11** **Type of training:** Webinario
Training title: IEEE Standards Enable a Reliable, Secure, Interoperable Smart Grid
City awarding entity: United States of America
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Steven Collier
End date: 23/11/2015 **Duration in hours:** 1 hour
- 12** **Type of training:** Tutorial
Training title: Distribution Volt/VAR Control and Optimization
City awarding entity: Denver, CO, United States of America
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Larry Clark
End date: 29/07/2015 **Duration in hours:** 8 hours
- 13** **Type of training:** Tutorial
Training title: Smart Distribution Systems
City awarding entity: Denver, CO, United States of America
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Larry Clark
End date: 26/07/2015 **Duration in hours:** 8 hours
- 14** **Type of training:** Tutorial
Training title: Implementation of Synchrophasor Systems
City awarding entity: National Harbor, MD, United States of America
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Vahid Madani
End date: 30/07/2014 **Duration in hours:** 8 hours
- 15** **Type of training:** Tutorial
Training title: Smart Grid 308: Distributed Energy Resources
City awarding entity: Vancouver, BC, Canada
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Doug Houseman
End date: 25/07/2013 **Duration in hours:** 4 hours
- 16** **Type of training:** Tutorial
Training title: Renewable Energy Plant Design and System Interconnection
City awarding entity: Vancouver, Canada
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Younan Lawando
End date: 24/07/2013 **Duration in hours:** 8 hours
- 17** **Type of training:** Tutorial
Training title: Microgrids - Designing their Role in Smart Grid
City awarding entity: Vancouver, BC, Canada
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Steve Pullins
End date: 22/07/2013 **Duration in hours:** 4 hours



- 18** **Type of training:** Tutorial
Training title: Power Quality- From Lighting and Harmonics to Variable Energy Resources
City awarding entity: Vancouver, BC, Canada
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
Training manager: Mark McGranahan
End date: 21/07/2013 **Duration in hours:** 8 hours
- 19** **Training title:** Distributed Generation
Awarding entity: The Institute of Electrical and Electronics Engineers, Inc. (IEEE)
End date: 06/12/2012 **Duration in hours:** 3 hours
- 20** **Type of training:** Course
Training title: Opal-RT Europe Training
City awarding entity: Île de France, France
Awarding entity: Opal-RT Technologies
Training manager: Yoan Mougenot
End date: 16/12/2009 **Duration in hours:** 12 hours
- 21** **Type of training:** Course
Training title: Armónicos, Huecos y Desequilibrios: Las Perturbaciones que Amenazan mi Instalación
City awarding entity: Madrid, Comunidad de, Spain
Awarding entity: Centro Español de Información del Cobre
Training manager: Power Quality Initiative Leonardo
End date: 24/11/2005 **Duration in hours:** 4 hours
- 22** **Training title:** Medida de Capacidad, Tangente Delta y Descargas Parciales
Awarding entity: DRILCO S.A.
End date: 09/06/2000 **Duration in hours:** 30 hours
- 23** **Training title:** Tópicos Selectos en Electrónica de Potencia
Awarding entity: Universidad de Oviedo
End date: 30/11/1993 **Duration in hours:** 30 hours
- 24** **Type of training:** Course
Training title: Curso Electrotécnico
City awarding entity: Barcelona, Cataluña, Spain
Awarding entity: Merlin Gerin - Groupe Schneider
Training manager: Manuel Cortes Cherta
End date: 03/11/1993 **Duration in hours:** 8 hours
- 25** **Type of training:** Course
Training title: Introducción al Dibujo Asistido por Computador
City awarding entity: Oviedo, Asturias, Principado de, Spain
Awarding entity: Universidad de Oviedo
Training manager: Pedro Ignacio Álvarez Peñín
End date: 17/07/1992 **Duration in hours:** 35 hours



Attended advanced, improvement and innovative teacher training and new technology courses and seminars focused on improving teaching

- 1** **Title of course/seminar:** Herramientas Avanzadas para la Defensa contra Ciberataques
Goals of the course/seminar: Programa de Formación en Competencias Digitales 2022/2023
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Investigación e Innovación Educativa (INIE)
Duration in hours: 10 hours
Start-End date: 11/05/2023 - 12/05/2023
- 2** **Title of course/seminar:** Como Grabar y Editar Videos, Subtitularlos y Compartirlos Utilizando Youtube
Goals of the course/seminar: Plan de Formación para la Adaptación de la Enseñanza en Entornos Mixtos
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Curso NOOC
Duration in hours: 5 hours
Start-End date: 16/11/2020 - 22/11/2020
- 3** **Title of course/seminar:** Intensificación en Pronunciación y Fonética Correctiva del Inglés
Goals of the course/seminar: Mejora del inglés para la docencia universitaria
Organising entity: Universidad de Oviedo
Faculty, institute or centre: La Casa de las Lenguas
Duration in hours: 20 hours
Start-End date: 28/09/2015 - 04/11/2015
- 4** **Title of course/seminar:** Creación y Gestión de Acuerdos Erasmus+ y Convenio: Un Enfoque Práctico
Goals of the course/seminar: Creación de acuerdos internacionales
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Ciencias de la Educación
Duration in hours: 10 hours
Start-End date: 29/04/2015 - 06/05/2015
- 5** **Title of course/seminar:** Cómo Utilizar el Campus Virtual de la Universidad de Oviedo. Nivel Avanzado.
Goals of the course/seminar: Capacitación para impartir docencia online
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Ciencias de la Educación
Duration in hours: 18 hours
Start-End date: 27/01/2015 - 20/02/2015
- 6** **Title of course/seminar:** Orientaciones para la Evaluación de Solicitudes Científico-técnicas en la ANEP
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Ciencias de la Educación
Duration in hours: 10 hours
Start-End date: 27/05/2013 - 27/05/2013
- 7** **Title of course/seminar:** Fuentes de Financiación Europea para Proyectos de Investigación. De la Idea Inicial a la Gestión Posterior.
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Ciencias de la Educación
Duration in hours: 10 hours



Start-End date: 14/03/2013 - 15/03/2013

- 8 Title of course/seminar:** SEBSO. Una Experiencia Alternativa para Evaluar Competencias
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Ciencias de la Educación
Duration in hours: 10 hours
Start-End date: 17/02/2012 - 17/02/2012
- 9 Title of course/seminar:** Estilos de Aprendizaje y Estrategias de Enseñanza
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Ciencias de la Educación
Duration in hours: 12 hours
Start-End date: 20/11/2003 - 21/11/2003
- 10 Title of course/seminar:** Tutoría Universitaria
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Ciencias de la Educación
Duration in hours: 10 hours
Start-End date: 18/04/2002 - 19/04/2002
- 11 Title of course/seminar:** La Elaboración de Pruebas Objetivas
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Ciencias de la Educación
Duration in hours: 10 hours
Start-End date: 13/12/2001 - 14/12/2001
- 12 Title of course/seminar:** Evaluación y Mejora de la Enseñanza Universitaria: la Carpeta Docente
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Ciencias de la Educación
Duration in hours: 10 hours
Start-End date: 22/11/2001 - 23/11/2001
- 13 Title of course/seminar:** Dinámica de Grupos. Técnicas de Conducción y Acción Dinámica del Grupo
Organising entity: Universidad de Oviedo
Faculty, institute or centre: Instituto de Ciencias de la Educación
Duration in hours: 10 hours
Start-End date: 08/11/2001 - 09/11/2001

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
German		A1	A1	A1	A1
English		C1	C1	C1	C1



Teaching experience

General teaching experience

- 1** **Type of teaching:** Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería de Tecnologías Mineras
Start date: 2023 **End date:** 2024
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 37
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela de Ingeniería de Minas, Energía y Materiales de Oviedo
City of entity: Spain
- 2** **Name of the course:** Distributed Generation Systems and Power Quality
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2023 **End date:** 2024
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 37,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica de Ingeniería de Gijón
City of entity: Spain
Subject language: English
- 3** **Name of the course:** Power System Operation and Electrical Energy Transport
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2023 **End date:** 2024
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 18,75
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica de Ingeniería de Gijón
City of entity: Spain
Subject language: English
- 4** **Type of teaching:** Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería de Tecnologías Mineras
Start date: 2022 **End date:** 2023
Type of hours/ ECTS credits: Hours



Hours/ECTS credits: 44

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela de Ingeniería de Minas, Energía y Materiales de Oviedo

City of entity: Spain

5 Name of the course: Distributed Generation Systems and Power Quality

Type of programme: Master's degree

Type of subject: Obligatory

University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia

Start date: 2022

End date: 2023

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 37,5

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Politécnica de Ingeniería de Gijón

City of entity: Spain

Subject language: English

6 Name of the course: Power System Operation and Electrical Energy Transport

Type of programme: Master's degree

Type of subject: Obligatory

University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia

Start date: 2022

End date: 2023

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 22,5

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Politécnica de Ingeniería de Gijón

City of entity: Spain

Subject language: English

7 Type of teaching: Official teaching

Name of the course: Electrotecnia

Type of programme: Engineering

Type of subject: Core

University degree: Grado en Ingeniería de Tecnologías Mineras

Start date: 2021

End date: 2022

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 44

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela de Ingeniería de Minas, Energía y Materiales de Oviedo

City of entity: Spain

8 Name of the course: Distributed Generation Systems and Power Quality

Type of programme: Master's degree

Type of subject: Obligatory

University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia

Start date: 2021

End date: 2022

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 37,5

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Politécnica de Ingeniería de Gijón

City of entity: Spain



Subject language: English

- 9** **Name of the course:** Power System Operation and Electrical Energy Transport
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2021 **End date:** 2022
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 22,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica de Ingeniería de Gijón
City of entity: Spain
Subject language: English
- 10** **Type of teaching:** Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería de Tecnologías Mineras
Start date: 2020 **End date:** 2021
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 44
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas
City of entity: Spain
- 11** **Name of the course:** Distributed Generation Systems and Power Quality
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2020 **End date:** 2021
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 37,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica de Ingeniería de Gijón
City of entity: Spain
Subject language: English
- 12** **Name of the course:** Power System Operation and Electrical Energy Transport
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2020 **End date:** 2021
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 22,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica de Ingeniería de Gijón
City of entity: Spain
Subject language: English



- 13** **Type of teaching:** Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería de Tecnologías Mineras
Start date: 2019 **End date:** 2020
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 44
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas
City of entity: Spain
- 14** **Name of the course:** Distributed Generation Systems and Power Quality
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2019 **End date:** 2020
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 37,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English
- 15** **Name of the course:** Energy Efficiency
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2019 **End date:** 2020
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 0,75
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English
- 16** **Name of the course:** Power System Operation and Electrical Energy Transport
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2019 **End date:** 2020
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 22,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English
- 17** **Type of teaching:** Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering



Type of subject: Core
University degree: Grado en Ingeniería de Tecnologías Mineras
Start date: 2018 **End date:** 2019
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 51
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas
City of entity: Spain

18 **Name of the course:** Distributed Generation Systems and Power Quality
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2018 **End date:** 2019
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 37,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English

19 **Name of the course:** Energy Efficiency
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2018 **End date:** 2019
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 0,75
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English

20 **Name of the course:** Power System Operation and Electrical Energy Transport
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2018 **End date:** 2019
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 14
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English

21 **Type of teaching:** Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería de Tecnologías Mineras
Start date: 2017 **End date:** 2018



Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 51

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas

City of entity: Spain

22 Name of the course: Distributed Generation Systems and Power Quality

Type of programme: Master's degree

Type of subject: Obligatory

University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia

Start date: 2017

End date: 2018

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 37,5

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Centro Internacional de Postgrado

City of entity: Spain

Subject language: English

23 Name of the course: Energy Efficiency

Type of programme: Master's degree

Type of subject: Obligatory

University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia

Start date: 2017

End date: 2018

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 0,75

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Centro Internacional de Postgrado

City of entity: Spain

Subject language: English

24 Type of teaching: Official teaching

Name of the course: Electrotecnia

Type of programme: Engineering

Type of subject: Core

University degree: Grado en Ingeniería de Tecnologías Mineras

Start date: 2016

End date: 2017

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 51

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas

City of entity: Spain

25 Name of the course: Distributed Generation Systems and Power Quality

Type of programme: Master's degree

Type of subject: Obligatory

University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia

Start date: 2016

End date: 2017

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 37,5

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Centro Internacional de Postgrado



City of entity: Spain
Subject language: English

26 **Name of the course:** Energy Efficiency
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2016 **End date:** 2017
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 0,75
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English

27 **Type of teaching:** Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería de Tecnologías Mineras
Start date: 2015 **End date:** 2016
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 58
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas
City of entity: Spain

28 **Name of the course:** Conferencias y Seminarios II
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Ingeniería Mecatrónica
Start date: 2015 **End date:** 2016
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 11
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain

29 **Name of the course:** Distributed Generation Systems and Power Quality
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2015 **End date:** 2016
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 37,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English



- 30** **Name of the course:** Energy Efficiency
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2015 **End date:** 2016
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 0,75
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English
- 31** **Type of teaching:** Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería de Tecnologías Mineras
Start date: 2014 **End date:** 2015
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 118
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas
City of entity: Spain
- 32** **Type of teaching:** Official teaching
Name of the course: Teoría de Circuitos
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería en Tecnologías y Servicios de Telecomunicación
Start date: 2014 **End date:** 2015
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 14
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica de Ingeniería de Gijón
City of entity: Spain
- 33** **Name of the course:** Conferencias y Seminarios II
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Ingeniería Mecatronica
Start date: 2014 **End date:** 2015
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 11
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
- 34** **Name of the course:** Distributed Generation Systems and Power Quality
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia



Start date: 2014 **End date:** 2015
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 37,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English

35 Name of the course: Energy Efficiency
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2014 **End date:** 2015
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 0,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English

36 Type of teaching: Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería de Tecnologías Mineras
Start date: 2013 **End date:** 2014
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 124
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas
City of entity: Spain

37 Name of the course: Conferencias y Seminarios II
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Ingeniería Mecatronica
Start date: 2013 **End date:** 2014
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 11
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain

38 Name of the course: Distributed Generation Systems and Power Quality
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2013 **End date:** 2014
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 37,5
Entity: Universidad de Oviedo **Type of entity:** University



Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English

39 Name of the course: Electrical Machines for Generation and Traction
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2013 **End date:** 2014
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 11,25
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English

40 Name of the course: Energy Efficiency
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2013 **End date:** 2014
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 0,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English

41 Type of teaching: Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería de Tecnologías Mineras
Start date: 2012 **End date:** 2013
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 69
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas
City of entity: Spain

42 Type of teaching: Official teaching
Name of the course: Teoría de Circuitos
Type of programme: Engineering
Type of subject: Core
University degree: Grado en Ingeniería en Tecnologías y Servicios de Telecomunicación
Start date: 2012 **End date:** 2013
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 20,4
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica de Ingeniería de Gijón
City of entity: Spain



- 43** **Name of the course:** Distributed Generation Systems and Power Quality
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2012 **End date:** 2013
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 35,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English
- 44** **Name of the course:** Energy Efficiency
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2012 **End date:** 2013
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 5,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English
- 45** **Type of teaching:** Official teaching
Name of the course: Electrotecnia
Type of programme: Engineering
Type of subject: Core
University degree: Ingeniero de Minas
Start date: 2011 **End date:** 2012
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 20
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas
City of entity: Spain
- 46** **Name of the course:** Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2011 **End date:** 2012
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 15
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 47** **Name of the course:** Conferencias y Seminarios III
Type of programme: Master's degree
Type of subject: Obligatory



University degree: Master en Ingeniería Mecatronica
Start date: 2011 **End date:** 2012
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 11
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain

48 Name of the course: Distributed Generation Systems and Power Quality
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Conversión de Energía Eléctrica y Sistemas de Potencia
Start date: 2011 **End date:** 2012
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
Subject language: English

49 Name of the course: Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2010 **End date:** 2011
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 20
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain

50 Name of the course: Teoría de Circuitos. Electrotecnia
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2010 **End date:** 2011
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain

51 Name of the course: Sensores y Actuadores
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Ingeniería Mecatronica
Start date: 2010 **End date:** 2011
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 7,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado



City of entity: Spain

- 52** **Name of the course:** Simulación, Modelado y Compatibilidad Electromagnética de Sistemas Eléctricos y Electrónicos de Potencia
Type of programme: Master's degree
Type of subject: Optional
University degree: Máster Universitario en Control de Procesos, Electrónica Industrial e Ingeniería Eléctrica
Start date: 2010 **End date:** 2011
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 53** **Name of the course:** Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2009 **End date:** 2010
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 20
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 54** **Name of the course:** Teoría de Circuitos. Electrotecnia
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2009 **End date:** 2010
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 55** **Name of the course:** Sensores y Actuadores
Type of programme: Master's degree
Type of subject: Obligatory
University degree: Master en Ingeniería Mecatronica
Start date: 2009 **End date:** 2010
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 15
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Centro Internacional de Postgrado
City of entity: Spain
- 56** **Name of the course:** Simulación, Modelado y Compatibilidad Electromagnética de Sistemas Eléctricos y Electrónicos de Potencia
Type of programme: Doctorate
Type of subject: Optional



University degree: Doctorado en Control de Procesos, Electrónica Industrial e Ingeniería Eléctrica
Start date: 2008 **End date:** 2009

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 5

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain

57 Name of the course: Máquinas Eléctricas

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero de Minas

Start date: 2008

End date: 2009

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 20

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo

City of entity: Spain

58 Name of the course: Teoría de Circuitos. Electrotecnia

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero de Minas

Start date: 2008

End date: 2009

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 30

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo

City of entity: Spain

59 Name of the course: Fundamentos de Ingeniería Eléctrica

Type of programme: Master's degree

Type of subject: Obligatory

University degree: Master en Ingeniería Mecatronica

Start date: 2008

End date: 2009

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 174

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Centro Internacional de Postgrado

City of entity: Spain

60 Name of the course: Sensores y Actuadores

Type of programme: Master's degree

Type of subject: Obligatory

University degree: Master en Ingeniería Mecatronica

Start date: 2008

End date: 2009

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 15

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Centro Internacional de Postgrado

City of entity: Spain



- 61** **Name of the course:** Simulación, Modelado y Compatibilidad Electromagnética de Sistemas Eléctricos y Electrónicos de Potencia
Type of programme: Doctorate
Type of subject: Optional
University degree: Doctorado en Control de Procesos, Electrónica Industrial e Ingeniería Eléctrica
Start date: 2007 **End date:** 2008
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 62** **Name of the course:** Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2007 **End date:** 2008
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 60
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 63** **Name of the course:** Teoría de Circuitos
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 2007 **End date:** 2008
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 75
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 64** **Name of the course:** Teoría de Circuitos. Electrotecnia
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2007 **End date:** 2008
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 65** **Name of the course:** Simulación, Modelado y Compatibilidad Electromagnética de Sistemas Eléctricos y Electrónicos de Potencia
Type of programme: Doctorate
Type of subject: Optional
University degree: Doctorado en Control de Procesos, Electrónica Industrial e Ingeniería Eléctrica



Start date: 2006

End date: 2007

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 5

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain

66 Name of the course: Máquinas Eléctricas

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero de Minas

Start date: 2006

End date: 2007

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 65

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo

City of entity: Spain

67 Name of the course: Teoría de Circuitos

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero Industrial

Start date: 2006

End date: 2007

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 75

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain

68 Name of the course: Teoría de Circuitos. Electrotecnia

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero de Minas

Start date: 2006

End date: 2007

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 30

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo

City of entity: Spain

69 Name of the course: Soluciones y Equipos Comerciales para la Mejora de la Inmunidad de las Instalaciones Industriales Frente a Perturbaciones del Sistema Eléctrico

Type of programme: Doctorate

Type of subject: Optional

University degree: Doctorado en Control de Procesos, Electrónica Industrial e Ingeniería Eléctrica

Start date: 2005

End date: 2006

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 10

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain



- 70** **Name of the course:** Electrotecnia
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Técnico Forestal
Start date: 2005 **End date:** 2006
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 10
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Universitaria de Ingeniería Técnica de Minas de Mieres
City of entity: Spain
- 71** **Name of the course:** Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2005 **End date:** 2006
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 60
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 72** **Name of the course:** Teoría de Circuitos
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 2005 **End date:** 2006
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 75
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 73** **Name of the course:** Teoría de Circuitos. Electrotecnia
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2005 **End date:** 2006
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 74** **Name of the course:** Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2004 **End date:** 2005
Type of hours/ ECTS credits: Hours



Hours/ECTS credits: 105

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo

City of entity: Spain

75 Name of the course: Teoría de Circuitos

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero Industrial

Start date: 2004

End date: 2005

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 75

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain

76 Name of the course: Teoría de Circuitos. Electrotecnia

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero de Minas

Start date: 2004

End date: 2005

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 30

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo

City of entity: Spain

77 Name of the course: Accionamientos Eléctricos

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero Industrial

Start date: 2003

End date: 2004

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 15

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain

78 Name of the course: Cálculo, Construcción y Ensayo de Máquinas Eléctricas

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero Industrial

Start date: 2003

End date: 2004

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 15

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain



- 79** **Name of the course:** Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2003 **End date:** 2004
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 105
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 80** **Name of the course:** Teoría de Circuitos
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 2003 **End date:** 2004
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 75
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 81** **Name of the course:** Teoría de Circuitos. Electrotecnia
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2003 **End date:** 2004
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 82** **Name of the course:** Cálculo, Construcción y Ensayo de Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 2002 **End date:** 2003
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 50
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 83** **Name of the course:** Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2002 **End date:** 2003
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 120



Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain

84 Name of the course: Teoría de Circuitos
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 2002 **End date:** 2003
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain

85 Name of the course: Teoría de Circuitos. Electrotecnia
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2002 **End date:** 2003
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain

86 Name of the course: Circuitos
Type of programme: Technical engineering
Type of subject: Obligatory
University degree: Ingeniero Técnico Industrial
Start date: 2002 **End date:** 2003
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 7,5
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Universitaria de Ingeniería Técnica Industrial de Gijón
City of entity: Spain

87 Name of the course: Nuevos Criterios Basados en Ensayos del Sistema Aislante y en el Modelado por el Método de Elementos Finitos para el Diagnóstico de Fallos en Máquinas Eléctricas
Type of programme: Doctorate
Type of subject: Optional
University degree: Doctorado en Control de Procesos, Electrónica Industrial e Ingeniería Eléctrica
Start date: 2001 **End date:** 2002
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 10
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain



- 88** **Name of the course:** Centrales y Redes Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2001 **End date:** 2002
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 89** **Name of the course:** Cálculo, Construcción y Ensayo de Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 2001 **End date:** 2002
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 40
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 90** **Name of the course:** Electrotecnia I
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 2001 **End date:** 2002
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 90
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 91** **Name of the course:** Teoría de Circuitos. Electrotecnia
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2001 **End date:** 2002
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 60
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain
- 92** **Name of the course:** Centrales y Redes Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2000 **End date:** 2001
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 20



Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain

93 Name of the course: Electrotecnia I
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 2000 **End date:** 2001
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 135
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain

94 Name of the course: Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 2000 **End date:** 2001
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain

95 Name of the course: Teoría de Circuitos. Electrotecnia
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero de Minas
Start date: 2000 **End date:** 2001
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Minas de Oviedo
City of entity: Spain

96 Name of the course: Fundamentos de Tecnología Eléctrica
Type of programme: Technical engineering
Type of subject: Obligatory
University degree: Ingeniero Técnico Industrial
Start date: 2000 **End date:** 2001
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 45
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Universitaria de Ingeniería Técnica Industrial de Gijón
City of entity: Spain

97 Name of the course: Cálculo, Construcción y Ensayo de Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory



University degree: Ingeniero Industrial

Start date: 1999

End date: 2000

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 60

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain

98 Name of the course: Electrotecnia I

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero Industrial

Start date: 1999

End date: 2000

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 105

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain

99 Name of the course: Máquinas Eléctricas

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero Industrial

Start date: 1999

End date: 2000

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 75

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain

100 Name of the course: Cálculo, Construcción y Ensayo de Máquinas Eléctricas

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero Industrial

Start date: 1998

End date: 1999

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 60

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain

101 Name of the course: Electrotecnia I

Type of programme: Engineering

Type of subject: Obligatory

University degree: Ingeniero Industrial

Start date: 1998

End date: 1999

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 105

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain



- 102** **Name of the course:** Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 1998 **End date:** 1999
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 75
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 103** **Name of the course:** Electrotecnia I
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 1997 **End date:** 1998
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 180
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 104** **Name of the course:** Máquinas Eléctricas
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 1997 **End date:** 1998
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 45
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón
City of entity: Spain
- 105** **Name of the course:** Teoría de Circuitos
Type of programme: Technical engineering
Type of subject: Obligatory
University degree: Ingeniero Técnico en Informática de Sistemas
Start date: 1997 **End date:** 1998
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad de Oviedo **Type of entity:** University
Faculty, institute or centre: Escuela Universitaria de Ing. Técnica Informática de Gijón
City of entity: Spain
- 106** **Name of the course:** Electrotecnia I
Type of programme: Engineering
Type of subject: Obligatory
University degree: Ingeniero Industrial
Start date: 1996 **End date:** 1997
Type of hours/ ECTS credits: Hours



Hours/ECTS credits: 165

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Industriales de Gijón

City of entity: Spain

107 Name of the course: Teoría de Circuitos

Type of programme: Technical engineering

Type of subject: Obligatory

University degree: Ingeniero Técnico en Informática de Sistemas

Start date: 1996

End date: 1997

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 75

Entity: Universidad de Oviedo

Type of entity: University

Faculty, institute or centre: Escuela Universitaria de Ing. Técnica Informática de Gijón

City of entity: Spain

Experience supervising doctoral thesis and/or final year projects

1 Project title: Contributions to distribution system state estimation in the context of smart grids

Type of project: Doctoral thesis

Entity: Universidad de Oviedo

Type of entity: University

Student: Mahmoud Rashad Ahmed

Obtained qualification: Apto Cum Laude

Date of reading: 01/2026

European doctorate: Yes

Date of recognition: 23/01/2026

Narrative Explanation: Programa Oficial de Doctorado en Ingeniería Eléctrica y Electrónica (Interuniversitario: Universidad Politécnica de Madrid - Universidad de Oviedo)

2 Project title: Coordinated control of distributed resources in hybrid AC/DC mesh distribution networks

Type of project: Doctoral thesis

Entity: Universidad de Oviedo

Type of entity: University

Student: Carlos Gómez-Aleixandre Tiemblo

Obtained qualification: Apto Cum Laude

Date of reading: 03/2023

European doctorate: Yes

Date of recognition: 15/07/2023

Narrative Explanation: Programa de Doctorado en Energía y Control de Procesos

3 Project title: Consistent modeling and parameter estimation of voltage regulating transformers for power system studies

Type of project: Doctoral thesis

Entity: Universidad de Oviedo

Type of entity: University

Student: Md Rejwanur Rashid Mojumdar

Obtained qualification: Apto Cum Laude

Date of reading: 07/2022

European doctorate: Yes

Date of recognition: 15/07/2022

Narrative Explanation: Programa de Doctorado en Energía y Control de Procesos

4 Project title: Modelling of 4-wire low voltage systems for enhanced control strategies of grid-tied power converters

Type of project: Doctoral thesis

Co-director of thesis: Pablo García Fernández



Entity: Universidad de Oviedo

Type of entity: University

Student: Andrés Suárez González

Obtained qualification: Apto Cum Laude

Date of reading: 07/2020

Narrative Explanation: Programa de Doctorado en Energía y Control de Procesos

5 Project title: Aportaciones al control directo de potencia de rectificadores activos trifásicos

Type of project: Doctoral thesis

Entity: Universidad de Oviedo

Type of entity: University

Student: Joaquín González Norniella

Obtained qualification: Apto Cum Laude y Premio Extraordinario de Doctorado de la Universidad de Oviedo (2011/2012)

Date of reading: 03/2012

European doctorate: Yes

Quality recognition: Yes

Narrative Explanation: Programa de Doctorado en Control de Procesos, Electrónica Industrial e Ingeniería Eléctrica

Materials and other teaching or educational publications.

- 1** G. Norniella, Joaquín; Cano, José M.; A. Orcajo, Gonzalo; Pedrayes G., Francisco; G. Melero, Manuel; F. Cabanas, Manés; Rojas, Carlos. 25 Congreso Universitario de Innovación Educativa en las Enseñanzas Técnicas, 06/09/2017.

Name of the materials: Análisis de la Escasa Utilización de las Tutorías Individuales por Parte del Alumnado Universitario de Enseñanzas Técnicas

Format: Article(s)

Corresponding author: No
- 2** Cano, José M.. Electrical network equations, Encyclopedia of Electrical and Electronic Power Engineering. 1, pp. 566 - 568. Elsevier. 01/01/2023.

Name of the materials: Book chapter

Format: Chapters of books

Corresponding author: Yes
- 3** Cano, José M.. Theorems for circuit analysis, Encyclopedia of Electrical and Electronic Power Engineering. 1, pp. 569 - 575. Elsevier. 01/01/2023.

Name of the materials: Book chapter

Format: Chapters of books

Corresponding author: Yes
- 4** Cano, José M.; G. Norniella, Joaquín; A. Orcajo, Gonzalo; Mojumdar, Md. Rejwanur. 25 Congreso Universitario de Innovación Educativa en las Enseñanzas Técnicas, 06/09/2017.

Name of the materials: Mejora de Aprovechamiento de Prácticas de Laboratorio mediante el Uso de Recursos Audiovisuales y Sistemas de Corrección Automática

Format: Article(s)

Corresponding author: Yes



Participation in innovative teaching projects

- 1** **Project title:** Mejora del aprovechamiento de prácticas de laboratorio mediante el uso de recursos audiovisuales y sistemas de corrección automática (PAINN-16-011)
Type of participation: Principal investigator
Contribution to the project: Actividades de innovación educativa
Dedication regime: Part time
Name of the main researcher: Cano, José M.
Number of participants: 8
Amount awarded: 0 €
Funding entity: Universidad de Oviedo **Type of entity:** University
Type of call: Competitive
Start-End date: 01/09/2016 - 31/08/2017 **Duration:** 1 year
- 2** **Project title:** ¿Por qué el alumnado prefiere las academias privadas a las tutorías individuales? (PAINN-16-017)
Type of participation: Team member
Contribution to the project: Actividades de innovación educativa
Dedication regime: Part time
Name of the main researcher: G. Norniella, Joaquín
Number of participants: 7
Amount awarded: 0 €
Funding entity: Universidad de Oviedo **Type of entity:** University
Type of call: Competitive
Start-End date: 01/09/2016 - 31/08/2017 **Duration:** 1 year
- 3** **Project title:** Cómo hacer un examen en el ámbito de la Ingeniería: Método basado en TGs y PAs (PINN-14-025)
Type of participation: Team member
Contribution to the project: Actividades de innovación educativa
Dedication regime: Part time
Name of the main researcher: G. Norniella, Joaquín
Number of participants: 8
Amount awarded: 0 €
Funding entity: Universidad de Oviedo **Type of entity:** University
Type of call: Competitive
Start-End date: 01/09/2014 - 31/08/2015 **Duration:** 1 year
- 4** **Project title:** Empleo de las actividades Glosario y Wiki del Campus Virtual en el desarrollo de un nuevo sistema de evaluación basado en la asignatura "Applied simulation to power systems" (Ref. PINN-13-015)
Type of participation: Team member
Contribution to the project: Actividades de innovación educativa
Dedication regime: Part time
Name of the main researcher: G. Norniella, Joaquín
Number of participants: 8
Amount awarded: 0 €
Funding entity: Universidad de Oviedo **Type of entity:** University
Type of call: Competitive
Start-End date: 01/09/2013 - 31/08/2014 **Duration:** 1 year



- 5** **Project title:** Desarrollo de aula virtual para la mejora de la enseñanza de la asignatura de "Circuitos Eléctricos. Electrotecnia" del plan de estudios de Ingeniero de Minas (Ref. PB-06-039)
Type of participation: Principal investigator
Contribution to the project: Actividades de innovación educativa
Dedication regime: Part time
Name of the main researcher: Cano, José M.
Number of participants: 6
Amount awarded: 1.500 €
Funding entity: Universidad de Oviedo, Vicerrectorado de Calidad e Innovación
Type of call: Competitive
Start-End date: 01/09/2006 - 31/08/2007 **Duration:** 1 year
- 6** **Project title:** Aula virtual en las asignaturas de Electrotecnia II y Cálculo Construcción y Ensayo de Máquinas Eléctricas (Ref. PA-02-002)
Type of participation: Team member
Contribution to the project: Actividades de innovación educativa
Dedication regime: Part time
Name of the main researcher: Gonzalo A. Orcajo
Number of participants: 5
Amount awarded: 6.000 €
Funding entity: Universidad de Oviedo, Vicerrectorado de Calidad e Innovación
Type of call: Competitive
Start-End date: 01/09/2002 - 31/08/2003 **Duration:** 1 year
- 7** **Project title:** Innovación docente para asignaturas de Ingeniería Eléctrica en Ingeniería de Telecomunicación y Marina Civil (Ref. PB-02-034)
Type of participation: Team member
Dedication regime: Part time
Name of the main researcher: G. Melero, Manuel
Number of participants: 5
Amount awarded: 787,78 €
Funding entity: Universidad de Oviedo
Type of call: Competitive
Start-End date: 01/09/2002 - 31/08/2003 **Duration:** 1 year
- 8** **Project title:** Innovación docente basada en el uso de internet y tecnologías multimedia para asignaturas de Ingeniería Eléctrica (Ref. PB-01-030)
Type of participation: Team member
Contribution to the project: Actividades de Innovación docente
Dedication regime: Part time
Name of the main researcher: F. Cabanas, Manés
Number of participants: 5
Amount awarded: 2.940,33 €
Funding entity: Universidad de Oviedo, Vicerrectorado de Calidad e Innovación
Type of call: Competitive
Start-End date: 01/09/2001 - 31/08/2002 **Duration:** 1 year
- 9** **Project title:** Aula virtual como herramienta para la mejora de la enseñanza de la asignatura de Teoría de Circuitos Eléctricos del plan de estudio de Ingeniería Técnica en Telecomunicación (Ref. PB-05-051)
Type of participation: Team member
Contribution to the project: Actividades de innovación educativa



Dedication regime: Full time
Name of the main researcher: Carlos H. Rojas G.
Number of participants: 5
Amount awarded: 2.250 €
Funding entity: Universidad de Oviedo, Vicerrectorado de Calidad e Innovación
Type of call: Competitive
Duration: 9 months

- 10 Project title:** Aula virtual educativa para la asignatura Fundamentos de Tecnología Eléctrica (Ref. PB-01-030)
Type of participation: Others
Contribution to the project: Actividades de innovación docente
Dedication regime: Full time
Name of the main researcher: Carlos H. Rojas G.
Number of participants: 5
Funding entity: Universidad de Oviedo, Vicerrectorado de Calidad e Innovación
Type of call: Competitive
Duration: 9 months

Other activities/achievements not included above

- 1 Description of the activity:** Coordinador del Máster en Conversión de Energía Eléctrica y Sistemas de Potencia (desde 06/09/2019)
City of activity: Gijón, Asturias, Principado de, Spain
Organising entity: Universidad de Oviedo **Type of entity:** University
End date: 31/01/2023
- 2 Description of the activity:** Méritos docentes: 5 tramos (quinquenios) con evaluación positiva (1997-2021)
Organising entity: Universidad de Oviedo
End date: 31/12/2021
- 3 Description of the activity:** Impartición de clases a nivel de Master (Seminario de 5 horas titulado "Distributed Generation and Power Quality") y Doctorado (Seminario de 3 horas titulado "Direct Power Control of Three-phase Active Rectifiers")
Organising entity: Universidad de Bolonia - Dipartimento di Ingegneria dell'Energia Elettrica e dell'Informazione "Guglielmo Marconi" **Type of entity:** University
End date: 29/05/2016
- 4 Description of the activity:** Acreditación del cumplimiento de los requisitos para impartir docencia virtual en la modalidad de "Enseñanza Online con y sin Comunicación Síncrona"
Organising entity: Universidad de Oviedo **Type of entity:** University
End date: 16/03/2015
- 5 Description of the activity:** Acreditación para impartir docencia en inglés en Grados Bilingües
Organising entity: Universidad de Oviedo **Type of entity:** University
End date: 07/03/2013
- 6 Description of the activity:** Impartición de curso teórico-práctico para el acceso a las plazas 264 y 265 de Técnico Especialista en Laboratorio Grupo III - Departamento de Ingeniería Eléctrica, Electrónica de Computadores y Sistemas
Organising entity: Universidad de Oviedo **Type of entity:** University



End date: 18/02/2008

Scientific and technological experience

Research and development groups/teams

- 1 Name of the group:** Grupo de Investigación en Instalaciones y Sistemas Eléctricos (ISE)
Aims of the group: Grupo de Investigación
Number of members in the group: 8
Affiliation entity: Universidad de Oviedo **Type of entity:** University
Start date: 2024
- 2 Name of the group:** IEEE Task Force on Dynamic Average Modeling
Name of principal investigator: Jatskevich, Juri **Number of members in the group:** 20
Type of collaboration: Co-authorship of publications
Affiliation entity: Working Group on Modelling and Analysis of System Transients Using Digital Programs **Type of entity:** Associations and Groups
Start date: 2012
- 3 Name of the group:** Grupo de Investigación en el Diagnóstico de Máquinas e Instalaciones Eléctricas (DIMIE)
Aims of the group: Grupo de Investigación Consolidado
Number of members in the group: 8
Affiliation entity: Universidad de Oviedo **Type of entity:** University
Narrative explanation: Acreditado por la Agencia Nacional de Evaluación y Prospectiva (ANEP) 29/09/2011
Start date: 1996

Scientific or technological activities

R&D projects funded through competitive calls of public or private entities

- 1 Name of the project:** Estimación de estado en sistemas de distribución: modelos de transición en el contexto de las redes inteligentes (Mod4DSSE)
Degree of contribution: Coordinator of total project, network or consortium
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI...): Cano, José M.; A. Orcajo, Gonzalo
Nº of researchers: 7
Funding entity or bodies: Ministerio de Ciencia e Innovación **Type of entity:** Body, others
Name of the programme: Proyectos de Generación de Conocimiento, Convocatoria 2021
Code according to the funding entity: PID2021-122704OB-I00
Start-End date: 01/01/2022 - 31/12/2024 **Duration:** 3 years
Total amount: 123.420 €
- 2 Name of the project:** Sistemas de compensación de potencia reactiva y de almacenamiento de energía en plantas siderúrgicas conectadas a redes con alta densidad de generación eólica y fotovoltaica (STATESTEEL)



Degree of contribution: Coordinator of total project, network or consortium
Entity where project took place: Universidad de Oviedo **Type of entity:** University

Name principal investigator (PI, Co-PI....): Cano, José M.; A. Orcajo, Gonzalo

Nº of researchers: 6

Funding entity or bodies:

Ministerio de Ciencia e Innovación

Type of entity: Body, others

Name of the programme: Proyectos de Transición Ecológica y Digital 2021

Code according to the funding entity: TED2021-131498B-I00

Start-End date: 01/12/2022 - 30/11/2024

Duration: 2 years

Total amount: 106.030 €

3 Name of the project: Optimización de la demanda eléctrica en procesos siderúrgicos de laminación mediante la integración de accionamientos avanzados y fuentes de energía renovable

Degree of contribution: Coordinator of total project, network or consortium

Entity where project took place: Universidad de Oviedo **Type of entity:** University

Name principal investigator (PI, Co-PI....): Cano, José M.; A. Orcajo, Gonzalo

Nº of researchers: 4

Funding entity or bodies:

Ministerio de Economía y Competitividad

Name of the programme: Programa Estatal de Investigación, Desarrollo e Innovación Orientada a los Retos de la Sociedad

Code according to the funding entity: DPI2017-89186-R

Start-End date: 01/01/2018 - 31/12/2020

Duration: 3 years

Total amount: 84.000 €

4 Name of the project: Desarrollo de marco flexible y autónomo para la aplicación de controladores de flujo de cargas en anillo a redes radiales de distribución de cliente en entornos industriales

Degree of contribution: Coordinator of total project, network or consortium

Entity where project took place: Universidad de Oviedo **Type of entity:** University

Name principal investigator (PI, Co-PI....): Cano, José M.; A. Orcajo, Gonzalo

Nº of researchers: 4

Funding entity or bodies:

Ministerio de Economía y Competitividad

Name of the programme: Programa Estatal de Investigación, Desarrollo e Innovación Orientada a los Retos de la Sociedad

Code according to the funding entity: ENE2014-52272-R

Start-End date: 01/01/2015 - 31/12/2017

Duration: 3 years

Total amount: 246.840 €

5 Name of the project: Sistema híbrido de compensación de potencia reactiva para aplicaciones de baja tensión

Geographical area: Regional

Degree of contribution: Coordinator of total project, network or consortium

Entity where project took place: Universidad de Oviedo **Type of entity:** University

Name principal investigator (PI, Co-PI....): Cano, José M.

Nº of researchers: 8

**Funding entity or bodies:**

Instituto Universitario de Tecnología Industrial de Asturias (IUTA) **Type of entity:** University Research Institute

City funding entity: Gijón, Asturias, Principado de, Spain

Code according to the funding entity: SV-15-GIJON-1-12

Start-End date: 01/01/2015 - 31/12/2015

Duration: 1 year

Total amount: 3.000 €

6 Name of the project: Simulador de red regenerativo

Degree of contribution: Coordinator of total project, network or consortium

Entity where project took place: Universidad de Oviedo **Type of entity:** University

Name principal investigator (PI, Co-PI....): Cano, José M.

Nº of researchers: 20

Funding entity or bodies:

Ministerio de Economía y Competitividad

Name of the programme: Subprograma Estatal de Infraestructuras Científicas y Técnicas, y Equipamiento

Code according to the funding entity: UNOV13-2E-2519

Start-End date: 01/01/2013 - 31/12/2015

Duration: 3 years

Total amount: 55.472,03 €

7 Name of the project: Sistema de detección y localización de cortocircuitos en redes eléctricas de distribución mediante técnicas basadas en el análisis del vector de Park de tensiones

Geographical area: Regional

Degree of contribution: Researcher

Entity where project took place: Universidad de Oviedo

Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo

Nº of researchers: 4

Funding entity or bodies:

Consejería de Economía y Empleo del Principado de Asturias

Code according to the funding entity: SV-PA-13-ECOEMP-52

Start-End date: 01/04/2013 - 31/12/2013

Duration: 9 months

Total amount: 11.649,6 €

Relevant results: Actividades de I+D

8 Name of the project: Minimising energy loss in hot rolling by intelligent manufacturing

Degree of contribution: Researcher

Entity where project took place: Universidad de Oviedo

Name principal investigator (PI, Co-PI....): Briz, Fernando

Nº of researchers: 11

Funding entity or bodies:

European Commission

Name of the programme: Research Fund for Coal and Steel (RFCS)

Code according to the funding entity: UE-10-RFSR-CT-2010-00008

Start-End date: 01/07/2010 - 31/12/2013

Duration: 3 years - 6 months

Participating entity/entities: ArcelorMittal España S.A.; BFI - VDEh-Betriebsforschungsinstitut GmbH (Alemania); CRM - Centre de Recherches Metallurgiques ASBL (Bélgica); Universidad de Oviedo

Total amount: 1.886.437 €

Sub-project amount: 302.001,43 €



- 9** **Name of the project:** Monitorización de señales en motores eléctricos eficientes
Degree of contribution: Researcher
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): Manuel G. Melero
Nº of researchers: 7
Funding entity or bodies:
Ministerio de Educación y Ciencia
Ministerio de Educación, Cultura y Deporte
Code according to the funding entity: MEC-11-FP2011
Start-End date: 01/11/2011 - 10/10/2012 **Duration:** 1 year
Total amount: 29.263 €
- 10** **Name of the project:** Calidad de la onda de tensión. Medida y análisis de las perturbaciones electromagnéticas. Filtros y otras medidas correctoras
Degree of contribution: Coordinator of total project, network or consortium
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): Cano, José M.
Nº of researchers: 5
Funding entity or bodies:
Ministerio de Educación, Cultura y Deporte
Name of the programme: Plan Nacional de Investigación
Code according to the funding entity: MEC-07-ENE2007-68032-C04-03
Start-End date: 01/10/2007 - 30/09/2010 **Duration:** 3 years
Participating entity/entities: Universidad de Cantabria; Universidad de Oviedo; Universidad de Sevilla; Universidade de Vigo
Total amount: 139.150 €
- 11** **Name of the project:** Sistemas pasivos no convencionales para la mejora de la calidad de onda en entornos industriales.
Degree of contribution: Coordinator of total project, network or consortium
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): Cano, José M.
Nº of researchers: 5
Funding entity or bodies:
Ministerio de Educación y Ciencia
Code according to the funding entity: MEC-06-ENE2006-07014
Start-End date: 01/10/2006 - 30/09/2007 **Duration:** 1 year
Total amount: 7.260 €
Relevant results: Coordinador del proyecto total, red o consorcio
- 12** **Name of the project:** Calidad de onda y ahorro energético. Influencia de las perturbaciones en las instalaciones industriales. Minimización de sus efectos
Degree of contribution: Coordinator of total project, network or consortium
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): Cano, José M.
Nº of researchers: 5
Funding entity or bodies:
Ministerio de Ciencia y Tecnología



Name of the programme: Plan Nacional de I+D+I
Code according to the funding entity: MCT-02-DPI04416-C0403
Start-End date: 01/12/2002 - 30/11/2005 **Duration:** 3 years
Participating entity/entities: Universidad de Cantabria; Universidad de Oviedo; Universidad de Sevilla; Universidade de Vigo
Total amount: 32.790 €

13 Name of the project: Detección de cortocircuitos entre espiras en el estator de motores de inducción de media y baja tensión en funcionamiento alimentados por convertidores.

Degree of contribution: Researcher
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): G. Melero, Manuel
Nº of researchers: 5
Funding entity or bodies:
Comisión Interministerial de Ciencia y Tecnología (CICYT)

Name of the programme: Plan Nacional de I+D+I
Code according to the funding entity: MCT-02-DPI-03628
Start-End date: 01/12/2002 - 30/11/2005 **Duration:** 3 years
Total amount: 27.710 €

14 Name of the project: Modelado y simulación de sistemas eléctricos de potencia para el estudio de la transmisión de huecos de tensión

Degree of contribution: Researcher
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 5
Funding entity or bodies:
Gobierno del Principado de Asturias **Type of entity:** Body, others
City funding entity: Spain

Name of the programme: Plan Regional de I+D+I
Code according to the funding entity: PB02-065
Start-End date: 01/06/2003 - 30/11/2004 **Duration:** 1 year - 5 months
Total amount: 20.048 €

15 Name of the project: Mecanismo de fallo y deterioro de los materiales aislantes eléctricos y su relación con las descargas parciales

Degree of contribution: Researcher
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): Goyarrola, Santiago
Nº of researchers: 18
Funding entity or bodies:
Comisión Interministerial de Ciencia y Tecnología (CICYT)

Name of the programme: Plan Nacional de I+D+I (modalidad P4)
Code according to the funding entity: MCT-00-MAT-0134-P407
Start-End date: 07/11/2001 - 06/11/2003 **Duration:** 2 years
Participating entity/entities: Epoxsima, S.A.; Fundación Labein; Iberdrola, S.A.; Industrias de Aparillaje Eléctrico S.A. (Inael); Universitat Politècnica de València; Universidad de Oviedo; Universidad de Sevilla
Total amount: 180.303,63 € **Sub-project amount:** 21.035,42 €



- 16** **Name of the project:** Desarrollo de nuevos métodos de bajo coste para la detección en tiempo real de fallos incipientes en transformadores de potencia.
Degree of contribution: Researcher
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): F. Cabanas, Manés
Nº of researchers: 4
Funding entity or bodies: Gobierno de Principado de Asturias
Name of the programme: Plan Regional de I+D+I
Code according to the funding entity: FC-01-PB-TBI-11
Start-End date: 01/09/2001 - 31/08/2003 **Duration:** 2 years
Total amount: 34.417,56 €
- 17** **Name of the project:** Estudio teórico-experimental de la influencia de la presencia de desequilibrios en la tensión de alimentación sobre la generación de armónicos de corriente no característicos en accionamientos de velocidad variable del tipo PWM.
Degree of contribution: Coordinator of total project, network or consortium
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): Cano, José M.
Nº of researchers: 4
Funding entity or bodies: Gobierno del Principado de Asturias **Type of entity:** Body, others
Name of the programme: Plan Regional de I+D+I
Code according to the funding entity: FC-01-PB-TBI-13
Start-End date: 01/09/2001 - 28/02/2003 **Duration:** 1 year - 6 months
Total amount: 18.755,78 €
- 18** **Name of the project:** Desarrollo de nuevos ensayos para la mejora del diagnóstico de asimetrías rotóricas en motores asíncronos de jaula de ardilla en funcionamiento.
Degree of contribution: Researcher
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): F. Cabanas, Manés
Nº of researchers: 5
Funding entity or bodies: Ministerio de Ciencia y Tecnología
Name of the programme: Plan Nacional de I+D+I
Code according to the funding entity: MCT-00-DPI-0609
Start-End date: 28/12/2000 - 27/12/2002 **Duration:** 2 years
Total amount: 8.935,85 €
- 19** **Name of the project:** Estudio de los armónicos no téóricos asociados a las corrientes de alimentación de motores de CC y de inducción bajo diferentes condiciones de funcionamiento
Degree of contribution: Researcher
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 5
Funding entity or bodies: FICYT – Gobierno del Principado de Asturias
Name of the programme: Plan Regional de Investigación



Code according to the funding entity: PA-TDI99-04

Start-End date: 01/12/1999 - 30/06/2001

Duration: 1 year - 7 months

Total amount: 15.962,88 €

- 20 Name of the project:** Procesamiento de descargas parciales para la detección de fallos de aislamiento en motores de media tensión y análisis del envejecimiento de los aislantes mica-epoxy mediante modelos de elementos finitos, ensayos eléctricos, térmicos y medioambientales

Degree of contribution: Researcher

Entity where project took place: Universidad de Oviedo **Type of entity:** University

Name principal investigator (PI, Co-PI...): F. Cabanas, Manés

Nº of researchers: 9

Funding entity or bodies:

ABB Service

Ministerio de Educación y Cultura (DGESC)

Name of the programme: Fondos Feder - Plan Nacional De I+D

Code according to the funding entity: 1FD97-0567.

Start-End date: 01/07/1999 - 28/02/2000

Duration: 8 months

Total amount: 196.170,35 €

Relevant results: Actividades de I+D

- 21 Name of the project:** Análisis por elementos finitos del flujo axial de dispersión y de los esfuerzos mecánicos en los devanados de motores de inducción de baja y media tensión: Aplicación a la detección de fallos incipientes y valoración de su vida útil

Degree of contribution: Researcher

Entity where project took place: Universidad de Oviedo **Type of entity:** University

Name principal investigator (PI, Co-PI...): F. Cabanas, Manés

Nº of researchers: 4

Funding entity or bodies:

Gobierno del Principado de Asturias

Type of entity: Body, others

City funding entity: Spain

Name of the programme: Plan Regional de Investigación

Code according to the funding entity: FC-98-PB-TDI98-03

Start-End date: 01/09/1998 - 31/12/1999

Duration: 1 year - 4 months

Total amount: 31.799,55 €

- 22 Name of the project:** Análisis de la vida útil de los motores de inducción mediante ensayos de envejecimiento acelerado

Degree of contribution: Researcher

Entity where project took place: Universidad de Oviedo **Type of entity:** University

Name principal investigator (PI, Co-PI...): F. Cabanas, Manés

Nº of researchers: 7

Funding entity or bodies:

Comisión Interministerial de Ciencia y Tecnología (CICYT)

Name of the programme: Plan Nacional de I+D

Code according to the funding entity: CC-97-TAP-1108

Start-End date: 01/08/1997 - 31/07/1999

Duration: 2 years

Total amount: 34.281,73 €



- 23** **Name of the project:** Modelling of induction machines for monitoring and diagnostics
Degree of contribution: Researcher
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): F. Cabanas, Manés
N° of researchers: 8
Funding entity or bodies:
European Commission
Name of the programme: Programa TMR
Code according to the funding entity: UE-97-ERBFMBICT97202
Start-End date: 20/06/1997 - 19/06/1998 **Duration:** 1 year
Participating entity/entities: Universidad de Oviedo; Université de Picardie Jules Verne (UPJV)
Total amount: 51.135 €

R&D non-competitive contracts, agreements or projects with public or private entities

- 1** **Name of the project:** Sistemas de gestión de la energía eléctrica y la calidad del suministro eléctrico en una planta de producción de hidrógeno verde (Ref. FUO-25-085)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo; García, Pablo; Cano, José M.; Navarro, Ángel; Fajardo, Valeria
N° of researchers: 5
Participating entity/entities: Universidad de Oviedo
Funding entity or bodies:
Perses Energy Solutions S.L.
Start date: 01/03/2025 **Duration:** 3 months
Total amount: 3.660 €
- 2** **Name of the project:** Estimación de estado en redes de distribución de BT con medidas síncronas (Ref. FUO-22-070)
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Cano, José M.
N° of researchers: 4
Participating entity/entities: Enfasys Ingeniería S.L.; Universidad de Oviedo
Funding entity or bodies:
Enfasys Ingeniería S.L. **Type of entity:** Business
Start date: 01/03/2022 **Duration:** 1 year
Total amount: 30.000 €
- 3** **Name of the project:** Fundamentos analíticos para la estimación y clasificación de pérdidas de potencia en líneas de distribución (Ref. FUO-370-17)
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Cano, José M.
N° of researchers: 8
Participating entity/entities: Efibat Servicios Técnicos S.A.; Universidad de Oviedo
Funding entity or bodies:
Efibat Servicios Técnicos S.A. **Type of entity:** Business
Start date: 23/10/2017 **Duration:** 6 months



Total amount: 1.200 €

- 4** **Name of the project:** Comportamiento de un filtro activo bajo diferentes condiciones de carga y alimentación (Ref. FUO-247-17)
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Cano, José M.
N° of researchers: 8
Participating entity/entities: Efibat Servicios Técnicos S.A.; Universidad de Oviedo
Funding entity or bodies:
Efibat Servicios Técnicos S.A. **Type of entity:** Business
Start date: 21/04/2017 **Duration:** 2 months
Total amount: 800 €
- 5** **Name of the project:** Evaluación técnica del proyecto (Informe de ejecución 2013): DIBADIS12 - Desarrollo de protección diferencial de barras distribuida (Ref. 2000/0931/PIDI/07) (Ref. FUO-EM-245-15)
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Cano, José M.
N° of researchers: 1
Participating entity/entities: AENOR; Universidad de Oviedo
Funding entity or bodies:
AENOR **Type of entity:** Associations and Groups
City funding entity: Madrid, Spain
Start date: 07/09/2015 **Duration:** 24 days
Total amount: 400 €
- 6** **Name of the project:** Caracterización y análisis de un accionamiento LCI para motor síncrono de media tensión (Ref. FUO-EM-119-15)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
N° of researchers: 7
Participating entity/entities: CESINEL - Compañía Española de Instrumentos Eléctricos, S.L.; Universidad de Oviedo
Funding entity or bodies:
CESINEL - Compañía Española de Instrumentos Eléctricos, S.L.
Start date: 17/03/2015 **Duration:** 3 months
Total amount: 1.528 €
- 7** **Name of the project:** Análisis de estabilizador de tensión basado en la actuación de un autotransformador bajo diferentes condiciones de carga y alimentación (Ref. FUO-EM-352-14)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
N° of researchers: 8
Participating entity/entities: CESINEL S.L.; Gestión e Innovación en Eficiencia Energética S.L.; Universidad de Oviedo
Funding entity or bodies:
Gestión e Innovación en Eficiencia Energética S.L.
Start date: 24/11/2014 **Duration:** 3 months
Total amount: 5.800 €



- 8** **Name of the project:** Medida de conductividad de muestras de aluminio (Ref. FOU-EM-285-14)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 7
Participating entity/entities: KLK Electro Materiales, S.L.U.; Universidad de Oviedo
Funding entity or bodies:
KLK Electro Materiales, S.L.U. **Type of entity:** Business
Start date: 29/07/2014 **Duration:** 1 year
Total amount: 1.500 €
- 9** **Name of the project:** Supervisión del proceso de evaluación técnica del proyecto: 1801 CTA 747 SHARE - Sistema híbrido de almacenamiento para redes eléctricas (Ref. FOU-EM-168-14)
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Cano, José M.
Nº of researchers: 1
Participating entity/entities: AENOR; Universidad de Oviedo
Funding entity or bodies:
AENOR **Type of entity:** Associations and Groups
City funding entity: Madrid, Spain
Start date: 26/05/2014 **Duration:** 10 days
Total amount: 150 €
- 10** **Name of the project:** Evaluación de Contenido y 1ª Ejecución del ejercicio 2012 del proyecto 238.109 de la empresa (ABB) Asea Brown Boveri, S.A., titulado "Desarrollo de sistema de control completo para grandes subestaciones eléctricas con regulación por comunicaciones", actuando como Experto Técnico. (Ref. FOU-EM-058-14)
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Cano, José M.
Nº of researchers: 1
Participating entity/entities: EQA; Universidad de Oviedo
Funding entity or bodies:
EQA
Start date: 02/01/2014 **Duration:** 364 days
Total amount: 750 €
- 11** **Name of the project:** Análisis de la distorsión armónica en la factoría de ArcelorMittal en Tubarao (Brasil) bajo distintas condiciones de operación del sistema de filtrado y diferentes estrategias de laminación (Ref. FOU-EM-310-13)
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Cano, José M.; A. Orcajo, Gonzalo
Nº of researchers: 8
Participating entity/entities: ArcelorMittal España, S.A.; ArcelorMittal Tubarao; Universidad de Oviedo
Funding entity or bodies:
ArcelorMittal España, S.A. **Type of entity:** Business
Start date: 05/10/2013 **Duration:** 8 months - 26 days
Total amount: 18.600 €
- 12** **Name of the project:** Evaluación técnica del proyecto (Informe de contenido y ejecución 2012): DIBADIS12 - Desarrollo de protección diferencial de barras distribuida (Ref. 2000/0931/PIDI/07) (Ref. FOU-EM-108-13)
Degree of contribution: Coordinator of total project, network or consortium



Name principal investigator (PI, Co-PI....): Cano, José M.

Nº of researchers: 1

Participating entity/entities: AENOR; Universidad de Oviedo

Funding entity or bodies:

AENOR

Type of entity: Associations and Groups

City funding entity: Madrid, Spain

Start date: 23/09/2013

Duration: 10 days

Total amount: 600 €

13 Name of the project: La conductividad de muestras de aluminio (Ref. FOU-EM-288-13)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo

Nº of researchers: 7

Participating entity/entities: KLK Electro Materiales, S.L.U.; Universidad de Oviedo

Funding entity or bodies:

KLK Electro Materiales, S.L.U.

Type of entity: Business

Start date: 30/07/2013

Duration: 15 days

Total amount: 600 €

14 Name of the project: Equipos de compensación de energía reactiva altamente eficientes (Ref. FOU-EM-140-13)

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI....): Cano, José M.; A. Orcajo, Gonzalo

Nº of researchers: 7

Participating entity/entities: Efibat Servicios Técnicos S.A.; Universidad de Oviedo

Funding entity or bodies:

Efibat Servicios Técnicos S.A.

Type of entity: Business

Start date: 01/04/2013

Duration: 8 months

Total amount: 6.500 €

15 Name of the project: Supervisión del proceso de evaluación técnica del proyecto: Teka IDi Inducción 2011 (Ref. 2012/0529/PIDI/01) (Ref. FOU-EM-108-13)

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI....): Cano, José M.

Nº of researchers: 1

Participating entity/entities: AENOR; Universidad de Oviedo

Funding entity or bodies:

AENOR

Type of entity: Associations and Groups

City funding entity: Madrid, Spain

Start date: 06/03/2013

Duration: 10 days

Total amount: 150 €

16 Name of the project: Ensayo de continuidad eléctrica en muestras de aluminio y cobre (Ref. FOU-EM-058-13)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo

Nº of researchers: 7

Participating entity/entities: KLK Electro Materiales, S.L.U.; Universidad de Oviedo

Funding entity or bodies:



KLK Electro Materiales, S.L.U.

Type of entity: Business

Start date: 26/01/2013

Duration: 15 days

Total amount: 900 €

- 17 Name of the project:** Impartición del curso "Simulación y medida en accionamientos de motores de corriente alterna" (Ref. FUO-EM-228-12) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI...): G. Melero, Manuel; A. Orcajo, Gonzalo
Nº of researchers: 8
Participating entity/entities: CIFP La Laboral: Centro Integrado de Formación Profesional de los Sectores Industriales y de Servicios; Universidad de Oviedo
Funding entity or bodies:
CIFP La Laboral: Centro Integrado de Formación Profesional de los Sectores Industriales y de Servicios
Start date: 21/05/2012 **Duration:** 4 days
Total amount: 2.940 €
- 18 Name of the project:** Impartición del curso "Simulación y medida en accionamientos de motores de corriente alterna" (Ref. FUO-EM-230-12) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI...): G. Melero, Manuel; A. Orcajo, Gonzalo
Nº of researchers: 8
Participating entity/entities: Fundación EIFOR; Universidad de Oviedo
Funding entity or bodies:
Fundación EIFOR
Start date: 21/05/2012 **Duration:** 4 days
Total amount: 1.960 €
- 19 Name of the project:** Impartición del curso "Simulación y medida en accionamientos de motores de corriente alterna" (Ref. FUO-EM-235-12) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI...): G. Melero, Manuel; A. Orcajo, Gonzalo
Nº of researchers: 8
Participating entity/entities: Centro Integrado de Formación Profesional nº 1 de Santander; Universidad de Oviedo
Funding entity or bodies:
Centro Integrado de Formación Profesional nº 1 de Santander
Start date: 21/05/2012 **Duration:** 4 days
Total amount: 1.960 €
- 20 Name of the project:** Impartición del curso "Simulación y medida en accionamientos de motores de corriente alterna" (Ref. FUO-EM-236-12) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI...): G. Melero, Manuel; A. Orcajo, Gonzalo
Nº of researchers: 8
Participating entity/entities: Instituto de Enseñanza Secundaria as Mercedes de Lugo; Universidad de Oviedo
Funding entity or bodies:
Instituto de Enseñanza Secundaria as Mercedes de Lugo
Start date: 21/05/2012 **Duration:** 4 days



Total amount: 980 €

- 21** **Name of the project:** Ensayos sobre el aislamiento estatórico de seis motores (Ref. FUO-EM-133-12)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel
Nº of researchers: 8
Participating entity/entities: Taller Eléctrico AMG S.L.; Universidad de Oviedo
Funding entity or bodies:
Taller Eléctrico AMG S.L. **Type of entity:** Business
Start date: 21/03/2012 **Duration:** 3 days
Total amount: 184,74 €
- 22** **Name of the project:** Evaluación técnica del proyecto: Aplicación de la tecnología termográfica en las instalaciones eléctricas y vías de desarrollo de esta tecnología dentro de la consultoría energética (Ref. 068/1644) (Ref. FUO-EM-055-12)
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Cano, José M.
Nº of researchers: 1
Participating entity/entities: AENOR; Universidad de Oviedo
Funding entity or bodies:
AENOR **Type of entity:** Associations and Groups
City funding entity: Madrid, Spain
Start date: 01/02/2012 **Duration:** 10 days
Total amount: 700 €
- 23** **Name of the project:** Impartición del curso "Simulación y medida en la monitorización de motores eléctricos" (Ref. FUO-EM-099-12) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel; A. Orcajo, Gonzalo
Nº of researchers: 8
Participating entity/entities: CIFP La Laboral: Centro Integrado de Formación Profesional de los Sectores Industriales y de Servicios; Universidad de Oviedo
Funding entity or bodies:
CIFP La Laboral: Centro Integrado de Formación Profesional de los Sectores Industriales y de Servicios
Start date: 16/01/2012 **Duration:** 4 days
Total amount: 3.240 €
- 24** **Name of the project:** Impartición del curso "Simulación y medida en la monitorización de motores eléctricos" (Ref. FUO-EM-100-12) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel; A. Orcajo, Gonzalo
Nº of researchers: 8
Participating entity/entities: Instituto de Enseñanza Secundaria as Mercedes de Lugo; Universidad de Oviedo
Funding entity or bodies:
Instituto de Enseñanza Secundaria as Mercedes de Lugo
Start date: 16/01/2012 **Duration:** 4 days
Total amount: 1.080 €



- 25** **Name of the project:** Impartición del curso "Simulación y medida en la monitorización de motores eléctricos" (Ref. FUO-EM-101-12) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel; A. Orcajo, Gonzalo
Nº of researchers: 8
Participating entity/entities: Fundación EIFOR; Universidad de Oviedo
Funding entity or bodies:
Fundación EIFOR
Start date: 16/01/2012 **Duration:** 4 days
Total amount: 2.160 €
- 26** **Name of the project:** Impartición del curso "Simulación y medida en la monitorización de motores eléctricos" (Ref. FUO-EM-102-12) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel; A. Orcajo, Gonzalo
Nº of researchers: 8
Participating entity/entities: Centro Integrado de Formación Profesional nº 1 de Santander; Universidad de Oviedo
Funding entity or bodies:
Centro Integrado de Formación Profesional nº 1 de Santander
Start date: 16/01/2012 **Duration:** 4 days
Total amount: 3.240 €
- 27** **Name of the project:** Ensayo de continuidad eléctrica en muestras de aluminio y cobre (Ref. FUO-EM-209-11)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 7
Participating entity/entities: KLK Electro Materiales, S.L.U.; Universidad de Oviedo
Funding entity or bodies:
KLK Electro Materiales, S.L.U. **Type of entity:** Business
Start date: 21/06/2011 **Duration:** 15 days
Total amount: 1.200 €
- 28** **Name of the project:** Proyecto MERO. Asesoramiento tecnológico para la mejora de las medidas eléctricas de ventiladores durante las pruebas de rodaje (Ref. FUO-EM-177-11)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Calleja R. Antonio J.; A. Orcajo, Gonzalo
Nº of researchers: 6
Participating entity/entities: Talleres Zitron, S.A.; Universidad de Oviedo
Funding entity or bodies:
Talleres Zitron, S.A. **Type of entity:** Business
Start date: 03/06/2011 **Duration:** 2 months
Total amount: 3.705,88 €
- 29** **Name of the project:** Análisis de la calidad del suministro eléctrico en la terminal de descarga Cabo Poriño (Ref. FUO-EM-057-11)
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Cano, José M.; A. Orcajo, Gonzalo
Nº of researchers: 7



Participating entity/entities: Duro Felguera Plantas Industriales S.A.; Universidad de Oviedo

Funding entity or bodies:

Duro Felguera Plantas Industriales S.A.

Type of entity: Business

Start date: 26/01/2011

Duration: 2 months

Total amount: 6.800 €

30 Name of the project: Detailed design of ITER representative equatorial port plug (Ref. FUO-EM-039-11)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Rojas, Carlos

Nº of researchers: 7

Participating entity/entities: Fusion for Energy; NRG Energy Inc.; Numerical Analysis Technologies S.L. (NATEC Ingenieros); Universidad de Oviedo

Funding entity or bodies:

Numerical Analysis Technologies S.L. (NATEC Ingenieros)

Start date: 10/01/2011

Duration: 7 months - 22 days

Total amount: 1.000 €

31 Name of the project: Ensayos de continuidad eléctrica en muestras de aluminio y cobre (Ref. FUO-EM-282-10)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo

Nº of researchers: 7

Participating entity/entities: KLK Electro Materiales, S.L.U.; Universidad de Oviedo

Funding entity or bodies:

KLK Electro Materiales, S.L.U.

Type of entity: Business

Start date: 13/11/2010

Duration: 15 days

Total amount: 450 €

32 Name of the project: Asesoramiento en la búsqueda de soluciones de alta fiabilidad y mínimo impacto en calidad de la energía en el campo de los detectores de presencia por infrarrojos pasivos (Ref. FUO-EM-397-10)

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI....): Cano, José M.; A. Orcajo, Gonzalo

Nº of researchers: 7

Participating entity/entities: Temper S.A.U.; Universidad de Oviedo

Funding entity or bodies:

Temper S.A.U.

Type of entity: Business

Start date: 01/08/2010

Duration: 5 months

Total amount: 18.000 €

33 Name of the project: Ensayo de continuidad eléctrica en muestras de aluminio (Ref. FUO-EM-225-10)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo

Nº of researchers: 7

Participating entity/entities: KLK Electro Materiales, S.L.U.; Universidad de Oviedo

Funding entity or bodies:

KLK Electro Materiales, S.L.U.

Type of entity: Business

Start date: 01/07/2010

Duration: 15 days

Total amount: 450 €



- 34** **Name of the project:** MICROPOT. Diseño de un sistema que asegure la calidad del agua en áreas de difícil acceso, energéticamente autónomo y que utilice un recurso renovable (energía hidráulica) (Ref. FUO-EM-343-10)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pedrayes G., Francisco; Santolaria M., Carlos
Nº of researchers: 9
Participating entity/entities: Sogener S.D.S.; Universidad de Oviedo
Funding entity or bodies:
Sogener S.D.S.
Start date: 30/06/2010 **Duration:** 6 months
Total amount: 27.000 €
- 35** **Name of the project:** Medida de conductividad eléctrica de unas muestras de material conductor de aluminio (Ref. FUO-EM-115-10)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 7
Participating entity/entities: KLK Electro Materiales, S.L.U.; Universidad de Oviedo
Funding entity or bodies:
KLK Electro Materiales, S.L.U. **Type of entity:** Business
Start date: 27/02/2010 **Duration:** 15 days
Total amount: 150 €
- 36** **Name of the project:** Ensayo de continuidad eléctrica en muestras de aluminio (Ref. FUO-EM-007-10)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 7
Participating entity/entities: KLK Electro Materiales, S.L.U.; Universidad de Oviedo
Funding entity or bodies:
KLK Electro Materiales, S.L.U. **Type of entity:** Business
Start date: 03/01/2010 **Duration:** 15 days
Total amount: 150 €
- 37** **Name of the project:** Validación para la mejora energética del TBC (Ref. FUO-EM-307-09)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Briz del Blanco, Fernando; José M. Cano; Gonzalo A. Orcajo
Nº of researchers: 8
Participating entity/entities: ArcelorMittal España, S.A.; Universidad de Oviedo
Funding entity or bodies:
ArcelorMittal España, S.A. **Type of entity:** Business
Start date: 04/11/2009 **Duration:** 4 months - 27 days
Total amount: 10.000 €
- 38** **Name of the project:** Ensayo de continuidad eléctrica en muestras de aluminio (Ref. FUO-EM-189-09)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 7
Participating entity/entities: KLK Electro Materiales, S.L.U.; Universidad de Oviedo

**Funding entity or bodies:**

KLK Electro Materiales, S.L.U.

Type of entity: Business**Start date:** 24/06/2009**Duration:** 15 days**Total amount:** 150 €

- 39 Name of the project:** Asesoramiento en la búsqueda de soluciones de alta fiabilidad y mínimo impacto en calidad de la energía en el campo de los detectores de presencia por infrarrojos pasivos (Ref. FUO-EM-175-09)

Degree of contribution: Coordinator of total project, network or consortium**Name principal investigator (PI, Co-PI...):** Cano, José M.; A. Orcajo, Gonzalo**Nº of researchers:** 7**Participating entity/entities:** Temper S.A.U.; Universidad de Oviedo**Funding entity or bodies:**

Temper S.A.U.

Type of entity: Business**Start date:** 16/06/2009**Duration:** 6 months - 15 days**Total amount:** 18.000 €

- 40 Name of the project:** Diagnóstico energético de la planta de Danima Ingeniería Ambiental S.A. (Ref. FUO-EM-288-09)

Degree of contribution: Researcher**Name principal investigator (PI, Co-PI...):** A. Orcajo, Gonzalo; G. Melero, Manuel**Nº of researchers:** 7**Participating entity/entities:** Danima Ingeniería Ambiental S.A.; Oxígeno Empresarial S.L.; Universidad de Oviedo**Funding entity or bodies:**

Oxígeno Empresarial S.L.

Start date: 01/05/2009**Duration:** 4 months**Total amount:** 2.200 €

- 41 Name of the project:** Ampliación del convenio de colaboración para la ejecución del proyecto en cooperación "CTEYE. Equipo de control para detección de fallos en centros de transformación urbanos" (Ref. FUO-EM-030-09)

Degree of contribution: Coordinator of total project, network or consortium**Name principal investigator (PI, Co-PI...):** Cano, José M.; A. Orcajo, Gonzalo**Nº of researchers:** 7**Participating entity/entities:** Aplicaciones de Control y Automatización, S.A.; Hidrocantábrico Distribución Eléctrica, S.A.U.; Universidad de Oviedo**Funding entity or bodies:**

Aplicaciones de Control y Automatización, S.A.

Type of entity: Business

Hidrocantábrico Distribución Eléctrica, S.A.U.

Type of entity: Business**Start date:** 01/01/2009**Duration:** 2 years**Total amount:** 52.173,72 €

- 42 Name of the project:** Ensayo de continuidad eléctrica en muestras de una catenaria (Ref. FUO-EM-325-08)

Degree of contribution: Researcher**Name principal investigator (PI, Co-PI...):** A. Orcajo, Gonzalo**Nº of researchers:** 7**Participating entity/entities:** KLK Electro Materiales, S.L.U.; Universidad de Oviedo**Funding entity or bodies:**



KLK Electro Materiales, S.L.U.

Type of entity: Business

Start date: 28/11/2008

Duration: 15 days

Total amount: 150 €

43 Name of the project: Análisis de las causas del segundo fallo ocurrido en el transformador ALSTOM ATT 316038 perteneciente a las instalaciones de San Juan de Nieva de la empresa Asturiana de Zinc S.A. (Ref. FUO-EM-228-08)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Gonzalo A. Orcajo; José M. Cano; Carlos Rojas; Manuel G. Melero; F. Cabanas, Manés; Francisco Pedrayes

Nº of researchers: 6

Participating entity/entities: ASEVASA, Asesoramiento y Valoraciones S.A.U.; Asturina de Zinc S.A.; Universidad de Oviedo

Funding entity or bodies:

ASEVASA, Asesoramiento y Valoraciones S.A.U.

Type of entity: Business

Start date: 01/10/2008

Duration: 4 months

Total amount: 13.500 €

44 Name of the project: Evaluación y análisis de las causas del segundo fallo ocurrido en el transformador ALSTOM ATT 316037 perteneciente a las instalaciones de San Juan de Nieva de la empresa Asturiana de Zinc S.A. (Ref. FUO-EM-227-08)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Gonzalo A. Orcajo; José M. Cano; Carlos Rojas; Manuel G. Melero; F. Cabanas, Manés; Francisco Pedrayes

Nº of researchers: 6

Participating entity/entities: ASEVASA, Asesoramiento y Valoraciones S.A.U.; Asturina de Zinc S.A.; Universidad de Oviedo

Funding entity or bodies:

ASEVASA, Asesoramiento y Valoraciones S.A.U.

Type of entity: Business

Start date: 01/10/2008

Duration: 4 months

Total amount: 13.500 €

45 Name of the project: Diagnóstico del estado de funcionamiento de un ventilador de tiro inducido perteneciente a la Central Térmica de La Pereda de la empresa HUNOSA (Ref. FUO-EM-146-08)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Rojas, Carlos

Nº of researchers: 6

Participating entity/entities: Hulleras del Norte S.A.; Taller Eléctrico AMG S.L.; Universidad de Oviedo

Funding entity or bodies:

Taller Eléctrico AMG S.L.

Type of entity: Business

Start date: 25/05/2008

Duration: 2 months

Total amount: 224 €

46 Name of the project: Análisis del sistema aislante de bobinas y motor de media tensión pertenecientes a la CTCC Castellón de la empresa IBERDROLA S.A. (Ref. FUO-EM-112-08)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Rojas, Carlos

Nº of researchers: 6

Participating entity/entities: IBERDROLA S.A.; Taller Eléctrico AMG S.L.; Universidad de Oviedo

Funding entity or bodies:



Taller Eléctrico AMG S.L.

Type of entity: Business

Start date: 04/04/2008

Duration: 3 months

Total amount: 369,6 €

47 Name of the project: Prórroga del contrato "Asesoramiento en la búsqueda de soluciones comerciales para la mejora de la calidad del suministro eléctrico" (Ref. FUO-EM-327-08)

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI...): Cano, José M.; A. Orcajo, Gonzalo

Nº of researchers: 6

Participating entity/entities: Temper S.A.U.; Universidad de Oviedo

Funding entity or bodies:

Temper S.A.U.

Type of entity: Business

Start date: 01/01/2008

Duration: 1 year

Total amount: 18.000 €

48 Name of the project: Convenio de colaboración para la ejecución del proyecto en cooperación "CTEYE. Equipo de control para detección de fallos en centros de transformación urbanos" (Ref. FUO-EM-085-08)

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI...): Cano, José M.; A. Orcajo, Gonzalo

Nº of researchers: 6

Participating entity/entities: Aplicaciones de Control y Automatización, S.A.; Hidrocantábrico Distribución Eléctrica, S.A.U.; Universidad de Oviedo

Funding entity or bodies:

Aplicaciones de Control y Automatización, S.A.

Type of entity: Business

Hidrocantábrico Distribución Eléctrica, S.A.U.

Type of entity: Business

Start date: 17/12/2007

Duration: 1 year - 13 days

Total amount: 18.304 €

49 Name of the project: Elaboración de informe técnico para el análisis de las causas de fallo del transformador ALSTOM ATT 3160318 perteneciente a las instalaciones de San Juan de Nieva de la empresa Asturiana de Zinc S.A. (Ref. FUO-EM-009-08)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI...): Gonzalo A. Orcajo; José M. Cano; Carlos Rojas; Manuel G. Melero; F. Cabanas, Manés; Francisco Pedrayes

Nº of researchers: 6

Participating entity/entities: ASEVASA, Peritaciones e Ingeniería de Riesgos; Asturiana de Zinc S.A.; Universidad de Oviedo

Funding entity or bodies:

ASEVASA, Peritaciones e Ingeniería de Riesgos

Type of entity: Business

Start date: 10/12/2007

Duration: 4 months

Total amount: 18.000 €

50 Name of the project: Análisis y evaluación del estado del aislamiento estático de motores de inducción de media tensión (Ref. FUO-EM-253-07)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI...): G. Melero, Manuel

Nº of researchers: 6

Participating entity/entities: Taller Eléctrico AMG S.L.; Universidad de Oviedo

Funding entity or bodies:



Taller Eléctrico AMG S.L.

Type of entity: Business

Start date: 04/12/2007

Duration: 3 months

Total amount: 672 €

51 Name of the project: Asesoramiento en el diagnóstico del estado del aislamiento estatórico de motores de inducción de central térmica (Ref. FUO-EM-197-07)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): G. Melero, Manuel

Nº of researchers: 6

Participating entity/entities: Taller Eléctrico AMG S.L.; Universidad de Oviedo

Funding entity or bodies:

Taller Eléctrico AMG S.L.

Type of entity: Business

Start date: 01/06/2007

Duration: 3 months

Total amount: 672 €

52 Name of the project: Análisis de motores de inducción para el accionamiento de pasarelas de embarque en aeronaves (Ref. FUO-EM-273-07)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): G. Melero, Manuel

Nº of researchers: 6

Participating entity/entities: ThyssenKrupp Elevator Innovation Center; Universidad de Oviedo

Funding entity or bodies:

ThyssenKrupp Elevator Innovation Center

Type of entity: Innovation and Technology Centres

Start date: 12/04/2007

Duration: 3 months

Total amount: 1.400 €

53 Name of the project: Estudio comparativo de motores de inducción de baja tensión para accionamiento de cargas tipo escalera mecánica (Ref. FUO-EM-063-07)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Rojas, Carlos

Nº of researchers: 5

Participating entity/entities: ThyssenKrupp Norte, S.A.; Universidad de Oviedo

Funding entity or bodies:

ThyssenKrupp Norte, S.A.

Type of entity: Business

Start date: 27/03/2007

Duration: 8 months

Total amount: 825,84 €

54 Name of the project: Prórroga del contrato "Asesoramiento en la búsqueda de soluciones comerciales para la mejora de la calidad del suministro eléctrico" (Ref. FUO-EM-243-07)

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI....): Cano, José M.; A. Orcajo, Gonzalo

Nº of researchers: 6

Participating entity/entities: Temper S.A.U.; Universidad de Oviedo

Funding entity or bodies:

Temper S.A.U.

Type of entity: Business

Start date: 01/01/2007

Duration: 1 year

Total amount: 18.000 €



- 55** **Name of the project:** Ensayo de continuidad eléctrica en bandeja tipo escalera (Ref. FUO-EM-166-06)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 6
Participating entity/entities: KLK Electro Materiales, S.L.U.; Universidad de Oviedo
Funding entity or bodies:
KLK Electro Materiales, S.L.U. **Type of entity:** Business
Start date: 21/12/2006 **Duration:** 10 days
Total amount: 150 €
- 56** **Name of the project:** Análisis del proceso de fabricación de bobinas para motor multipolar de 6 kV (Ref. FUO-EM-084-06)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel
Nº of researchers: 6
Participating entity/entities: Talleres Electromecánicos Monge S.L.; Universidad de Oviedo
Funding entity or bodies:
Talleres Electromecánicos Monge S.L. **Type of entity:** Business
Start date: 27/10/2006 **Duration:** 2 months - 5 days
Total amount: 1.800 €
- 57** **Name of the project:** Diagnóstico de bobinas para motor de 6 kV y 900 CV (Ref. FUO-EM-066-06)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel
Nº of researchers: 6
Participating entity/entities: Talleres Electromecánicos Monge S.L.; Universidad de Oviedo
Funding entity or bodies:
Talleres Electromecánicos Monge S.L. **Type of entity:** Business
Start date: 11/04/2006 **Duration:** 8 months - 20 days
Total amount: 1.518 €
- 58** **Name of the project:** Prórroga del contrato "Asesoramiento en la búsqueda de soluciones comerciales para la mejora de la calidad del suministro eléctrico" (Ref. FUO-EM-228-06)
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Cano, José M.; A. Orcajo, Gonzalo
Nº of researchers: 6
Participating entity/entities: Temper S.A.U.; Universidad de Oviedo
Funding entity or bodies:
Temper S.A.U. **Type of entity:** Business
Start date: 01/01/2006 **Duration:** 1 year
Total amount: 6.600 €
- 59** **Name of the project:** Análisis del proceso de fabricación de bobinas de un motor de 5000 V y 7000 CV mediante ensayos eléctricos (Ref. FUO-EM-013-06)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel
Nº of researchers: 6
Participating entity/entities: Talleres Electromecánicos Monge S.L.; Universidad de Oviedo
Funding entity or bodies:



Talleres Electromecánicos Monge S.L.

Type of entity: Business

Start date: 10/12/2005

Duration: 15 days

Total amount: 1.424 €

60 Name of the project: Caracterización del estado del aislamiento estatórico de un motor de 6000 V y 620 CV mediante ensayos de tangente delta y de descargas parciales (Ref. FUO-EM-012-06)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): G. Melero, Manuel

Nº of researchers: 6

Participating entity/entities: Talleres Electromecánicos Monge S.L.; Universidad de Oviedo

Funding entity or bodies:

Talleres Electromecánicos Monge S.L.

Type of entity: Business

Start date: 25/11/2005

Duration: 15 days

Total amount: 840 €

61 Name of the project: Control de calidad de fabricación de bobinas preformadas para motores de media tensión (Ref. FUO-EM-107-05)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Rojas, Carlos

Nº of researchers: 5

Participating entity/entities: Taller Eléctrico AMG S.L.; Universidad de Oviedo

Funding entity or bodies:

Taller Eléctrico AMG S.L.

Type of entity: Business

Start date: 27/04/2005

Duration: 1 month

Total amount: 369,6 €

62 Name of the project: Ensayos sobre el aislante de motores de media tensión perteneciente a la Central Térmica Soto de Ribera de la empresa Hidroeléctrica del Cantábrico S.A. (Ref. FUO-EM-066-05)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Rojas, Carlos

Nº of researchers: 5

Participating entity/entities: Hidroeléctrica del Cantábrico S.A.; Taller Eléctrico AMG S.L.; Universidad de Oviedo

Funding entity or bodies:

Taller Eléctrico AMG S.L.

Type of entity: Business

Start date: 27/04/2005

Duration: 1 month

Total amount: 672 €

63 Name of the project: Ampliación de las pruebas experimentales y de validación de prototipos. (Ref. FUO-EM-017-04 - Addenda)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Gonzalo A. Orcajo; José M. Cano; Carlos Rojas; Manuel G. Melero; F. Cabanas, Manés

Nº of researchers: 5

Participating entity/entities: TSK Electrónica y Electricidad S.A; Universidad de Oviedo

Funding entity or bodies:

TSK Electrónica y Electricidad S.A

Type of entity: Business

Start date: 01/01/2005

Duration: 3 months

Total amount: 15.000 €



- 64** **Name of the project:** Impartición para Cementos Alfa S.L. del curso: "Aspectos constructivos y de funcionamiento relacionados con el diagnóstico y mantenimiento de máquinas eléctricas rotativas" (Ref. FUO-EM-098-04) - 12 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel
Nº of researchers: 5
Participating entity/entities: Cementos Alfa S.A.; Equilibrados Dinámicos S.L.; Universidad de Oviedo
Funding entity or bodies:
Equilibrados Dinámicos S.L. **Type of entity:** Business
Start date: 23/06/2004 **Duration:** 2 days
Total amount: 1.024,8 €
- 65** **Name of the project:** Ensayos de diagnóstico del aislamiento estático en motores de 1200, 500 y 450 CV (Ref. FUO-EM-101-04)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel
Nº of researchers: 5
Participating entity/entities: Talleres Electromecánicos Monge S.L.; Universidad de Oviedo
Funding entity or bodies:
Talleres Electromecánicos Monge S.L.
Start date: 19/06/2004 **Duration:** 3 days
Total amount: 605 €
- 66** **Name of the project:** Medidas de pérdidas dieléctricas en un motor asíncrono de media tensión perteneciente a la Central Térmica de La Pereda de la empresa HUNOSA (Ref. FUO-EM-094-04)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Rojas, Carlos
Nº of researchers: 5
Participating entity/entities: Hulleras del Norte S.A. (HUNOSA); Taller Eléctrico AMG S.L.; Universidad de Oviedo
Funding entity or bodies:
Taller Eléctrico AMG S.L. **Type of entity:** Business
Start date: 22/05/2004 **Duration:** 1 month
Total amount: 201,6 €
- 67** **Name of the project:** Impartición para ABB del curso: "Técnicas de medida de las descargas parciales para el diagnóstico del aislamiento estático de motores de media tensión" (Ref. FUO-EM-097-04) - 12 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): G. Melero, Manuel
Nº of researchers: 5
Participating entity/entities: ABB; Equilibrados Dinámicos S.L.; Universidad de Oviedo
Funding entity or bodies:
Equilibrados Dinámicos S.L. **Type of entity:** Business
Start date: 13/05/2004 **Duration:** 2 days
Total amount: 1.000 €
- 68** **Name of the project:** Medidas de pérdidas dieléctricas en tres motores asíncronos de media tensión pertenecientes a la Central Térmica Soto de Ribera de la empresa Hidroeléctrica del Cantábrico S.A. (Ref. FUO-EM-080-04)



Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Rojas, Carlos

Nº of researchers: 5

Participating entity/entities: Hidroeléctrica del Cantábrico S.A.; Taller Eléctrico AMG S.L.; Universidad de Oviedo

Funding entity or bodies:

Taller Eléctrico AMG S.L.

Type of entity: Business

Start date: 06/05/2004

Duration: 1 month

Total amount: 604,8 €

69 Name of the project: Asesoramiento en la búsqueda de soluciones comerciales para la mejora de la calidad del suministro eléctrico (Ref. FUO-EM-103-04)

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI....): Cano, José M.; A. Orcajo, Gonzalo

Nº of researchers: 5

Participating entity/entities: Temper S.A.U.; Universidad de Oviedo

Funding entity or bodies:

Temper S.A.U.

Type of entity: Business

Start date: 01/05/2004

Duration: 1 year - 8 months

Total amount: 31.034,5 €

70 Name of the project: Impartición del curso: "Perturbaciones conducidas de baja frecuencia en sistemas eléctricos de potencia. Prevención y corrección." (Ref. FUO-EM-102-04) - 20 horas

Degree of contribution: Coordinator of total project, network or consortium

Name principal investigator (PI, Co-PI....): Cano, José M.

Nº of researchers: 5

Participating entity/entities: Temper S.A.U.; Universidad de Oviedo

Funding entity or bodies:

Temper S.A.U.

Type of entity: Business

Start date: 16/04/2004

Duration: 10 days

Total amount: 2.800 €

71 Name of the project: Reforma de los circuitos de fuerza y mando de un sistema tipo puente grúa (Ref. FUO-EM-073-04)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Rojas, Carlos

Nº of researchers: 5

Participating entity/entities: Equilibrados Dinámicos S.L.; Universidad de Oviedo

Funding entity or bodies:

Equilibrados Dinámicos S.L.

Type of entity: Business

Start date: 17/03/2004

Duration: 6 months

Total amount: 300 €

72 Name of the project: Ensayo de aislamiento en motores de media tensión pertenecientes a la empresa Cementos Cosmos S.A. (Ref. FUO-EM-054-04)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Rojas, Carlos

Nº of researchers: 5

Participating entity/entities: Cementos Cosmos S.A.; Talleres Electromecánicos Monge S.L.; Universidad de Oviedo

**Funding entity or bodies:**

Talleres Electromecánicos Monge S.L.

Type of entity: Business**Start date:** 19/02/2004**Duration:** 1 month**Total amount:** 520 €

- 73 Name of the project:** I+D de sistemas de diagnóstico, supervisión y control del estado de redes, máquinas eléctricas de potencia e instalaciones eléctricas con equipo de comunicaciones. (Ref. FUO-EM-017-04)

Degree of contribution: Researcher**Name principal investigator (PI, Co-PI...):** Gonzalo A. Orcajo; José M. Cano; Carlos Rojas; Manuel G. Melero; F. Cabanas, Manés**Nº of researchers:** 5**Participating entity/entities:** TSK Electrónica y Electricidad S.A; Universidad de Oviedo**Funding entity or bodies:**

TSK Electrónica y Electricidad S.A

Type of entity: Business**Start date:** 01/01/2004**Duration:** 1 year**Total amount:** 105.000 €

- 74 Name of the project:** Ensayo de aislamiento en máquinas de media tensión pertenecientes a la empresa Bridgestone/Firestone (Ref. FUO-EM-007-04)

Degree of contribution: Researcher**Name principal investigator (PI, Co-PI...):** Rojas, Carlos**Nº of researchers:** 5**Participating entity/entities:** Bridgestone/Firestone Hispania, S.A.; Equilibrados Dinámicos S.L.; Universidad de Oviedo**Funding entity or bodies:**

Equilibrados Dinámicos S.L.

Type of entity: Business**Start date:** 27/12/2003**Duration:** 1 month**Total amount:** 300 €

- 75 Name of the project:** Asesoramiento en la búsqueda de soluciones comerciales para la mejora de la calidad del suministro eléctrico (Ref. FUO-EM-69-03)

Degree of contribution: Researcher**Name principal investigator (PI, Co-PI...):** A. Orcajo, Gonzalo**Nº of researchers:** 5**Participating entity/entities:** Temper S.A.; Universidad de Oviedo**Funding entity or bodies:**

Temper S.A.

Start date: 16/07/2003**Duration:** 8 months - 18 days**Total amount:** 4.200 €

- 76 Name of the project:** Ensayo de medida de tangente delta sobre motores de inducción de media tensión (Ref. FUO-EM-081-03)

Degree of contribution: Researcher**Name principal investigator (PI, Co-PI...):** Rojas, Carlos**Nº of researchers:** 5**Participating entity/entities:** Taller Eléctrico AMG S.L.; Universidad de Oviedo**Funding entity or bodies:**

Taller Eléctrico AMG S.L.

Type of entity: Business**Start date:** 21/05/2003**Duration:** 2 days



Total amount: 448 €

- 77** **Name of the project:** Asesoría Técnica para el Mercado CE de equipos de refrigeración industrial (Ref. FUO-EM-032-03)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Rojas, Carlos
Nº of researchers: 5
Participating entity/entities: Trabadelo Bengoa S.L.; Universidad de Oviedo
Funding entity or bodies:
Trabadelo Bengoa S.L. **Type of entity:** Business
Start date: 05/03/2003 **Duration:** 6 months
Total amount: 2.100 €
- 78** **Name of the project:** Impartición del curso: "Perturbaciones conducidas de baja frecuencia en sistemas eléctricos de potencia. Prevención y corrección." (Ref. FUO-EM-069-02) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 5
Participating entity/entities: Phoenix Contact S.A.; Universidad de Oviedo
Funding entity or bodies:
Phoenix Contact S.A. **Type of entity:** Business
Start date: 20/05/2002 **Duration:** 10 days
Total amount: 925 €
- 79** **Name of the project:** Impartición del curso: "Perturbaciones conducidas de baja frecuencia en sistemas eléctricos de potencia. Prevención y corrección." (Ref. FUO-EM-070-02) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 5
Participating entity/entities: Temper S.A.; Universidad de Oviedo
Funding entity or bodies:
Temper S.A. **Type of entity:** Business
Start date: 20/05/2002 **Duration:** 10 days
Total amount: 1.050 €
- 80** **Name of the project:** Impartición del curso: "Perturbaciones conducidas de baja frecuencia en sistemas eléctricos de potencia. Prevención y corrección." (Ref. FUO-EM-071-02) - 20 horas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo
Nº of researchers: 5
Participating entity/entities: Servicios y Finanzas Temper S.L.; Universidad de Oviedo
Funding entity or bodies:
Servicios y Finanzas Temper S.L. **Type of entity:** Business
Start date: 20/05/2002 **Duration:** 10 days
Total amount: 925 €
- 81** **Name of the project:** Comportamiento en frecuencia de la instalación eléctrica prevista para la realización de ensayos de transformadores en la empresa ABB Trafo Sur, S.A. (Ref. CN-00-086-B1)
Degree of contribution: Researcher



Name principal investigator (PI, Co-PI....): A. Orcajo, Gonzalo

Nº of researchers: 4

Participating entity/entities: ABB Trafo Sur, S.A.; Universidad de Oviedo

Funding entity or bodies:

ABB Trafo Sur, S.A.

Type of entity: Business

Start date: 09/03/2000

Duration: 15 days

Total amount: 901,65 €

82 Name of the project: Impartición del curso "Métodos convencionales y nuevos para la monitorización y el diagnóstico de máquinas eléctricas rotativas" (Ref. CN-99-104-C1) - 24 horas

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): G. Melero, Manuel

Nº of researchers: 4

Participating entity/entities: ABB Service S.A.; Universidad de Oviedo

Funding entity or bodies:

ABB Service S.A.

Start date: 07/04/1999

Duration: 3 days

Total amount: 1.951,16 €

83 Name of the project: Impartición del curso "Técnicas para el diagnóstico de fallos incipientes en máquinas eléctricas rotativas" (Ref. CN-98-073-C1) - 24 horas

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Manuel G. Melero; Manés F. Cabanas; Gonzalo A. Orcajo; José M. Cano

Nº of researchers: 4

Participating entity/entities: ABB Service S.A.; Universidad de Oviedo

Funding entity or bodies:

ABB Service S.A.

Start date: 20/02/1998

Duration: 3 days

Total amount: 4.631,24 €

84 Name of the project: Impartición del curso "Nuevas técnicas para el mantenimiento predictivo de máquinas eléctricas rotativas" (Ref. CN-97-146-C1) - 24 horas

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Manuel G. Melero; Manés F. Cabanas; Gonzalo A. Orcajo; Jose M. Cano

Nº of researchers: 4

Participating entity/entities: ABB Service S.A.; Universidad de Oviedo

Funding entity or bodies:

ABB Service S.A.

Start date: 05/09/1997

Duration: 3 days

Total amount: 3.702,26 €

85 Name of the project: Análisis electromecánico para los sistemas de tracción eléctrica para escaleras automáticas de Thyssen Norte, S.A. (Ref. CN-97-078-B1)

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): F. Cabanas, Manés

Nº of researchers: 5

Participating entity/entities: Thyssen Norte S.A.; Universidad de Oviedo

Funding entity or bodies:



Thyssen Norte, S.A.

Type of entity: Business

Start date: 24/04/1997

Duration: 3 months

Total amount: 5.106,2 €

Results

Industrial and intellectual property

- Title registered industrial property:** Equipo y Método de Detección de Fusión de Fusibles en las Salidas de Baja Tensión en Centros de Transformación Urbanos

Type of industrial property: Patent of invention

Inventors/authors/obtainers: A. Orcajo, Gonzalo; Cano, José M.; G. Norriella, Joaquín; F. Cabanas, Manés; Rojas, Carlos H.; G. Melero, Manuel; Pedrayes G., Francisco; F. García-Jove, Nixen A.; Lastra Cueva, Miguel; Pérez López, Miguel A.; Rivas Ardisana, María; Sánchez Corrales, Carlos; Del Rosal, Pedro M.

Entity holder of rights: Hidrocantábrico Distribución Eléctrica S.A. (50%) y Aplicaciones de Control y Automatización, S.A. (50%)

Country of inscription: Spain

Date of register: 26/11/2010

Conferral date: 04/06/2013

Spanish patent: Yes **EU patent:** No

Companies: Grupo Isastur; Hidrocantábrico Distribución Eléctrica, S.A.
- Title registered industrial property:** Sistema Modular de Paneles de Entrenamiento para Ingeniería Eléctrica

Type of industrial property: Utility model

Inventors/authors/obtainers: G. Melero, Manuel; A. Orcajo, Gonzalo; G. Norriella, Joaquín; F. Cabanas, Manés; Rojas, Carlos H.; Cano, José M.; Pedrayes G., Francisco

Entity holder of rights: Universidad de Oviedo

Country of inscription: Spain

Date of register: 06/05/2011

Spanish patent: Yes **EU patent:** No

Companies: Electrónica EDIMAR S.L.
- Title registered industrial property:** Squirrel Cage Asynchronous Motor and Fault Detection Method Therefor

Type of industrial property: Patent of invention

Inventors/authors/obtainers: Pedrayes G., Francisco; Ruiz, Myriam; F. Cabanas, Manés; G. Melero, Manuel; Rojas, Carlos H.; A. Orcajo, Gonzalo; Cano, José M.

Entity holder of rights: TSK Electrónica y Electricidad – Grupo TSK

Reference/registry code: PCT/ES2004/000467 **Nº of application:** PCT/ES2004/000467

Country of inscription: Spain

Date of register: 26/10/2004

Conferral date: 05/01/2011

Spanish patent: No **EU patent:** Yes

Companies: TSK Electrónica y Electricidad – Grupo TSK



- 4 Title registered industrial property:** Programa Informático KOMBISMART
Type of industrial property: Programa registrado
Inventors/authors/obtainers: Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos H.; G. Melero, Manuel; F. Cabanas, Manés; Pedrayes G., Francisco
Entity holder of rights: Universidad de Oviedo
Reference/registry code: 05/2007/51 **Nº of application:** 05/2007/51
Country of inscription: Spain
Date of register: 22/02/2007
Licences: Yes
Companies: TEMPER S.A.U.
- 5 Title registered industrial property:** Aplicación de los Automatas Programables al Mantenimiento y Protección de Motores Eléctricos
Type of industrial property: Patent of invention
Inventors/authors/obtainers: G. Melero, Manuel; Rodríguez Villalba, Luis A.; F. Cabanas, Manés; A. Orcajo, Gonzalo; Pérez Vázquez, José F.; Cano, José M.
Entity holder of rights: Universidad de Oviedo
Country of inscription: Spain
Date of register: 29/07/1997
Conferral date: 01/04/1999
Spanish patent: Yes **EU patent:** No
Companies: Universidad de Oviedo

Results derived from specialized and transfer activities, not included in previous sections

Description: Entre los contratos celebrados con entidades privadas se han incluido la organización y/o impartición de 7 cursos a empresas. Se ruega consultar los detalles en dicho apartado.

Scientific and technological activities

Scientific production

- 1 H index:** 17
Date of application: 10/03/2026
Source of H-Index: WOS
- 2 H index:** 24
Date of application: 10/03/2026
Source of H-Index: GOOGLE SCHOLAR
- 3 H index:** 20
Date of application: 10/03/2026
Source of H-Index: SCOPUS

Publications, scientific and technical documents

- 1** Fajardo, Valeria; A. Orcajo, Gonzalo; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Rojas, Carlos H.. Effect of Photovoltaic Generation on Frequency Stability in Steelworks with Electric Arc Furnaces. IEEE Transactions on Industry Applications. pp. 1 - 11. (United States of America): IEEE, 12/2025. ISSN 0093-9994
DOI: 10.1109/TIA.2025.3605899
Type of production: Scientific paper
Position of signature: 3
Total no. authors: 6
Impact source: WOS (JCR)
Impact index in year of publication: 4.5 (2024 JCR SE)
Position of publication: 27
Impact source: WOS (JCR)
Impact index in year of publication: 4.5 (2024 JCR SE)
Position of publication: 98
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 175
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: No
No. of journals in the cat.: 366
- 2** Alsyoufi, Yamen; Cano, José M.; A. Orcajo, Gonzalo; Piedra, José Manuel. Decentralized Real-time State Estimation in European-type LV Grids: an Implementation Using Edge Computing. IEEE Transactions on Industry Applications. 61 - 4, pp. 5571 - 5584. (United States of America): IEEE, 08/2025. ISSN 0093-9994
DOI: 10.1109/TIA.2025.3544576
Type of production: Scientific paper
Position of signature: 2
Total no. authors: 4
Impact source: WOS (JCR)
Impact index in year of publication: 4.5 (2024 JCR SE)
Position of publication: 27
Impact source: WOS (JCR)
Impact index in year of publication: 4.5 (2024 JCR SE)
Position of publication: 98
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: Yes
Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY
Journal in the top 25%: Yes
No. of journals in the cat.: 175
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: No
No. of journals in the cat.: 366
- 3** A. Orcajo, Gonzalo; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Rojas, Carlos; Rodríguez D., Josué. Hybridization of Distributed Energy Resources in a Steelworks. IEEE Transactions on Industry Applications. 60 - 5, pp. 7919 - 7929. (United States of America): IEEE, 09/2024. ISSN 0093-9994
DOI: 10.1109/TIA.2024.3412871
Type of production: Scientific paper
Position of signature: 2
Total no. authors: 6
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No



Impact source: WOS (JCR)

Impact index in year of publication: 4.5 (2024 JCR SE)

Position of publication: 27

Impact source: WOS (JCR)

Impact index in year of publication: 4.5 (2024 JCR SE)

Position of publication: 98

Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY

Journal in the top 25%: Yes

No. of journals in the cat.: 175

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: No

No. of journals in the cat.: 366

- 4** Navarro, Ángel; García, Pablo; Cano, José M.; Sumner, Mark. Dynamic Analysis, Stability and Design of Grid Forming Converters with PI-based Voltage Control in DC and 3-phase AC Microgrids. IEEE Transactions on Energy Conversion. 38 - 4, pp. 2249 - 2262. (United States of America): IEEE, 12/2023. ISSN 0885-8969

DOI: 10.1109/TEC.2023.3280977

Type of production: Scientific paper

Position of signature: 3

Total no. authors: 4

Impact source: WOS (JCR)

Impact index in year of publication: 5.0 (2023 JCR SE)

Position of publication: 65

Impact source: WOS (JCR)

Impact index in year of publication: 5.0 (2023 JCR SE)

Position of publication: 71

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: No

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: Yes

No. of journals in the cat.: 352

Category: Science Edition - ENERGY & FUELS

Journal in the top 25%: No

No. of journals in the cat.: 170

- 5** A. Orcajo, Gonzalo; Rodríguez D., Josué; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Rojas, Carlos. Voltage Sag Ride-Through in a Joint Installation of a Hot Rolling Mill Plant and a Wind Farm. IEEE Transactions on Industry Applications. 59 - 4, pp. 5190 - 5200. (United States of America): IEEE, 08/2023. ISSN 0093-9994

DOI: 10.1109/TIA.2023.3268995

Type of production: Scientific paper

Position of signature: 3

Corresponding author: No

Impact source: WOS (JCR)

Impact index in year of publication: 4.2 (2023 JCR SE)

Position of publication: 24

Impact source: WOS (JCR)

Impact index in year of publication: 4.2 (2023 JCR SE)

Position of publication: 89

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY

Journal in the top 25%: Yes

No. of journals in the cat.: 179

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: No

No. of journals in the cat.: 352

- 6** Suárez, Andrés; Blanco, Cristian; García, Pablo; Navarro, Ángel; Cano, José M.. Grid impedance estimator for active multisource AC grids. IEEE Transactions on Smart Grid. 14 - 3, pp. 2023 - 2033. (United States of America): IEEE, 05/2023. ISSN 1949-3053
DOI: 10.1109/TSG.2022.3212770
Type of production: Scientific paper
Position of signature: 5
Total no. authors: 5
Impact source: WOS (JCR)
Impact index in year of publication: 8.6 (2023 JCR SE)
Position of publication: 18
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: No
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: Yes
No. of journals in the cat.: 352
- 7** Rashad Ahmed, Mahmoud; Cano, José M.; Arbolea, Pablo; Suárez, Lucía; Abdelaziz, Almoataz Y.. DSSE in European-Type Networks Using PLC-Based Advanced Metering Infrastructure. IEEE Transactions on Power Systems. 37 - 5, pp. 3875 - 3888. (United States of America): IEEE, 09/2022. ISSN 0885-8950
DOI: 10.1109/TPWRS.2022.3143695
Type of production: Scientific paper
Position of signature: 2
Total no. authors: 5
Impact source: WOS (JCR)
Impact index in year of publication: 6.6 (2022 JCR SE)
Position of publication: 44
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: Yes
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: Yes
No. of journals in the cat.: 275
- 8** A. Orcajo, Gonzalo; Rodríguez D., Josué; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Rojas, Carlos. Coordinated Management of Electrical Energy in a Steelworks and a Wind Farm. IEEE Transactions on Industry Applications. 58 - 4, pp. 5488 - 5502. (United States of America): IEEE, 08/2022. ISSN 0093-9994
DOI: 10.1109/TIA.2022.3165521
Type of production: Scientific paper
Position of signature: 3
Corresponding author: No
Impact source: WOS (JCR)
Impact index in year of publication: 4.4 (2022 JCR SE)
Position of publication: 23
Impact source: WOS (JCR)
Impact index in year of publication: 4.4 (2022 JCR SE)
Position of publication: 84
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY
Journal in the top 25%: No
No. of journals in the cat.: 90
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: No
No. of journals in the cat.: 275
- 9** Md. Rashid Mojumdar; Cano, José M.; A. Orcajo, Gonzalo. Estimation of Impedance Ratio Parameters for Consistent Modeling of Tap-Changing Transformers. IEEE Transactions on Power Systems. 36 - 4, pp. 3282 - 3292. (United States of America): IEEE, 07/2021. ISSN 0885-8950
DOI: 10.1109/TPWRS.2021.3050958



Type of production: Scientific paper
Position of signature: 2

Total no. authors: 3

Impact source: WOS (JCR)

Impact index in year of publication: 7.326 (2021 JCR SE)

Position of publication: 32

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Corresponding author: Yes

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: Yes

No. of journals in the cat.: 276

- 10** Cano, José M.; Arboleya, Pablo; Rashad Ahmed, Mahmoud; Mojumdar, Md. Rejwanur; A. Orcajo, Gonzalo. Improving distribution system state estimation with synthetic measurements. International Journal of Electrical Power and Energy Systems. 129, pp. 1 - 6. (United Kingdom): Elsevier, 07/2021. ISSN 0142-0615

DOI: 10.1016/j.ijepes.2020.106751

Type of production: Scientific paper

Position of signature: 1

Impact source: WOS (JCR)

Impact index in year of publication: 5.659 (2021 JCR SE)

Position of publication: 50

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: Yes

No. of journals in the cat.: 276

- 11** Pedrayes, Francisco; G. Melero, Manuel; Cano, José M.; Duque, Salvador; G. Norniella, Joaquín; Rojas, Carlos; A. Orcajo, Gonzalo. Lambert W Function based Closed-form Expressions of Supercapacitor Electrical Variables in Constant Power Applications. Energy. 218 - 119364, pp. 1 - 9. (United Kingdom): Elsevier, 03/2021. ISSN 0360-5442

DOI: 10.1016/j.energy.2020.119364

Type of production: Scientific paper

Position of signature: 3

Corresponding author: No

Impact source: WOS (JCR)

Impact index in year of publication: 8.857 (2021 JCR SE)

Position of publication: 24

Impact source: WOS (JCR)

Impact index in year of publication: 8.857 (2021 JCR SE)

Position of publication: 3

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENERGY & FUELS

Journal in the top 25%: Yes

No. of journals in the cat.: 119

Category: Science Edition - THERMODYNAMICS

Journal in the top 25%: Yes

No. of journals in the cat.: 63

- 12** Rodríguez D., Josué; A. Orcajo, Gonzalo; Cano, José M.; G. Norniella, Joaquín; Vicente, Asier. Thermal Analysis of Dry-Type Air-Core Coils for the Optimization of Passive Filtering Systems. Energies. 13 - 4540, pp. 1 - 24. (Switzerland): MDPI, 09/2020. ISSN 1996-1073

DOI: 10.3390/en13174540

Type of production: Scientific paper

Position of signature: 3

Corresponding author: No

Impact source: WOS (JCR)

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENERGY AND FUELS

Journal in the top 25%: No



Impact index in year of publication: 3.004 (2020 JCR SE)

Position of publication: 81

No. of journals in the cat.: 133

- 13** A. Orcajo, Gonzalo; Rodríguez D., Josué; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Rojas, Carlos; Ardura, Pablo; Cifrián R., Diego. Enhancement of Power Quality in an Actual Hot Rolling Mill Plant through a STATCOM. IEEE Transactions on Industry Applications. 56 - 3, pp. 3238 - 3249. (United States of America): IEEE, 06/2020. ISSN 0093-9994

DOI: 10.1109/TIA.2020.2976034

Type of production: Scientific paper

Position of signature: 3

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY

Journal in the top 25%: Yes

Impact source: WOS (JCR)

Impact index in year of publication: 3.654 (2020 JCR SE)

Position of publication: 22

No. of journals in the cat.: 91

Impact source: WOS (JCR)

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: No

Impact index in year of publication: 3.654 (2020 JCR SE)

Position of publication: 78

No. of journals in the cat.: 273

- 14** Pedrayes, Francisco; G. Melero, Manuel; G. Norniella, Joaquín; Cano, José M.; F. Cabanas, Manés; A. Orcajo, Gonzalo; Rojas, Carlos. A Novel Analytical Solution for the Calculation of Temperature in Supercapacitors Operating at Constant Power Energy. Energy. 188 - 116047, pp. 1 - 10. (United Kingdom): Elsevier, 12/2019. ISSN 0360-5442

DOI: 10.1016/j.energy.2019.116047

Type of production: Scientific paper

Position of signature: 4

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENERGY & FUELS

Journal in the top 25%: Yes

Impact source: WOS (JCR)

Impact index in year of publication: 6.082 (2019 JCR SE)

Position of publication: 20

No. of journals in the cat.: 112

- 15** Cano, José M.; Md. Rashid Mojumdar; A. Orcajo, Gonzalo. Reconciling Tap-Changing Transformer Models. IEEE Transactions on Power Delivery. 34 - 6, pp. 2266 - 2268. (United States of America): IEEE, 12/2019. ISSN 0885-8977

DOI: 10.1109/TPWRD.2019.2940422

Type of production: Scientific paper

Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: Yes

Impact source: WOS (JCR)

Impact index in year of publication: 3.681 (2019 JCR SE)

Position of publication: 63

No. of journals in the cat.: 266

- 16** Pedrayes, Francisco; G. Melero, Manuel; Cano, José M.; G. Norniella, Joaquín; A. Orcajo, Gonzalo; F. Cabanas, Manés; Rojas, Carlos. Optimization of Supercapacitor Sizing for High-Fluctuating Power Applications by means of an Internal-Voltage-Based Method. Energy. 183, pp. 504 - 513. (United Kingdom): Elsevier, 09/2019. ISSN 0360-5442



DOI: 10.1016/j.energy.2019.06.145

Type of production: Scientific paper

Position of signature: 3

Impact source: WOS (JCR)

Impact index in year of publication: 6.082 (2019 JCR SE)

Position of publication: 20

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENERGY & FUELS

Journal in the top 25%: Yes

No. of journals in the cat.: 112

- 17** Suárez, Andrés; García, Pablo; Navarro Rodríguez, Ángel; Villa, Geber; Cano, José M.. Sensorless Unbalance Modelling and Estimation as an Ancillary Service for LV 4-Wire/3-Phase Power Converters. IEEE Transactions on Industry Applications. 55 - 5, pp. 4876 - 4885. (United States of America): IEEE, 09/2019. ISSN 0093-9994

DOI: 10.1109/TIA.2019.2918046

Type of production: Scientific paper

Position of signature: 5

Impact source: WOS (JCR)

Impact index in year of publication: 3.488 (2019 JCR SE)

Position of publication: 19

Impact source: WOS (JCR)

Impact index in year of publication: 3.488 (2019 JCR SE)

Position of publication: 68

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY

Journal in the top 25%: Yes

No. of journals in the cat.: 91

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: No

No. of journals in the cat.: 266

- 18** Cano, José M.; Navarro Rodríguez, Ángel; Suárez, Andrés; García, Pablo. Variable Switching Frequency Control of Distributed Resources for Improved System Efficiency. IEEE Transactions on Industry Applications. 54 - 5, pp. 4612 - 4620. (United States of America): IEEE, 09/2018. ISSN 0093-9994

DOI: 10.1109/TIA.2018.2836365

Type of production: Scientific paper

Position of signature: 1

Impact source: WOS (JCR)

Impact index in year of publication: 3.347 (2018 JCR SE)

Position of publication: 16

Impact source: WOS (JCR)

Impact index in year of publication: 3.347 (2018 JCR SE)

Position of publication: 76

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY

Journal in the top 25%: Yes

No. of journals in the cat.: 88

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: No

No. of journals in the cat.: 265

- 19** A. Orcajo, Gonzalo; Rodríguez D., Josué; Cano, José M.; G. Norniella, Joaquín; Ardura, Pablo; Llera T., Rocío; Cifrián R., Diego. Retrofit of a Hot Rolling Mill Plant with Three-Level Active Front End Drives. IEEE Transactions on Industry Applications. 54 - 3, pp. 2964 - 2974. (United States of America): IEEE, 05/2018. ISSN 0093-9994

DOI: 10.1109/TIA.2018.2808159

Type of production: Scientific paper

Format: Journal



Position of signature: 3

Impact source: WOS (JCR)

Impact index in year of publication: 3.347 (2018 JCR SE)

Position of publication: 16

Impact source: WOS (JCR)

Impact index in year of publication: 3.347 (2018 JCR SE)

Position of publication: 76

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY

Journal in the top 25%: Yes

No. of journals in the cat.: 88

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: No

No. of journals in the cat.: 265

- 20** Cano, José M.; Mojumdar, Md. Rejwanur; G. Norniella, Joaquín; A. Orcajo, Gonzalo. Phase Shifting Transformer Model for Direct Approach Power Flow Studies. International Journal of Electrical Power and Energy Systems. 91, pp. 71 - 79. (United Kingdom): Elsevier, 10/2017. ISSN 0142-0615

DOI: 10.1016/j.ijepes.2017.03.007

Type of production: Scientific paper

Position of signature: 1

Impact source: WOS (JCR)

Impact index in year of publication: 3.610 (2017 JCR SE)

Position of publication: 45

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: Yes

No. of journals in the cat.: 260

- 21** A. Orcajo, Gonzalo; Ardura G., Pablo; Rodríguez D., Josué; Cano, José M.; G. Norniella, Joaquín; Llera T., Rocío; Cifrián R., Diego. Overcurrent Protection Response of a Hot Rolling Mill Filtering System: Analysis of the Process Conditions. IEEE Transactions on Industry Applications. 53 - 3, pp. 2596 - 2607. (United States of America): IEEE, 05/2017. ISSN 0093-9994

DOI: 10.1109/TIA.2017.2671459

Type of production: Scientific paper

Position of signature: 4

Impact source: WOS (JCR)

Impact index in year of publication: 2.743 (2017 JCR SE)

Position of publication: 14

Impact source: WOS (JCR)

Impact index in year of publication: 2.743 (2017 JCR SE)

Position of publication: 80

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY

Journal in the top 25%: Yes

No. of journals in the cat.: 86

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: No

No. of journals in the cat.: 260

- 22** A. Orcajo, Gonzalo; Rodríguez D., Josué; Ardura G., Pablo; Cano, José M.; G. Norniella, Joaquín; Llera T., Rocío; Cifrián R., Diego. Dynamic Estimation of Electrical Demand in Hot Rolling Mills. IEEE Transactions on Industry Applications. 52 - 3, pp. 2714 - 2723. (United States of America): IEEE, 02/2016. ISSN 0093-9994

DOI: 10.1109/TIA.2016.2533483

Type of production: Scientific paper

Format: Journal

**Position of signature:** 4**Impact source:** WOS (JCR)**Impact index in year of publication:** 2.937 (2016 JCR SE)**Position of publication:** 13**Impact source:** WOS (JCR)**Impact index in year of publication:** 2.937 (2016 JCR SE)**Position of publication:** 63**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Category:** Science Edition - ENGINEERING, MULTIDISCIPLINARY**Journal in the top 25%:** Yes**No. of journals in the cat.:** 85**Category:** Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC**Journal in the top 25%:** Yes**No. of journals in the cat.:** 262

- 23** G. Norniella, Joaquín; Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; Pedrayes, Francisco; F. Cabanas, Manés; G. Melero, Manuel. Coupling Inductor Fault Detection and Estimation in Three-Phase Adjustable Speed Drives with Direct Power Control-based Active Front-End Rectifiers. IEEE Transactions on Industrial Electronics. 62 - 3, pp. 1955 - 1963. (United States of America): IEEE, 03/2015. ISSN 0278-0046

DOI: 10.1109/TIE.2014.2334651**Type of production:** Scientific paper**Position of signature:** 2**Impact source:** WOS (JCR)**Impact index in year of publication:** 6,383 (2015 JCR SE)**Position of publication:** 2**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Category:** Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC**Journal in the top 25%:** Yes**No. of journals in the cat.:** 247

- 24** Cano, José M.; Jatskevich, Juri; G. Norniella, Joaquín; Davoudi, Ali; Wang, X.; Martinez, Juan; Mehrizi-Sani, Ali; Saeedifard, Maryam; Aliprantis, Dionysios. Dynamic Average-Value Modeling of Direct Power Controlled Active Front-End Rectifiers. IEEE Transactions on Power Delivery. 29 - 6, pp. 2458 - 2466. (United States of America): IEEE, 12/2014. ISSN 0885-8977

DOI: 10.1109/TPWRD.2014.2342240**Type of production:** Scientific paper**Position of signature:** 1**Impact source:** WOS (JCR)**Impact index in year of publication:** 1,733 (2014 JCR SE)**Position of publication:** 85**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Category:** Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC**Journal in the top 25%:** No**No. of journals in the cat.:** 247

- 25** Atighechi, Hamid; Chiniforoosh, Sina; Jatskevich, Juri; Davoudi, Ali; Martinez, Juan; Faruque, Md Omar; Sood, Vijay; Saeedifard, Maryam; Cano, José M.; Mahseredjian, Jean; Aliprantis, Dionysios; Strunz, Kai. Dynamic Average-Value Modeling of CIGRE HVDC Benchmark System. IEEE Transactions on Power Delivery. 29 - 5, pp. 2046 - 2054. (United States of America): IEEE, 10/2014. ISSN 0885-8977

DOI: 10.1109/TPWRD.2014.2340870**Type of production:** Scientific paper**Position of signature:** 9**Impact source:** WOS (JCR)**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Category:** Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC



Impact index in year of publication: 1,733 (2014 JCR SE) **Journal in the top 25%:** No

Position of publication: 85

No. of journals in the cat.: 247

- 26** Ardura, Pablo; A. Orcajo, Gonzalo; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Briz, Fernando; F. Cabanas, Manés; G. Melero, Manuel; Rojas, Carlos; González, José R.. Simulation, Power Quality Analysis and Improvements in a Hot Rolling Mill Using a STATCOM. Journal of Energy and Power Engineering. 8 - 9, pp. 1633 - 1641. (United States of America): David Publishing Company, 09/2014. ISSN 1934-7367

Type of production: Scientific paper

Format: Journal

Position of signature: 3

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

- 27** Daryabak, Mehdi; Filizadeh, Shaahin; Jatskevich, Juri; Davoudi, Ali; Saeedifard, Maryam; Sood, Vijay; Martinez, Juan; Aliprantis, Dionysios; Cano, José M.; Mehrizi-Sani, Ali. Modeling of LCC-HVDC Systems Using Dynamic Phasors. IEEE Transactions on Power Delivery. 29 - 4, pp. 1989 - 1998. (United States of America): IEEE, 08/2014. ISSN 0885-8977

DOI: 10.1109/TPWRD.2014.2308431

Type of production: Scientific paper

Format: Journal

Position of signature: 9

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Impact source: WOS (JCR)

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Impact index in year of publication: 1,733 (2014 JCR SE) **Journal in the top 25%:** No

Position of publication: 85

No. of journals in the cat.: 247

- 28** G. Norniella, Joaquín; Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; Pedrayes, Francisco; F. Cabanas, M.; G. Melero, M.. Multiple-Switching-Tables Direct Power Control of Active Front-End Rectifiers. IET Power Electronics. 7 - 6, pp. 1578 - 1589. (United Kingdom): IET, 06/2014. ISSN 1755-4535

DOI: 10.1049/iet-pel.2013.0492

Type of production: Scientific paper

Format: Journal

Position of signature: 2

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Impact source: WOS (JCR)

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Impact index in year of publication: 1,683 (2014 JCR SE) **Journal in the top 25%:** No

Position of publication: 113

No. of journals in the cat.: 247

- 29** G. Norniella, Joaquín; Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; Pedrayes, Francisco; F. Cabanas, M.; G. Melero, M.. Improving the Dynamics of Virtual-Flux-Based Control of Three-Phase Active Rectifiers. IEEE Transactions on Industrial Electronics. 61 - 1, pp. 177 - 187. (United States of America): IEEE, 01/2014. ISSN 0278-0046

DOI: 10.1109/TIE.2013.2245614

Type of production: Scientific paper

Format: Journal

Position of signature: 2

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Impact source: WOS (JCR)

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Impact index in year of publication: 6,500 (2013 JCR SE) **Journal in the top 25%:** Yes

Position of publication: 2

No. of journals in the cat.: 247



- 30** Saad, H.; Peralta, J.; Denetière, S.; Mahseredjian, J.; Jatskevich, J.; Martínez, J. A.; Davoudi, A.; Saeedifard, M.; Sood, V.; Wang, X.; Cano, José M.; Mehrizi-Sani, Ali. Dynamic Averaged and Simplified Models for MMC-Based HVDC Transmission Systems. *IEEE Transactions on Power Delivery*. 28 - 3, pp. 1723 - 1730. (United States of America): IEEE, 07/2013. ISSN 0885-8977
DOI: 10.1109/TPWRD.2013.2251912
Type of production: Scientific paper
Position of signature: 11
Impact source: WOS (JCR)
Impact index in year of publication: 1,657
Position of publication: 85
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: No
No. of journals in the cat.: 247
- 31** A. Orcajo, Gonzalo; Cano, José M.; G. Melero, Manuel; F. Cabanas, Manés; Rojas, Carlos; Pedrayes, Francisco; G. Norniella, Joaquín. Diagnosis of Electrical Distribution Network Short Circuits Based on Voltage Park's Vector. *IEEE Transactions on Power Delivery*. 27 - 4, pp. 1964 - 1972. (United States of America): IEEE, 10/2012. ISSN 0885-8977
DOI: 10.1109/TPWRD.2012.2210448
Type of production: Scientific paper
Position of signature: 2
Impact source: WOS (JCR)
Impact index in year of publication: 1,519
Position of publication: 83
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: No
No. of journals in the cat.: 243
- 32** F. Cabanas, M.; Pedrayes, Francisco; Rojas, Carlos; G. Melero, Manuel; G. Norniella, Joaquín; A. Orcajo, Gonzalo; Cano, José M.; Nuño, Fernando; Fuentes, D. R.. A New Portable, Self-Powered, and Wireless Instrument for the Early Detection of Broken Rotor Bars in Induction Motors. *IEEE Transactions on Industrial Electronics*. 58 - 10, pp. 4917 - 4930. (United States of America): IEEE, 10/2011. ISSN 0278-0046
DOI: 10.1109/TIE.2011.2109340
Type of production: Scientific paper
Position of signature: 7
Impact source: WOS (JCR)
Impact index in year of publication: 5,160
Position of publication: 4
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: Yes
No. of journals in the cat.: 245
- 33** G. Norniella, Joaquín; Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; Pedrayes, Francisco; F. Cabanas, Manés; G. Melero, Manuel. Analytic and Iterative Algorithms for Online Estimation of Coupling Inductance in Direct Power Control of Three-Phase Active Rectifiers. *IEEE Transactions on Power Electronics*. 26 - 11, pp. 3298 - 3307. (United States of America): 04/2011. ISSN 0885-8993
DOI: 10.1109/TPEL.2011.2142196
Type of production: Scientific paper
Position of signature: 2
Impact source: WOS (JCR)
Impact index in year of publication: 4,650
Position of publication: 7
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: Yes
No. of journals in the cat.: 245

- 34** F. Cabanas, Manés; Pedrayes, Francisco; G. Melero, Manuel; Rojas, Carlos; A. Orcajo, Gonzalo; Cano, José M.; G. Norriella, Joaquín. Insulation Fault Diagnosis in High Voltage Power Transformers by Means of Leakage Flux Analysis. Progress In Electromagnetics Research - PIER. 114, pp. 211 - 234. (United States of America): 03/2011. ISSN 1559-8985
DOI: 10.2528/PIER11010302
Type of production: Scientific paper
Position of signature: 6
Impact source: WOS (JCR)
Impact index in year of publication: 5,298
Position of publication: 3
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: Yes
No. of journals in the cat.: 245
- 35** F. Cabanas, Manés; Pedrayes, Francisco; G. Melero, Manuel; Rojas, Carlos; Cano, José M.; A. Orcajo, Gonzalo; G. Norriella, Joaquín. Unambiguous Detection of Broken Bars in Asynchronous Motors by Means of a Flux Measurement-Based Procedure. IEEE Transactions on Instrumentation and Measurement. 60 - 3, pp. 891 - 899. (United States of America): IEEE, 03/2011. ISSN 0018-9456
DOI: 10.1109/TIM.2010.2062711
Type of production: Scientific paper
Position of signature: 5
Impact source: WOS (JCR)
Impact index in year of publication: 1,214
Position of publication: 106
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: No
No. of journals in the cat.: 245
- 36** Rojas, Carlos; G. Melero, Manuel; Cano, José M.; F. Cabanas, Manés; A. Orcajo, Gonzalo; Pedrayes, Francisco. Cálculo del Par Electromagnético. Motor de Inducción con Asimetrías Rotóricas Mediante Modelos de Elemento Finitos. EOLUS. 46, pp. 20 - 26. (Spain): Publicaciones Técnicas S. L., 11/2009. ISSN 1889-2876
Type of production: Scientific paper
Position of signature: 3
Format: Journal
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee
- 37** Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Pedrayes, Francisco. Analysis of the Effects Caused by Structural Asymmetries in the Performance of Three-Limb Core Three-Phase Inductive Filters. IEEE Transactions on Energy Conversion. 22 - 3, pp. 600 - 607. (United States of America): IEEE, 09/2007. ISSN 0885-8969
DOI: 10.1109/TEC.2006.888045
Type of production: Scientific paper
Position of signature: 1
Impact source: WOS (JCR)
Impact index in year of publication: 1,018
Position of publication: 82
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC
Journal in the top 25%: No
No. of journals in the cat.: 227
- 38** F. Cabanas, Manés; G. Melero, Manuel; Pedrayes, Francisco; Rojas, Carlos; A. Orcajo, Gonzalo; Cano, José M.; G. Iglesias, Javier; Nuño, Fernando. A New Online Method Based on Leakage Flux Analysis for the Early Detection and Location of Insulating Failures in Power Transformers: Application to Remote Condition Monitoring.



IEEE Transactions on Power Delivery. 22 - 3, pp. 1591 - 1602. (United States of America): IEEE, 07/2007. ISSN 0885-8977

DOI: 10.1109/TPWRD.2006.881620

Type of production: Scientific paper

Position of signature: 6

Impact source: WOS (JCR)

Impact index in year of publication: 0,857

Position of publication: 101

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: No

No. of journals in the cat.: 227

- 39** F. Cabanas, Manés; Pedrayes, Francisco; Rojas, Carlos; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.. Flujo de Dispersión: Una Herramienta Alternativa para el Diagnóstico de Fallos de Aislamiento en Transformadores. Mantenimiento. 180, pp. 22 - 30. (Spain): Puntex S. A., 12/2004. ISSN 0214-4344

Type of production: Scientific paper

Position of signature: 6

Format: Journal

Degree of contribution: Author or co-author of article in journal without external admissions assessment committee

- 40** G. Melero, Manuel; F. Cabanas, Manés; Rojas, Carlos; A. Orcajo, Gonzalo; Cano, José M.; Capolino, Gérard A.. Système pour la Détection de Défauts d'Isolement dans les Moteurs à Induction. Revue Internationale de Génie Électrique. 5 - 1, pp. 49 - 61. (France): Lavoisier, 05/2002. ISSN 1295-490X

DOI: 10.3166/rige.5.49-61

Type of production: Scientific paper

Position of signature: 5

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

- 41** Cano, José M.; A. Orcajo, Gonzalo; G. Mayordomo, Julio; Asensi, Rafael; F. Cabanas, Manés; G. Melero, Manuel. New Transfer Functions for an Accurate Estimation of Harmonic Distortion in AC/DC Converters Working under Unbalanced Conditions. IEEE Transactions on Industry Applications. 37 - 2, pp. 642 - 649. (United States of America): IEEE, 03/2001. ISSN 0093-9994

DOI: 10.1109/28.913732

Type of production: Scientific paper

Position of signature: 1

Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Category: Science Edition - ENGINEERING, MULTIDISCIPLINARY

Journal in the top 25%: Yes

Impact source: WOS (JCR)

Impact index in year of publication: 0,847 (2001 JCR SE)

Position of publication: 6

No. of journals in the cat.: 58

Impact source: WOS (JCR)

Category: Science Edition - ENGINEERING, ELECTRICAL & ELECTRONIC

Journal in the top 25%: No

Impact index in year of publication: 0,847 (2001 JCR SE)

Position of publication: 67

No. of journals in the cat.: 200

- 42** F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.; R. Faya, Francisco; Solares, Juan. Métodos no Convencionales para la Detección y Diagnóstico Precoz de Fallos en Motores Eléctricos (II). Mantenimiento. 126, pp. 11 - 22. (Spain): Puntex S. A., 07/1999. ISSN 0214-4344

Type of production: Scientific paper

Position of signature: 4

Format: Journal



- Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee
- 43** F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.; R. Faya, Francisco; Solares, Juan. Métodos no Convencionales para la Detección y Diagnóstico Precoz de Fallos en Motores Eléctricos (I). Mantenimiento. 125, pp. 5 - 15. (Spain): Puntex S. A., 06/1999. ISSN 0214-4344
Type of production: Scientific paper
Position of signature: 4
Format: Journal
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee
- 44** F. Cabanas, Manés; G. Melero, Manuel; Cano, José M.; Solares, Juan. El Ensayo de Factor de Pérdidas Dieléctricas y su Aplicación al Diagnóstico de Fallos en el Aislamiento en Motores de Inducción de Media Tensión. Énfasis. 9, pp. 1 - 9. (Argentina): FLC - Editorial Austral S.A., 1999. ISSN 1667-5347
Type of production: Scientific paper
Position of signature: 3
Format: Journal
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee
- 45** A. Orcajo, Gonzalo; Cano, José M.; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Pedrayes, Francisco; G. Norriella, Joaquín; Ardura, Pablo. Analysis of Losses Due to Voltage Sags in Industrial Processes: Influential Parameters. Power Quality. pp. 52 - 75. Newcastle upon Tyne, Northumberland and Tyne and Wear(United Kingdom): Cambridge Scholars Publishing, 09/2016. ISBN 978-1-4438-9493-7
Type of production: Book chapter
Format: Book
- 46** Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; G. Norriella, Joaquín; Pedrayes, Francisco. Newton's Method Based Modelling of Loads with a Discontinuous Conduction Mode Diode Rectifier Front End for System-Level Studies. Power Quality. pp. 320 - 339. Newcastle upon Tyne, Northumberland and Tyne and Wear(United Kingdom): Cambridge Scholars Publishing, 09/2016. ISBN 978-1-4438-9493-7
Type of production: Book chapter
Format: Book
- 47** G. Melero, Manuel; Pedrayes, Francisco; G. Norriella, Joaquín; Rojas, Carlos; F. Cabanas, Manés; A. Orcajo, Gonzalo; Cano, José M.; L. Barrera, José M.. Quality Control Tests and Fault Detection in the Manufacturing Process of Form-wound Coils: A Case Study. Renewable Energy: Selected Issues. II, pp. 467 - 486. Newcastle upon Tyne, Northumberland and Tyne and Wear(United Kingdom): Cambridge Scholars Publishing, 01/2016. ISBN 978-1-4438-8377-1
Type of production: Book chapter
Format: Book
- 48** F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.; Solares, Juan. Maintenance and Diagnostic Techniques for Rotating Electric Machinery. pp. 1 - 318. Barcelona, Cataluña(Spain): Marcombo Boixareu Editores, 07/1999. ISBN 84-267-1222-3
Collection: ABB Service
Type of production: Popular science book
Position of signature: 4
Format: Book
Degree of contribution: Author or co-author of entire book
- 49** F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.; Solares, Juan. Técnicas para el Mantenimiento y Diagnóstico de Máquinas Eléctricas Rotativas. pp. 1 - 368. Barcelona, Cataluña(Spain): Marcombo Boixareu Editores, 11/1998. ISBN 84-267-1166-9
Collection: ABB Service
Type of production: Popular science book
Position of signature: 4
Format: Book
Degree of contribution: Author or co-author of entire book



Works presented at national or international conferences

- 1** **Title of the work:** On State Estimation in LV Grids: Output-to-Application Error Propagation in Neural Network Models
Name of the conference: 2025 IEEE PES Innovative Smart Grid Technologies Europe (ISGT EUROPE)
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
Corresponding author: No
City of event: Valletta, Malta
Date of event: 20/10/2025
End date: 23/10/2025
Organising entity: IEEE Power & Energy Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Alsyoufi, Yamen; Cano, José M.; A. Orcajo, Gonzalo; Gómez-Aleixandre, Carlos. pp. 1 - 5. IEEE Xplore Digital Library, ISBN 979-8-3503-9678-2
DOI: 10.1109/ISGTEurope64741.2025.11305542
- 2** **Title of the work:** Compact Complex-Valued Formulation of Power Flow Equations
Name of the conference: 2025 IEEE PowerTech
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Kiel, Germany
Date of event: 29/06/2025
End date: 03/07/2025
Organising entity: IEEE Power & Energy Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Gómez-Aleixandre, Carlos; García, Pablo; Cano, José M.; Alsyoufi, Yamen. pp. 1 - 5. IEEE Xplore Digital Library,
DOI: 10.1109/PowerTech59965.2025.11180609
- 3** **Title of the work:** Impact of Photovoltaic and Storage Power Reserve on Frequency Control in Steelworks
Name of the conference: 2025 IEEE Industry Applications Society Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
Corresponding author: No
City of event: Taipei, Taiwan
Date of event: 15/06/2025
End date: 20/06/2025
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper



Fajardo, Valeria; A. Orcajo, Gonzalo; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Rojas, Carlos. pp. 1 - 8. IEEE Xplore Digital Library,
DOI: 10.1109/IAS62731.2025.11061671

- 4** **Title of the work:** Impact of Photovoltaic Generation on Frequency Control Under Electric Arc Furnace Demand
Name of the conference: 2024 IEEE Industry Applications Society Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
Corresponding author: No
City of event: Phoenix, AZ, United States of America
Date of event: 20/10/2024
End date: 24/10/2024
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Fajardo, Valeria; A. Orcajo, Gonzalo; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Rojas, Carlos. pp. 1 - 7. IEEE Xplore Digital Library,
DOI: 10.1109/IAS55788.2024.11023718

- 5** **Title of the work:** Neural Network-Driven State Estimator for European-Type Unbalanced LV Grids
Name of the conference: 2024 IEEE PES Innovative Smart Grid Technologies Europe (ISGT EUROPE)
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Dubrovnik, Croatia
Date of event: 14/10/2024
End date: 17/10/2024
Organising entity: IEEE Power & Energy Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Alsyoufi, Yamen; Cano, José M.; A. Orcajo, Gonzalo. pp. 1 - 5. IEEE Xplore Digital Library, ISBN 979-8-3503-9678-2
DOI: 10.1109/ISGTEUROPE62998.2024.10863145

- 6** **Title of the work:** DSSE as a Tool for Hosting Capacity Assessment in European-type Distribution Grids
Name of the conference: CIRED 2024 International Conference & Exhibition on Electricity Distribution
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - poster
Corresponding author: No
City of event: Viena, Austria
Date of event: 19/06/2024
End date: 20/06/2024
Organising entity: CIRED **Type of entity:** Associations and Groups
City organizing entity: Belgium
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper



Rashad Ahmed, Mahmoud; Cano, José M.; Arboleya, Pablo. "IET Conference Proceedings". 2024 - 5, pp. 3057 - 3061. CIRED,
DOI: 10.1049/icp.2024.2089

- 7** **Title of the work:** Hybridization of a Wind Farm and a Photovoltaic Plant in a Steelworks with an Energy Storage System
Name of the conference: 2023 IEEE Industry Applications Society Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
Corresponding author: No
City of event: Nashville, TN, United States of America
Date of event: 29/10/2023
End date: 02/11/2023
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Rojas, Carlos H.; Rodríguez, Josué. pp. 1 - 6. IEEE Xplore Digital Library,
DOI: 10.1109/IAS54024.2023.10406767

- 8** **Title of the work:** Implementation of an Online State Estimator in an Edge Computing Device for European-type Industrial LV Grids
Name of the conference: 2023 IEEE Industry Applications Society Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Nashville, TN, United States of America
Date of event: 29/10/2023
End date: 02/11/2023
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Alsyoufi, Yamen; Cano, José M.; A. Orcajo, Gonzalo; Piedra, José Manuel. pp. 1 - 8. IEEE Xplore Digital Library,
DOI: 10.1109/IAS54024.2023.10406792

- 9** **Title of the work:** On the Estimation of Phase-Angles in European-Type Distribution Grids
Name of the conference: 2023 IEEE PES Innovative Smart Grid Technologies Europe (ISGT EUROPE)
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - poster
Corresponding author: Yes
City of event: Grenoble, Rhône-Alpes, France
Date of event: 23/10/2023
End date: 26/10/2023
Organising entity: IEEE Power & Energy Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes



Type of contribution: Scientific paper

Cano, José M.; Alsyoufi, Yamen; Arboleya, Pablo; A. Orcajo, Gonzalo; Rashad Ahmed, Mahmoud; Suárez Ramón, Lucía. pp. 1 - 5. IEEE Xplore Digital Library, 30/01/2024. ISBN 979-8-3503-9678-2

DOI: 10.1109/ISGTEUROPE56780.2023.10407813

10 Title of the work: Distributed Real-Time OPF and State Estimation Architecture for Active Distribution Networks

Name of the conference: 2023 IEEE Power & Energy Society General Meeting

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - poster

City of event: Orlando, FL, United States of America

Date of event: 16/07/2023

End date: 20/07/2023

Organising entity: IEEE Power & Energy Society

City organizing entity: United States of America

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

Elfeky, Karim; García, Pablo; Cano, José M.; Villa, Geber. pp. 1 - 5. IEEE Xplore Digital Library,

DOI: 10.1109/PESGM52003.2023.10252888

11 Title of the work: Building a Realistic Sampler to Emulate Communication Delays in PLC-Operated Low Voltage Networks

Name of the conference: CIRED 2023 International Conference & Exhibition on Electricity Distribution

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

Corresponding author: No

City of event: Roma, Italy

Date of event: 12/06/2023

End date: 15/06/2023

Organising entity: CIRED

Type of entity: Associations and Groups

City organizing entity: Belgium

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

Rashad Hamed, Mahmoud; Cano, José M.; Arboleya, Pablo. pp. 3043 - 3047. CIRED,

DOI: 10.1049/icp.2023.0914

12 Title of the work: Performance Analysis of a State Estimator for Low Voltage Unbalanced Grids Using Different Advance Metering Infrastructure Technologies

Name of the conference: CIRED 2023 International Conference & Exhibition on Electricity Distribution

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

Corresponding author: No

City of event: Roma, Italy

Date of event: 12/06/2023

End date: 15/06/2023

Organising entity: CIRED

Type of entity: Associations and Groups

City organizing entity: Belgium

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper



Rashad Hamed, Mahmoud; Cano, José M.; Mohamed, Bassam; Arboleya, Pablo. pp. 3057 - 3061. CIRED, DOI: 10.1049/icp.2023.0911

- 13 Title of the work:** Voltage Sag Ride-Through in a Joint Installation of a Hot Rolling Mill Plant and a Wind Farm
Name of the conference: 2022 IEEE Industry Applications Society Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Detroit, MI, United States of America
Date of event: 09/10/2022
End date: 14/10/2022
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; Pedrayes, Francisco; Cano, José M.; G. Norriella, Joaquín; Rojas, Carlos H.; Rodríguez, Josué. pp. 1 - 8. IEEE Xplore Digital Library,
DOI: 10.1109/IAS54023.2022.9939726
- 14 Title of the work:** Wide Voltage-Regulation Range Tap-changing Transformer Model for Power System Studies
Name of the conference: 2021 IEEE PES Innovative Smart Grid Technologies Europe (ISGT EUROPE)
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - poster
Corresponding author: Yes
City of event: Espoo, Finland
Date of event: 18/10/2021
End date: 21/10/2021
Organising entity: IEEE Power & Energy Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Cano, José M.; Mojumdar, Md. Rejwanur R.; A. Orcajo, Gonzalo. pp. 1 - 5. IEEE Xplore Digital Library,
DOI: 10.1109/ISGTEurope52324.2021.9639981
- 15 Title of the work:** Coordinated Management of Electrical Energy in a Hot Rolling Mill and a Wind Farm
Name of the conference: 2021 IEEE Industry Applications Society Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Vancouver, BC, Canada
Date of event: 10/10/2021
End date: 14/10/2021
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; Rodríguez, Josué; Cano, José M.; G. Norriella, Joaquín; Pedrayes, Francisco; Rojas, Carlos H. pp. 1 - 9. IEEE Xplore Digital Library,
DOI: 10.1109/IAS48185.2021.9677405



- 16** **Title of the work:** Consensus Phase Shifting Transformer Model
Name of the conference: 2020 IEEE Power & Energy Society General Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Montreal, QC, Canada
Date of event: 02/08/2020
End date: 06/08/2020
Organising entity: IEEE Power & Energy Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Mojumdar, Md. Rejwanur R.; Cano, José M.; Assadi, Mohsen; A. Orcajo, Gonzalo. pp. 1 - 5. IEEE Xplore Digital Library,
DOI: 10.1109/PESGM41954.2020.9281681
- 17** **Title of the work:** On the Consistency of Tap-Changing Transformer Models in Power System Studies
Name of the conference: 2020 IEEE Power & Energy Society General Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Montreal, QC, Canada
Date of event: 02/08/2020
End date: 06/08/2020
Organising entity: IEEE Power & Energy Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Cano, José M.; Mojumdar, Md. Rejwanur R.; A. Orcajo, Gonzalo. pp. 1 - 5. IEEE Xplore Digital Library,
DOI: 10.1109/PESGM41954.2020.9281405
- 18** **Title of the work:** Power Quality Improvement in a Hot Rolling Mill Plant Using a Cascaded H-Bridge STATCOM
Name of the conference: 2019 IEEE Industry Applications Society Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Baltimore, MD, United States of America
Date of event: 29/09/2019
End date: 03/10/2019
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Rojas, Carlos H.; Rodríguez, Josué; Ardura, Pablo; Cifrián, Diego. pp. 1 - 9. IEEE Xplore Digital Library,
DOI: 10.1109/IAS.2019.8912366



- 19** **Title of the work:** Online Impedance Estimation in AC Grids Considering Parallel-Connected Converters
Name of the conference: 2018 IEEE Energy Conversion Conference and Exposition (ECCE)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Portland, OR, United States of America
Date of event: 23/09/2018
End date: 27/09/2018
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Suárez González, Andrés; García, Pablo; Navarro Rodríguez, Ángel; Cano, José M. pp. 1 - 5. IEEE Xplore Digital Library,
DOI: 10.1109/ECCE.2018.8557922
- 20** **Title of the work:** Smoothing Parameter Optimization Routine for High-Quality a Priori Estimates in Forecasting-Aided State Estimation
Name of the conference: 2018 IEEE Power & Energy Society General Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Portland, OR, United States of America
Date of event: 05/08/2018
End date: 09/08/2018
Organising entity: IEEE Power & Energy Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Mojumdar, Md. Rejwanur R.; Cano, José M.; Jaman, Shahid; A. Orcajo, Gonzalo. pp. 1 - 5. IEEE Xplore Digital Library,
DOI: 10.1109/PESGM.2018.8586036
- 21** **Title of the work:** Retrofit of a Hot Rolling Mill Plant with Three-Level Active Front End Drives
Name of the conference: 2017 IEEE Industry Applications Society Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Cincinnati, OH, United States of America
Date of event: 01/10/2017
End date: 05/10/2017
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; Rodríguez, Josué; Cano, José M.; G. Norniella, Joaquín; Ardura, Pablo; Llera, Rocío; Cifrián, Diego. pp. 1 - 9. IEEE Xplore Digital Library,
DOI: 10.1109/IAS.2017.8101821
- 22** **Title of the work:** Sensorless Unbalance Correction as an Ancillary Service for LV 4-Wire/3-Phase Power Converters
Name of the conference: 2017 IEEE Energy Conversion Conference and Exposition (ECCE)



Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Cincinnati, OH, United States of America
Date of event: 01/10/2017
End date: 05/10/2017
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Suárez González, Andrés; García, Pablo; Navarro Rodríguez, Ángel; Villa Fernández, Geber; Cano, José M.pp. 4799 - 4805. IEEE Xplore Digital Library,
DOI: 10.1109/ECCE.2017.8096816

23 **Title of the work:** Limits, Stability and Disturbance Rejection Analysis of Voltage Control Loop Strategies for Grid Forming Converters in DC and AC Microgrids with High Penetration of CPL
Name of the conference: 19th European Conference on Power Electronics and Applications, EPE'17 ECCE Europe
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Warsaw, Poland
Date of event: 11/09/2017
End date: 14/09/2017
Organising entity: EPE & IEEE
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Navarro Rodríguez, Ángel; García, Pablo; Cano, José M.; Sumner, Mark. pp. 1 - 10. IEEE Xplore Digital Library,
DOI: 10.23919/EPE17ECCEEurope.2017.8099228

24 **Title of the work:** Overcurrent Protection Response of a Hot Rolling Mill Filtering System: Analysis of the Process Conditions
Name of the conference: 2016 IEEE Industry Applications Society Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Portland, OR, United States of America
Date of event: 02/10/2016
End date: 06/10/2016
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; Rodríguez, Josué; Cano, José M.; G. Norriella, Joaquín; Ardura, Pablo; Llera, Rocío; Cifrián, Diego. pp. 1 - 10. IEEE Xplore Digital Library,
DOI: 10.1109/IAS.2016.7731908

25 **Title of the work:** Improved Efficiency of Local EPS through Variable Switching Frequency Control of Distributed Resources
Name of the conference: 2016 IEEE Energy Conversion Conference and Exposition (ECCE)



Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Milwaukee, WI, United States of America
Date of event: 18/09/2016
End date: 22/09/2016
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Cano, José M.; Suárez, Andrés; Navarro-Rodríguez, Ángel; García, Pablo. pp. 1 - 7. IEEE Xplore Digital Library,
DOI: 10.1109/ECCE.2016.7855190

26 **Title of the work:** Dynamic Estimation of Electrical Demand in Hot Rolling Mills
Name of the conference: 2015 IEEE Industry Applications Society Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Dallas, TX, United States of America
Date of event: 18/10/2015
End date: 22/10/2015
Organising entity: IEEE Industry Applications Society
City organizing entity: United States of America
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; Rodríguez, Josué; Ardura, Pablo; Cano, José M.; G. Norriella, Joaquín; Llera, Rocío; Cifrián, Diego. pp. 1 - 9. IEEE Xplore Digital Library,
DOI: 10.1109/IAS.2015.7356891

27 **Title of the work:** Método MEI: Cómo Hacer un Examen en el Ámbito de la Ingeniería
Name of the conference: V Congreso de la Red Ibero-Americana de Investigación sobre la Calidad de la Educación Superior (RIAICES)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Oviedo, Spain
Date of event: 08/10/2015
End date: 10/10/2015
Organising entity: RIAICES
City organizing entity: Spain
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
G. Norriella, Joaquín; Cano, José M.; Pedrayes, Francisco; F. Cabanas, Manés. "Innovación en la Educación Superior: Desafíos y Propuestas". pp. 327 - 334. Ediciones de la Universidad de Oviedo, ISBN 978-84-16046-85-0

28 **Title of the work:** Application of Loop Power Flow Controllers for Power Demand Optimization at Industrial Customer Sites
Name of the conference: 2015 IEEE Power & Energy Society General Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - poster



City of event: Denver, CO, United States of America

Date of event: 26/07/2015

End date: 30/07/2015

Organising entity: IEEE Power & Energy Society

City organizing entity: United States of America

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

Cano, José M.; G. Norriella, Joaquín; Rojas, Carlos; A. Orcajo, Gonzalo; Jatskevich, Juri. pp. 1 - 5. IEEE Xplore Digital Library,

DOI: 10.1109/PESGM.2015.7285766

29 Title of the work: Modeling of LCC-HVDC Systems Using Dynamic Phasors

Name of the conference: 2015 IEEE Power & Energy Society General Meeting

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Denver, CO, United States of America

Date of event: 26/07/2015

End date: 30/07/2015

Organising entity: IEEE Power & Energy Society

City organizing entity: United States of America

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

Daryabak, Mehdi; Filizadeh, Shaahin; Jatskevich, Juri; Davoudi, Ali; Saeedifard, Maryam; Sood, Vijay; Martinez, Juan; Aliprantis, Dionysios; Cano, José M.; Mehrizi-Sani, Ali. pp. 1 - 5. IEEE Xplore Digital Library,

DOI: 10.1109/PESGM.2015.7285683

30 Title of the work: Multi-Resolution Modeling of Induction Furnace Systems with Line-Commutated Rectifier and Resonant Converter

Name of the conference: 2015 IEEE Power & Energy Society General Meeting

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - poster

City of event: Denver, CO, United States of America

Date of event: 26/07/2015

End date: 30/07/2015

Organising entity: IEEE Power & Energy Society

City organizing entity: United States of America

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

Ebrahimi, Seyyedmilad; Atighechi, Hamid; Amiri, Navid; Jatskevich, Juri; Cano, José M. pp. 1 - 5. IEEE Xplore Digital Library,

DOI: 10.1109/PESGM.2015.7286583

31 Title of the work: Electric Motors Monitoring: An Alternative to Increase the Efficiency of Ball Mills

Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'14)

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Córdoba, Andalucía, Spain



Date of event: 08/04/2014

End date: 10/04/2014

Organising entity: AEDIE y EA4EPQ

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

G. Melero, Manuel; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; F. Cabanas, Manés; Rojas G. Carlos; A. Orcajo, Gonzalo; Aguado, José M.; Ardura, Pablo. "Renewable Energy and Power Quality Journal (RE&PQJ)". 1 - 12, pp. 1 - 6. EA4EPQ, Available on-line at: <<http://www.icrepq.com/papers-icrepq14.html>>. ISBN 978-84-616-8196-9

32 Title of the work: Power Quality Analysis and Improvements in a Hot Rolling Mill using a STATCOM

Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'14)

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Córdoba, Andalucía, Spain

Date of event: 08/04/2014

End date: 10/04/2014

Organising entity: AEDIE y EA4EPQ

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Ardura, Pablo; A. Orcajo, Gonzalo; Cano, José M.; G. Norniella, Joaquín; Pedrayes, Francisco; Briz, Fernando; F. Cabanas, Manés; G. Melero, Manuel; Rojas, Carlos; G. Suárez, José R. "Renewable Energy and Power Quality Journal (RE&PQJ)". 1 - 12, pp. 1 - 6. EA4EPQ, Available on-line at: <<http://www.icrepq.com/papers-icrepq14.html>>. ISBN 978-84-616-8196-9

33 Title of the work: Detection of Coupling Inductor Faults in Three-Phase Adjustable Speed Drives with Direct Power Control-Based Active Front-End Rectifiers

Name of the conference: The 11th IEEE International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives (SDEMPED'13)

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Valencia, Spain

Date of event: 27/08/2013

End date: 30/08/2013

Organising entity: IEEE and IEEE Industrial Electronics Society

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

G. Norniella, Joaquín; Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; Pedrayes, Francisco; F. Cabanas, Manés; G. Melero, Manuel. pp. 527 - 532. IEEE Xplore Digital Library, ISBN 978-1-4799-0025-1

DOI: 10.1109/DEMPED.2013.6645765

34 Title of the work: Average-Value Modeling of Thyristor Controlled Line- Commutated Converter using Voltage and Current Source Formulations

Name of the conference: 2013 IEEE Power & Energy Society General Meeting

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Vancouver, Canada

Date of event: 21/07/2013

End date: 25/07/2013

Organising entity: IEEE Power & Energy Society

City organizing entity: United States of America

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

Atighechi, Hamid; Jatskevich, Juri; Cano, José M. pp. 1 - 5. IEEE Xplore Digital Library, ISBN 978-1-4799-1303-9

DOI: 10.1109/PESMG.2013.6673005

35 Title of the work: Efficiency Estimation on DPC Active Front-End Rectifier Loads for System-Level Transient Studies

Name of the conference: 2013 IEEE Power & Energy Society General Meeting

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Vancouver, Canada

Date of event: 21/07/2013

End date: 25/07/2013

Organising entity: IEEE Power & Energy Society

City organizing entity: United States of America

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

Cano, José M.; G. Norniella, Joaquín; A. Orcajo, Gonzalo; Rojas, Carlos; Atighechi, Hamid; Jatskevich, Juri. pp. 1 - 5. IEEE Xplore Digital Library, ISBN 978-1-4799-1303-9

DOI: 10.1109/PESMG.2013.6672229

36 Title of the work: New Strategies for Estimating the Coupling Inductance in Grid-Connected Direct Power Control-based Three-Phase Active Rectifiers

Name of the conference: 2013 IEEE Power & Energy Society General Meeting

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Vancouver, Canada

Date of event: 21/07/2013

End date: 25/07/2013

Organising entity: IEEE Power & Energy Society

City organizing entity: United States of America

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

G. Norniella, Joaquín; Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; Pedrayes, Francisco; F. Cabanas, Manés; G. Melero, Manuel. pp. 1 - 5. IEEE Xplore Digital Library, ISBN 978-1-4799-1303-9

DOI: 10.1109/PESMG.2013.6672432

37 Title of the work: Detection of Stator Winding Insulation Failures: On-line and Off-line Tests

Name of the conference: 2013 IEEE Workshop on Electrical Machines Design Control and Diagnosis (IEEE-WEMDCD'13)

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - invited / keynote talk

Reasons for participation: Upon invitation

City of event: Paris, France

Date of event: 11/03/2013

End date: 12/03/2013

Organising entity: IEEE Industrial Electronics Society and the IEEE France Section



Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

F. Cabanas, Manés; G. Norriella, Joaquín; G. Melero, Manuel; Rojas, Carlos; Cano, José M.; Pedrayes, Francisco; A. Orcajo, Gonzalo. pp. 210 - 219. IEEE Xplore Digital Library, ISBN 978-1-4673-5658-9

DOI: 10.1109/WEMDCD.2013.6525181

- 38** **Title of the work:** Direct Power Control of a Three-phase Active Rectifier
Name of the conference: Real-Time 2010, 3rd Annual Opal-RT International Users Conference
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: París, France
Date of event: 27/06/2010
End date: 30/06/2010
Organising entity: Opal-RT
Type of contribution: Scientific paper
G. Norriella, Joaquín; Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; Pedrayes, Francisco; F. Cabanas, Manés; G. Melero, Manuel.
- 39** **Title of the work:** Experimental Application of Leakage Flux to the Detection of Insulation Faults on Disc-type Winding Transformers
Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'10)
Geographical area: Non EU International
Type of participation: Participatory - oral communication
City of event: Granada, Andalucía, Spain
Date of event: 22/03/2010
End date: 25/03/2010
Organising entity: AEDIE y Universidad de Granada
With external admission assessment committee: Yes
F. Cabanas, Manés; G. Melero, Manuel; Rojas, Carlos; A. Orcajo, Gonzalo; Cano, José M.; Pedrayes, Francisco; G. Norriella, Joaquín; D. Rozada, S.1 - CD, pp. 1 - 6. EA4EPQ, Available on-line at: <<http://www.icrepq.com/papers-icrepq10.html>>. ISBN 978-84-613-7543-1
- 40** **Title of the work:** Optimization of Direct Power Control of Three-phase Active Rectifiers by Using Multiple Switching Tables
Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'10)
Geographical area: Non EU International
Type of participation: Participatory - oral communication
City of event: Granada, Andalucía, Spain
Date of event: 22/03/2010
End date: 25/03/2010
Organising entity: AEDIE y Universidad de Granada
With external admission assessment committee: Yes
G. Norriella, Joaquín; Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; Pedrayes, Francisco; F. Cabanas, Manés; G. Melero, Manuel. 1 - CD, pp. 1 - 6. EA4EPQ, Available on-line at: <<http://www.icrepq.com/papers-icrepq10.html>>. ISBN 978-84-613-7543-1



- 41 Title of the work:** Detection of Insulation Faults on Disc-type Winding Transformers by Means of Leakage Flux Analysis
Name of the conference: The 7th IEEE International Symposium on Diagnostics for Electric Machines, Power Electronics and Drives (SDEMPED'09)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Córcega, France
Date of event: 31/08/2009
End date: 03/09/2009
Organising entity: IEEE and IEEE Industrial Electronics Society
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
F. Cabanas, Manés; G. Melero, Manuel; Rojas, Carlos; A. Orcajo, Gonzalo; Cano, José M.; Pedrayes, Francisco; G. Norriella, Joaquín; D. Rozada, S.pp. 1 - 6. IEEE Xplore, ISBN 978-1-4244-3441-1
DOI: 10.1109/DEMPED.2009.5292756
- 42 Title of the work:** Analysis of Electrical Field in a 6 kV Form-wound Coil with Flat Shape Voids
Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'09)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - poster
City of event: Valencia, Spain
Date of event: 15/04/2009
End date: 17/04/2009
Organising entity: AEDIE y Universidad de Valencia
With external admission assessment committee: Yes
Type of contribution: Scientific paper
Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Cano, José M.; A. Orcajo, Gonzalo; Pedrayes, Francisco. CD - 1, pp. 1 - 6. EA4EPQ, Available on-line at: <<http://www.icrepq.com/papers-icrepq09.htm>>. ISBN 978-84-612-8014-8
- 43 Title of the work:** Application of a Dynamic Model based on a Network of Magnetically Coupled Reluctances to Rotor Fault Diagnosis in Induction Motors
Name of the conference: The 6th IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'07)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Cracovia, Poland
Date of event: 06/09/2007
End date: 08/09/2007
Organising entity: IEEE y Arsenal Research
Publication in conference proceedings: Yes
Type of contribution: Scientific paper
Pedrayes, Francisco; Rojas, Carlos; F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.1, pp. 241 - 246. IEEE Xplore, ISBN 978-1-4244-1062-0
DOI: 10.1109/DEMPED.2007.4393102
- 44 Title of the work:** Finite Element Model for the Study of Inter-Turn Short Circuits in Induction Motors
Name of the conference: The 6th IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'07)
Type of event: Conference **Geographical area:** Non EU International



Type of participation: Participatory - oral communication

City of event: Cracovia, Poland

Date of event: 06/09/2007

End date: 08/09/2007

Organising entity: IEEE y Arsenal Research

Type of contribution: Scientific paper

Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Cano, José M.; A. Orcajo, Gonzalo; Pedrayes, Francisco. 1, pp. 415 - 419. IEEE Xplore, ISBN 978-1-4244-1062-0

DOI: 10.1109/DEMPED.2007.4393130

45 Title of the work: Low Cost Method for On-line Remote Monitoring of Power Transformers and Induction Motors

Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'07)

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Sevilla, Spain

Date of event: 28/03/2007

End date: 30/03/2007

Organising entity: AEDIE y Universidad de Sevilla

With external admission assessment committee: Yes

Type of contribution: Scientific paper

F. Cabanas, Manés; Pedrayes, Francisco; Rojas, Carlos; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.1 - CD, pp. 1 - 6. EA4EPQ, Available on-line at: <<http://www.icrepq.com/icrepq07-papers.htm>>.

ISBN 978-84-611-4707-6

46 Title of the work: Desarrollo de Métodos para el Diagnóstico de Máquinas Eléctricas Mediante el Análisis por Elementos Finitos del Flujo Magnético

Name of the conference: XIII Seminario Anual de Automática, Electrónica Industrial e Instrumentación (SAAEI'06)

Type of event: Conference

Geographical area: National

Type of participation: Participatory - oral communication

City of event: Gijón, Spain

Date of event: 13/09/2006

End date: 15/09/2006

Organising entity: Capítulo Español de la IEEE Power Electronics Society e IEEE Industrial Electronics Society

With external admission assessment committee: Yes

Type of contribution: Scientific paper

Pedrayes, Francisco; F. Cabanas, Manés; Rojas, Carlos; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M. pp. 255 - 260. Servicio de Publicaciones de la Universidad de Oviedo, ISBN 84-8317-564-9

47 Title of the work: Modelo Dinámico de un Motor Asíncrono Basado en una Red de Reluctancias Magnéticas Acopladas

Name of the conference: XIII Seminario Anual de Automática, Electrónica Industrial e Instrumentación (SAAEI'06)

Type of event: Conference

Geographical area: National

Type of participation: Participatory - oral communication

City of event: Gijón, Spain

Date of event: 13/09/2006

End date: 15/09/2006



Organising entity: Capítulo Español de la IEEE Power Electronics Society e IEEE Industrial Electronics Society

Type of contribution: Scientific paper

Pedrayes, Francisco; Rojas, Carlos; F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M. pp. 261 - 266. Servicio de Publicaciones de la Universidad de Oviedo, ISBN 84-8317-564-9

48 Title of the work: A Dynamic Model Based on a Network of Magnetically Coupled Reluctances for Asynchronous Motor Fault Analysis

Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'06)

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Palma de Mallorca, Spain

Date of event: 05/04/2006

End date: 07/04/2006

Organising entity: AEDIE

With external admission assessment committee: Yes

Type of contribution: Scientific paper

Pedrayes, Francisco; Rojas, Carlos; F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M. 1 - CD, pp. 1 - 6. EA4EPQ, Available on-line at: <<http://www.icrepq.com/papers-icrepq06.htm>>. ISBN 84-609-6604-6

49 Title of the work: A New On-line Method for the Early Detection of Broken Rotor Bars in Asynchronous Motors Working under Arbitrary Load Conditions

Name of the conference: IEEE Industry Applications Conference - 40th IAS Annual Meeting

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Kowloon, Hong Kong

Date of event: 02/10/2005

End date: 06/10/2005

Organising entity: IEEE Industry Applications Society

Publication in conference proceedings: Yes

With external admission assessment committee: Yes

Type of contribution: Scientific paper

F. Cabanas, Manés; Pedrayes, Francisco; González, M. R.; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.; Rojas, Carlos. 1, pp. 662 - 669. IEEE Xplore, ISBN 0-7803-9209-4

DOI: 10.1109/IAS.2005.1518378

50 Title of the work: A New Electronic Instrument for the Early Detection of Broken Bars in Asynchronous Motors Working Under Arbitrary Load Conditions

Name of the conference: The 5th IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'05)

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Viena, Austria

Date of event: 07/09/2005

End date: 09/09/2005

Organising entity: IEEE y Arsenal Research

Publication in conference proceedings: Yes

With external admission assessment committee: Yes

Type of contribution: Scientific paper



F. Cabanas, Manés; Pedrayes, Francisco; R. González, M.; G. Melero, Manuel; Rojas, Carlos; A. Orcajo, Gonzalo; Cano, José M.; Nuño, Fernando. 1, pp. 29 - 34. IEEE Xplore, ISBN 978-0-7803-9124-6
DOI: 10.1109/DEMPED.2005.4662547

- 51** **Title of the work:** Accelerated Ageing Test Applied to the Early Detection of Insulation Failures in Low Voltage Induction Motors
Name of the conference: 9th Spanish-Portuguese Congress on Electrical Engineering
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Marbella, Spain
Date of event: 30/06/2005
End date: 02/07/2005
Organising entity: AEDIE, Universidad de Málaga y Universidad de Córdoba
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
G. Melero, Manuel; F. Cabanas, Manés; Rojas, Carlos; Pedrayes, Francisco; A. Orcajo, Gonzalo; Cano, José M. CD, pp. 1 - 5. ISBN 84-609-5231-2
- 52** **Title of the work:** Cálculo del Par Electromagnético de un Motor de Inducción con Asimetrías Rotóricas mediante Modelos de Elementos Finitos
Name of the conference: 9th Spanish-Portuguese Congress on Electrical Engineering
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Marbella, Spain
Date of event: 30/06/2005
End date: 02/07/2005
Organising entity: AEDIE, Universidad de Málaga y Universidad de Córdoba
With external admission assessment committee: Yes
Type of contribution: Scientific paper
Rojas, Carlos; G. Melero, Manuel; Cano, José M.; F. Cabanas, Manés; A. Orcajo, Gonzalo; Pedrayes, Francisco. CD, pp. 1 - 5. ISBN 84-609-5231-2
- 53** **Title of the work:** Detección de Fallos en el Aislamiento Estatórico de Motores de Inducción con Devanado de Hilo
Name of the conference: XV Reunión de Grupos de Investigación de Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Zaragoza, Spain
Date of event: 17/03/2005
End date: 18/03/2005
Organising entity: AEDIE y Universidad de Zaragoza
Type of contribution: Scientific paper
G. Melero, Manuel; F. Cabanas, Manés; Rojas, Carlos; Pedrayes, Francisco; A. Orcajo, Gonzalo; Cano, José M. 114, pp. 1 - 10. AE4EPQ, ISBN 84-609-3235-4
- 54** **Title of the work:** Voltage Sags in Industrial Systems
Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'05)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Zaragoza, Spain



Date of event: 16/03/2005

End date: 18/03/2005

Organising entity: AEDIE y Universidad de Zaragoza

With external admission assessment committee: Yes

Type of contribution: Scientific paper

A. Orcajo, Gonzalo; Cano, José M.; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Pedrayes, Francisco. 1, pp. 1 - 6. AE4EPQ, ISBN 84-609-3234-6

- 55** **Title of the work:** Influencia de las Oscilaciones de Par y de Inercia de la Carga en la Detección de la Rotura de Barras mediante el Análisis Espectral del Flujo Axial de Dispersión
Name of the conference: XIV Reunión de Grupos de Investigación en Ingeniería Eléctrica
Type of event: Conference **Geographical area:** National
Type of participation: Participatory - poster
City of event: Barcelona, Spain
Date of event: 01/04/2004
End date: 02/04/2004
Organising entity: AEDIE y Universidad Politécnica de Cataluña
Type of contribution: Scientific paper
G. Melero, Manuel; Rojas, Carlos; P. Donsión, Manuel; Pedrayes, Francisco; F. Cabanas, Manés; A. Orcajo, Gonzalo; Cano, José M.CD, pp. 1 - 6. AEDIE, ISBN 84-607-9887-9
- 56** **Title of the work:** Análisis Espectral de las Componentes Simétricas de las Corrientes de Alimentación de Motores de Jaula de Ardilla como Técnica de Detección de Asimetrías Rotóricas
Name of the conference: XIV Reunión de Grupos de Investigación en Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Barcelona, Spain
Date of event: 01/04/2004
End date: 02/04/2004
Organising entity: AEDIE y Universidad Politécnica de Cataluña
Type of contribution: Scientific paper
Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Cano, José M.; A. Orcajo, Gonzalo; Pedrayes, Francisco; P. Donsión, Manuel. CD, pp. 1 - 6. AEDIE, ISBN 84-607-9887-9
- 57** **Title of the work:** Detección de Fallos Incipientes en el Sistema Aislante de Transformadores de Potencia mediante el Análisis Temporal del Flujo de Dispersión
Name of the conference: XIV Reunión de Grupos de Investigación en Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Barcelona, Spain
Date of event: 01/04/2004
End date: 02/04/2004
Organising entity: AEDIE y Universidad Politécnica de Cataluña
Type of contribution: Scientific paper
Pedrayes, Francisco; G. Melero, Manuel; F. Cabanas, Manés; Rojas, Carlos; A. Orcajo, Gonzalo; Cano, José M.CD, pp. 1 - 6. ISBN 84-607-9887-9
- 58** **Title of the work:** Technical and Economical Assessment of the Effect of Voltage Sags on Adjustable Speed Drives
Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'04)
Type of event: Conference **Geographical area:** Non EU International



Type of participation: Participatory - oral communication

City of event: Barcelona, Spain

Date of event: 31/03/2004

End date: 02/04/2004

Organising entity: AEDIE y Universidad Politécnica de Cataluña

With external admission assessment committee: Yes

Type of contribution: Scientific paper

Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés. 1, pp. 1 - 6. EA4EPQ, ISBN 84-607-9889-5

59 Title of the work: A New On-Line Method Based On Leakage Flux Analysis For The Early Detection Of Insulation Failures In Power Trasformers

Name of the conference: IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'03)

Type of participation: Participatory - oral communication

City of event: Atlanta, United States of America

Date of event: 24/08/2003

End date: 26/08/2003

Organising entity: IEEE & Georgia Institute of Technology

F. Cabanas, Manés; G. Melero, Manuel; Pedrayes, Francisco; A. Orcajo, Gonzalo; Cano, José M.; Rojas, Carlos. 1, pp. 146 - 151. ISBN 0-7803-7838-5

DOI: 10.1109/DEMPED.2003.1234563

60 Title of the work: Study of an Induction Motor Working under Stator Winding Inter-turn Short Circuit Condition

Name of the conference: IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'03)

Type of participation: Participatory - oral communication

City of event: Atlanta, United States of America

Date of event: 24/08/2003

End date: 26/08/2003

Organising entity: IEEE & Georgia Institute of Technology

G. Melero, Manuel; F. Cabanas, Manés; Rojas, Carlos; A. Orcajo, Gonzalo; Cano, José M.; Solares, Juan. 1, pp. 52 - 57. ISBN 0-7803-7838-5

DOI: 10.1109/DEMPED.2003.1234546

61 Title of the work: Analysis by the FEM of the Squirrel Cage IM with Broken Rotor Bar: Influence Caused in Current Spectrum by the Variable Speed

Name of the conference: 8º Congresso Luso-Espanhol de Engenharia Electrotécnica

Type of event: Conference

Geographical area: European Union

Type of participation: Participatory - oral communication

City of event: Vilamoura, Portugal

Date of event: 03/07/2003

End date: 05/07/2003

Organising entity: Universidad de Coimbra

Publication in conference proceedings: Yes

With external admission assessment committee: Yes

Type of contribution: Scientific paper

Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; A. Orcajo, Gonzalo; Cano, José M.; Pedrayes, Francisco. 3, pp. 6.285 - 6.290. APDEE y AEDIE, ISBN 972-8822-00-6



- 62** **Title of the work:** Behaviour of an Induction Motor Working under Stator Winding Inter-turn Short Circuit Condition
Name of the conference: 8º Congresso Luso-Espanhol de Engenharia Electrotécnica
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Vilamoura, Portugal
Date of event: 03/07/2003
End date: 05/07/2003
Organising entity: Universidad de Coimbra
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
G. Melero, Manuel; Corbacho, José A.; F. Cabanas, Manés; Rojas, Carlos; A. Orcajo, Gonzalo; Cano, José M.; Solares, Juan. 3, pp. 6.261 - 6.266. APDEE y AEDIE, ISBN 972-8822-00-6
- 63** **Title of the work:** Effect of Voltage Sags on Adjustable-Speed Drives: Influence of Working Conditions
Name of the conference: 8º Congresso Luso-Espanhol de Engenharia Electrotécnica
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Vilamoura, Portugal
Date of event: 03/07/2003
End date: 05/07/2003
Organising entity: Universidad de Coimbra
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; Cano, José M.; Rojas, Carlos; F. Cabanas, Manés; G. Melero, Manuel; Zamora, Salvador. 2, pp. 4.171 - 4.176. APDEE y AEDIE, ISBN 972-8822-00-6
- 64** **Title of the work:** Estimación de Armónicos de Corriente en Accionamientos PWM en Modo de Funcionamiento Continuo
Name of the conference: 8º Congresso Luso-Espanhol de Engenharia Electrotécnica
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Vilamoura, Portugal
Date of event: 03/07/2003
End date: 05/07/2003
Organising entity: Universidad de Coimbra
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Zamora, Salvador. 3, pp. 6.1 - 6.6. APDEE y AEDIE, ISBN 972-8822-00-6
- 65** **Title of the work:** Consideraciones Relativas a la Evolución Temporal de las Variables Electromagnéticas del Motor de Inducción de Tipo Jaula de Ardilla con Barras Rotas
Name of the conference: XIII Reunión de Grupos de Investigación de Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Vigo, Spain
Date of event: 10/04/2003
End date: 12/04/2003



Organising entity: AEDIE

Type of contribution: Scientific paper

Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Cano, José M.; A. Orcajo, Gonzalo; Zamora, Salvador; P. Donsión, Manuel. Vol. 1, pp. 1 - 8. AEDIE, ISBN 84-607-6769-8

- 66** **Title of the work:** Editor Gráfico para la Simulación de Sistemas Eléctricos de Potencia
Name of the conference: XIII Reunión de Grupos de Investigación de Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Vigo, Spain
Date of event: 10/04/2003
End date: 12/04/2003
Organising entity: AEDIE
Type of contribution: Scientific paper
Zamora, Salvador; G. Cueto, J. A.; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Cano, José M.; Orcajo, Gonzalo A. Vol. 1, pp. 1 - 10. AEDIE, ISBN 84-607-6769-8
- 67** **Title of the work:** Estudio del Flujo Axial de un Motor de Inducción Funcionando en Condiciones Reales de Cortocircuito entre Espiras
Name of the conference: XIII Reunión de Grupos de Investigación de Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Vigo, Spain
Date of event: 10/04/2003
End date: 12/04/2003
Organising entity: AEDIE
Type of contribution: Scientific paper
G. Melero, Manuel; Corbacho, José A.; F. Cabanas, Manés; Rojas, Carlos; Orcajo, Gonzalo A.; Cano, José M.; Zamora, Salvador; Solares, Juan. Vol. 1, pp. 1 - 8. AEDIE, ISBN 84-607-6769-8
- 68** **Title of the work:** Revisión Bibliografía sobre el Diagnóstico de Fallos en Aislantes Sólidos de Media Tensión mediante el Análisis y Procesamiento de Descargas Parciales
Name of the conference: XIII Reunión de Grupos de Investigación de Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Vigo, Spain
Date of event: 10/04/2003
End date: 12/04/2003
Organising entity: AEDIE
Type of contribution: Scientific paper
Zamora, Salvador; F. Cabanas, Manés; G. Melero, Manuel; Orcajo, Gonzalo A.; Cano, José M.; Rojas, Carlos; Pedrayes, Francisco. Vol. 1, pp. 1 - 12. AEDIE, ISBN 84-607-6769-8
- 69** **Title of the work:** Analysis of the AC-DC Harmonic Interaction between the Power Network and Uncontrolled 6 Pulse Rectifiers Working in the Discontinuous Conduction Mode using Newton's Method
Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'03)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Vigo, Spain
Date of event: 09/04/2003
End date: 12/04/2003



Organising entity: EA4EPQ - European Association for the Development of Renewable Energies, Environment and Power Quality

Publication in conference proceedings: Yes

With external admission assessment committee: Yes

Type of contribution: Scientific paper

Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés. Vol. 1, pp. 1 - 6. EA4EPQ, ISBN 84-607-6768-X

70 Title of the work: Sequence Components Obtained by Current Spectral Analysis in DC Motor Drives Working under Abnormal Conditions

Name of the conference: International Conference on Renewable Energies and Power Quality (ICREPQ'03)

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Vigo, Spain

Date of event: 09/04/2003

End date: 12/04/2003

Organising entity: EA4EPQ - European Association for the Development of Renewable Energies, Environment and Power Quality

Publication in conference proceedings: Yes

With external admission assessment committee: Yes

Type of contribution: Scientific paper

A. Orcajo, Gonzalo; Cano, José M.; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés. Vol. 1, pp. 1 - 5. EA4EPQ, ISBN 84-607-7173-3

71 Title of the work: Análisis en Componentes de Secuencia de las Corrientes de Alimentación de un Accionamiento Controlado para un Motor de Corriente Continua de Excitación Independiente, bajo Condiciones Anómalas de Funcionamiento

Name of the conference: XII Reunión de Grupos de Investigación en Ingeniería Eléctrica

Type of event: Training Session

Geographical area: National

Type of participation: Participatory - poster

City of event: Córdoba, Spain

Date of event: 19/03/2002

End date: 21/03/2002

Organising entity: Universidad de Córdoba

Type of contribution: Scientific paper

A. Orcajo, Gonzalo; Cano, José M.; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Zamora, Salvador. Vol. 1, pp. 1 - 7. Universidad de Córdoba, ISBN 84-699-7609-5

72 Title of the work: Diagnóstico del Aislamiento Estatórico de Máquinas de Media Tensión mediante el Ensayo de Tangente de Delta

Name of the conference: XII Reunión de Grupos de Investigación en Ingeniería Eléctrica

Type of event: Training Session

Geographical area: National

Type of participation: Participatory - poster

City of event: Córdoba, Spain

Date of event: 19/03/2002

End date: 21/03/2002

Organising entity: Universidad de Córdoba

Type of entity: University

Type of contribution: Scientific paper

G. Melero, Manuel; F. Cabanas, Manés; Rojas, Carlos; A. Orcajo, Gonzalo; Cano, José M.; Zamora, Salvador; Solares, Juan. Vol. 1, pp. 1 - 6. Universidad de Córdoba, ISBN 84-699-7609-5



- 73** **Title of the work:** El Proceso de Mallado del Entrehierro de la Máquina Asíncrona en Modelos de Elementos Finitos y su Influencia sobre la estimación exacta de la Inducción y Par Electromagnético
Name of the conference: XII Reunión de Grupos de Investigación en Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Córdoba, Spain
Date of event: 19/03/2002
End date: 21/03/2002
Organising entity: Universidad de Córdoba **Type of entity:** University
Type of contribution: Scientific paper
Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Cano, José M.; A. Orcajo, Gonzalo; Zamora, Salvador. Vol. 1, pp. 1 - 7. Universidad de Córdoba, ISBN 84-699-7609-5
- 74** **Title of the work:** Interacción Alterna-Continua de Rectificadores no Controlados en Modo de Funcionamiento Discontinuo mediante la Aplicación del Método de Newton
Name of the conference: XII Reunión de Grupos de Investigación en Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Córdoba, Spain
Date of event: 19/03/2002
End date: 21/03/2002
Organising entity: Universidad de Córdoba **Type of entity:** University
Type of contribution: Scientific paper
Cano, José M.; A. Orcajo, Gonzalo; Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés. Vol. 1, pp. 1 - 9. Universidad de Córdoba, ISBN 84-699-7609-5
- 75** **Title of the work:** Estudio Teórico-experimental de los Factores Externos Capaces de Influir en el Diagnóstico de Asimetrías Rotóricas mediante el Análisis de Corrientes en el Dominio de la Frecuencia
Name of the conference: 7as Jornadas Hispano Lusas de Ingeniería Eléctrica
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Leganés, Spain
Date of event: 04/07/2001
End date: 06/07/2001
Organising entity: Universidad Carlos III de Madrid y Universidad de Coimbra
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Cano, José M.; A. Orcajo, Gonzalo; P. Donsión, Manuel. Vol. 1, pp. 135 - 140. Universidad Carlos III de Madrid, ISBN 84-95821-01-X
- 76** **Title of the work:** Evaluación Experimental de los Nuevos Métodos de Detección de Asimetrías Rotóricas en Motores Asíncronos de Jaula de Ardilla
Name of the conference: 7as Jornadas Hispano Lusas de Ingeniería Eléctrica
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Leganés, Spain
Date of event: 04/07/2001
End date: 06/07/2001
Organising entity: Universidad Carlos III de Madrid y Universidad de Coimbra
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes



Type of contribution: Scientific paper

Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; Cano, José M.; A. Orcajo, Gonzalo; P. Donsión, Manuel. Vol. 1, pp. 191 - 196. Universidad Carlos III de Madrid, ISBN 84-95821-01-X

- 77 Title of the work:** Modelo del Inversor PWM en el Dominio de la Frecuencia
Name of the conference: 7as Jornadas Hispano Lusas de Ingeniería Eléctrica
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Leganés, Spain
Date of event: 04/07/2001
End date: 06/07/2001
Organising entity: Universidad Carlos III de Madrid y Universidad de Coimbra
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes

Type of contribution: Scientific paper

Cano, José M.; A. Orcajo, Gonzalo; F. Cabanas, Manés; G. Melero, Manuel; Rojas, Carlos; Sáenz, José R. Vol. 1, pp. 93 - 98. Universidad Carlos III de Madrid, ISBN 84-95821-01-X

- 78 Title of the work:** Regulación de Potencia Reactiva en Parques Eólicos: Algoritmos de Control
Name of the conference: 7as Jornadas Hispano Lusas de Ingeniería Eléctrica
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Leganés, Spain
Date of event: 04/07/2001
End date: 06/07/2001
Organising entity: Universidad Carlos III de Madrid y Universidad de Coimbra
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes

Type of contribution: Scientific paper

Tapia, Arantxa; Tapia, Gerardo; Ostolaza, Xabier; Cano, José M.; Durán, Mario; Durán, José L.; Criado, Raimundo; Sáenz, José R. Vol. 1, pp. 155 - 160. Universidad Carlos III de Madrid, ISBN 84-95821-01-X

- 79 Title of the work:** A New Mathematical Procedure for the Computation of the Equivalent Inverse Sequence Impedance in Working Induction Motors
Name of the conference: IEEE Industry Applications Conference
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Roma, Italy
Date of event: 08/10/2000
End date: 12/10/2000
Organising entity: IEEE Industry Applications Society
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes

Type of contribution: Scientific paper

Henao, Humberto; Capolino, Gérard A.; Assaf, T.; F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.; Briz, Fernando. Vol. 1, pp. 336 - 343. IEEE Xplore, ISBN 0-7803-6401-5

DOI: 10.1109/IAS.2000.881133

- 80 Title of the work:** The Dispersion in the Calculation of Effective Inverse Sequence Impedance of Induction Motors: A Solution Based on the Complex Fourier Transform
Name of the conference: International Conference on Electrical Machines (ICEM'00)
Type of event: Conference **Geographical area:** Non EU International



Type of participation: Participatory - oral communication

City of event: Espoo, Finland

Date of event: 28/08/2000

End date: 30/08/2000

Organising entity: Helsinki University of Technology

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.; Briz, Fernando; Capolino, Gérard A.; Henao, Humberto. Vol. 1, pp. 766 - 770. Helsingin Yliopisto, ISBN 95-122-5097-7

81 Title of the work: Distortion Analysis in AC-DC Rectifiers Operating in Discontinuous Mode under Unbalanced Conditions

Name of the conference: PCIM 2000 - Power Conversion and Intelligent Motion, 6th European Power Quality Conference

Type of event: Conference

Geographical area: European Union

Type of participation: Participatory - oral communication

City of event: Nuremberg, Germany

Date of event: 06/06/2000

End date: 08/06/2000

Organising entity: PCIM Europe

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

Cano, José M.; A. Orcajo, Gonzalo; G. Mayordomo, Julio; F. Cabanas, Manés; G. Melero, Manuel. Vol. 1, pp. 127 - 131. PCIM, ISBN 3-928643-26-6

82 Title of the work: Análisis y Modelado de Asimetrías Rotóricas en Motores de Inducción de Jaula de Ardilla mediante el Método de los Elementos Finitos

Name of the conference: X Reunión de Grupos de Investigación en Ingeniería Eléctrica

Type of event: Training Session

Geographical area: National

Type of participation: Participatory - poster

City of event: Santander, Spain

Date of event: 16/03/2000

End date: 18/03/2000

Organising entity: Universidad de Cantabria

Publication in conference proceedings: Yes

Type of contribution: Scientific paper

Rojas, Carlos; G. Melero, Manuel; F. Cabanas, Manés; A. Orcajo, Gonzalo; Cano, José M.; P. Donsión, Manuel. Vol. 1, pp. 1 - 8. Universidad de Cantabria, ISBN 84-8102-248-9

83 Title of the work: Modelos en el Dominio de la Frecuencia para Cálculos de la Distorsión Armónica en Convertidores AC/DC

Name of the conference: X Reunión de Grupos de Investigación en Ingeniería Eléctrica

Type of event: Training Session

Geographical area: National

Type of participation: Participatory - poster

City of event: Santander, Spain

Date of event: 16/03/2000

End date: 18/03/2000

Organising entity: Universidad de Cantabria

Publication in conference proceedings: Yes

Type of contribution: Scientific paper



Cano, José M.; A. Orcajo, Gonzalo; G. Mayordomo, Julio; F. Cabanas, Manés; G. Melero, Manuel. Vol. 1, pp. 1 - 6. Universidad de Cantabria, ISBN 84-8102-248-9

- 84** **Title of the work:** An Automated Insulation Failure Detection System for Working Induction Motors
Name of the conference: 8th European Conference on Power Electronics and Applications (EPE'99)
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Lausanne, Switzerland
Date of event: 07/09/1999
End date: 09/09/1999
Organising entity: European Power Electronics and Drives Association
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
G. Melero, Manuel; F. Cabanas, Manés; A. Orcajo, Gonzalo; Cano, José M.; Capolino, G. A.1, pp. 1 - 8. École Polytechnique Fédérale de Lausanne, ISBN 90-75815-04-2

- 85** **Title of the work:** Analytical Calculation of Harmonic Distortion Produced by ac/dc Controlled Converters
Name of the conference: 8th European Conference on Power Electronics and Applications (EPE'99)
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Lausanne, Switzerland
Date of event: 07/09/1999
End date: 09/09/1999
Organising entity: European Power Electronics and Drives Association
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; F. Cabanas, Manés; Cano, José M.; G. Melero, Manuel; R. Faya, Francisco. 1, pp. 1 - 8. École Polytechnique Fédérale de Lausanne, ISBN 90-75815-04-2

- 86** **Title of the work:** TCR Based Reactive Power Compensator with Low Harmonic Injection
Name of the conference: 8th European Conference on Power Electronics and Applications (EPE'99)
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Lausanne, Switzerland
Date of event: 07/09/1999
End date: 09/09/1999
Organising entity: European Power Electronics and Drives Association
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Cano, José M.; A. Orcajo, Gonzalo; F. Cabanas, Manés; G. Melero, Manuel. 1, pp. 1 - 7. École Polytechnique Fédérale de Lausanne, ISBN 90-75815-04-2

- 87** **Title of the work:** The Evaluation of Current Harmonics in the Context of Filter Design for Distribution Systems with Variable Frequency Drives
Name of the conference: 8th European Conference on Power Electronics and Applications (EPE'99)
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - poster
City of event: Lausanne, Switzerland
Date of event: 07/09/1999



End date: 09/09/1999

Organising entity: European Power Electronics and Drives Association

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

A. Orcajo, Gonzalo; F. Cabanas, Manés; Cano, José M.; G. Melero, Manuel; Rojas, Carlos H.1, pp. 1 - 10. École Polytechnique Fédérale de Lausanne, ISBN 90-75815-04-2

- 88** **Title of the work:** A new methodology for applying the FFT to induction motor on-line diagnosis
Name of the conference: The 1999 IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'99)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Gijón, Spain
Date of event: 01/09/1999
End date: 03/09/1999
Organising entity: IEEE y Universidad de Oviedo
Publication in conference proceedings: Yes **With external admission assessment committee:**
Yes
Type of contribution: Scientific paper
F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.; Briz, Fernando; Capolino, Gérard A.1, pp. 537 - 543. IEEE, ISBN 84-699-0977-0

- 89** **Title of the work:** New Transfer Functions for an Accurate Estimation of Harmonic Distortion in AC/DC Converters Working under Unbalanced Conditions
Name of the conference: The 1999 IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'99)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Gijón, Spain
Date of event: 01/09/1999
End date: 03/09/1999
Organising entity: IEEE y Universidad de Oviedo
Publication in conference proceedings: Yes **With external admission assessment committee:**
Yes
Type of contribution: Scientific paper
Cano, José M.; A. Orcajo, Gonzalo; G. Mayordomo, Julio; Asensi, Rafael; F. Cabanas, Manés; G. Melero, Manuel. 1, pp. 409 - 414. IEEE, ISBN 84-699-0977-0

- 90** **Title of the work:** Study of Harmonic Distortion for Induction Motor Drives Working under Abnormal Conditions
Name of the conference: The 1999 IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'99)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Gijón, Spain
Date of event: 01/09/1999
End date: 03/09/1999
Organising entity: IEEE y Universidad de Oviedo
Publication in conference proceedings: Yes **With external admission assessment committee:**
Yes
Type of contribution: Scientific paper



A. Orcajo, Gonzalo; Cano, José M.; F. Cabanas, Manés; G. Melero, Manuel. 1, pp. 421 - 426. IEEE, ISBN 84-699-0977-0

- 91** **Title of the work:** Análisis de la Distorsión Asociada a los Accionamientos de Motores de Inducción mediante Técnicas Analíticas y de Simulación
Name of the conference: VI Jornadas Hispano-Lusas de Ingeniería Eléctrica
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Lisboa, Portugal
Date of event: 07/07/1999
End date: 09/07/1999
Organising entity: Universidade Nova de Lisboa
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; Cano, José M.; F. Cabanas, Manés; G. Melero, Manuel. 1, pp. 117 - 124. Edições da Universidade Nova de Lisboa - Edinova,
- 92** **Title of the work:** Compensador de Potencia Reactiva Basado en Reactancias Controladas por Tiristores con Baja Inyección de Corrientes Armónicas
Name of the conference: VI Jornadas Hispano-Lusas de Ingeniería Eléctrica
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Lisboa, Portugal
Date of event: 07/07/1999
End date: 09/07/1999
Organising entity: Universidade Nova de Lisboa
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
Cano, José M.; A. Orcajo, Gonzalo; F. Cabanas, Manés; G. Melero, Manuel. 1, pp. 329 - 335. Edições da Universidade Nova de Lisboa - Edinova,
- 93** **Title of the work:** Consideraciones sobre el Diagnóstico del Aislamiento Estatórico a partir de los Ensayos Eléctricos
Name of the conference: 9ª Reunión Nacional de Grupos de Investigación en Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Tarrasa, Spain
Date of event: 28/01/1999
End date: 30/01/1999
Organising entity: Departamento de Ingeniería Eléctrica, Universidad Politécnica de Cataluña
Type of contribution: Scientific paper
G. Melero, Manuel; F. Cabanas, Manés; A. Orcajo, Gonzalo; Cano, José M.; Solares, Juan. "Libro de Actas". 2, pp. 47 - 52.
- 94** **Title of the work:** Sistemas para la Evaluación y el Control de la Distorsión Armónica en Plantas Industriales
Name of the conference: 9ª Reunión Nacional de Grupos de Investigación en Ingeniería Eléctrica
Type of event: Training Session **Geographical area:** National
Type of participation: Participatory - poster
City of event: Tarrasa, Spain



Date of event: 28/01/1999

End date: 30/01/1999

Organising entity: Departamento de Ingeniería Eléctrica, Universidad Politécnica de Cataluña

Type of contribution: Scientific paper

A. Orcajo, Gonzalo; Cano, José M.; F. Cabanas, Manés; G. Melero, Manuel; R. Faya, Francisco; Álvarez, J.M. "Libro de Actas". 3, pp. 94 - 99.

95 Title of the work: Design and Construction of an Educational Prototype for the Generation of Electrical Energy in Isolated Networks by Means of a Self-excited Asynchronous Machine Controlled by PLC

Name of the conference: International Conference on Electrical Machines (ICEM'98)

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Estambul, Turkey

Date of event: 02/09/1998

End date: 04/09/1998

Organising entity: Universidad Técnica de Oriente Medio y Universidad Técnica de Estambul

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

G. Melero, Manuel; A. Orcajo, Gonzalo; M. Latorre, Bernardo; Cano, José M.; F. Cabanas, Manés; Mateos M., Felipe. 1, pp. 651 - 656. Middle East Technical University, ISBN 97-542-9125-X

96 Title of the work: Métodos no Convencionales para la Detección y Diagnóstico Precoz de Fallos en Motores Eléctricos

Name of the conference: 8ª Reunión Nacional de Grupos de Investigación en Ingeniería Eléctrica

Type of event: Training Session

Geographical area: National

Type of participation: Participatory - poster

City of event: Cádiz, Spain

Date of event: 29/01/1998

End date: 31/01/1998

Organising entity: Departamento de Ingeniería Eléctrica, Universidad de Cádiz

Type of contribution: Scientific paper

F. Cabanas, Manés; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.; R. Faya, Francisco. En: Libro de Actas. 1, pp. 321 - 338. Universidad de Cádiz,

97 Title of the work: A Maintenance, Protection and Control System for Asynchronous Motors Based on PLC

Name of the conference: IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'97)

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

City of event: Marsella, France

Date of event: 01/09/1997

End date: 03/09/1997

Organising entity: IEEE - Power Electronics Society

Publication in conference proceedings: Yes

With external admission assessment committee:
Yes

Type of contribution: Scientific paper

G. Melero, Manuel; R. Villalba, L. A.; A. Orcajo, Gonzalo; F. Cabanas, Manés; Cano, José M. 1, pp. 116 - 121. IEEE French Section,



- 98** **Title of the work:** A New PLC Compatible Instrument for On-line Detection of Interturn Shortcircuits in Working Induction Motors
Name of the conference: IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'97)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Marsella, France
Date of event: 01/09/1997
End date: 03/09/1997
Organising entity: IEEE - Power Electronics Society
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
F. Cabanas, Manés; Pérez, José F.; G. Melero, Manuel; A. Orcajo, Gonzalo; Cano, José M.1, pp. 27 - 33. IEEE French Section,
- 99** **Title of the work:** DC Motor Drives Behaviour under Abnormal Working Condition: A Practical Case Study
Name of the conference: IEEE International Symposium on Diagnostics for Electrical Machines, Power Electronics and Drives (SDEMPED'97)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Marsella, France
Date of event: 01/09/1997
End date: 03/09/1997
Organising entity: IEEE - Power Electronics Society
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
A. Orcajo, Gonzalo; G. Melero, Manuel; F. Cabanas, Manés; Cano, José M.1, pp. 125 - 131. IEEE French Section,
- 100** **Title of the work:** DC Motor Educational Drive with Four Quadrant Operation and Conventional and Fuzzy Control
Name of the conference: 7th International Power Electronics & Motion Control Conference and Exhibition (PEMC'96)
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Budapest, Hungary
Date of event: 02/09/1996
End date: 04/09/1996
Organising entity: European Power Electronics & Drives Association (EPEA)
Publication in conference proceedings: Yes **With external admission assessment committee:** Yes
Type of contribution: Scientific paper
F. Cabanas, Manés; Pérez, José F.; F. Nosti, Pablo; Sanz, Miguel A.; Cano, José M.3, pp. 382 - 386. Technical University of Budapest, ISBN 96-342-0487-2

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

- 1** **Committee title:** Gestor del área Energía y Transporte (EYT-ENE) de la División de Coordinación, Evaluación y Seguimiento Científico Técnico
Primary (UNESCO code): 330000 - Technological Science.
Secondary (UNESCO code): 330600 - Electrical technology and engineering
Tertiary (UNESCO code): 332200 - Power technology
Affiliation entity: Agencia Estatal de Investigación **Type of entity:** State agency
City affiliation entity: Madrid, Spain
Start date: 01/01/2024
- 2** **Committee title:** IEEE Task Force on Dynamic Average Modeling
Primary (UNESCO code): 330609 - Transmission and distribution
Affiliation entity: Working Group on Modeling and Analysis of Systems Transients Using Digital Programs - Power and Energy Society (PES) - IEEE **Type of entity:** Associations and Groups
City affiliation entity: United States of America
Start date: 07/2012
- 3** **Committee title:** Institut of Electrical and Electronics Engineers (IEEE) (Member number 40269346)
City affiliation entity: United States of America
Start date: 01/1998

Organization of R&D activities

- 1** **Title of the activity:** Miembro del comité local de organización de congreso de ámbito Internacional
Type of activity: The IEEE Vehicular Power and Propulsion Conference (IEEE VPPC'20)
Convening entity: IEEE - Vehicular Technology Society
City convening entity: Gijón, Asturias, Principado de, Spain
Start-End date: 18/11/2020 - 16/12/2020
- 2** **Title of the activity:** Miembro del comité local de organización de congreso de ámbito Internacional
Type of activity: The IEEE International Symposium on Diagnostics for Electrical Machines Power Electronics and Drives (IEEE SDEMPED'99)
Convening entity: IEEE
City convening entity: Gijón, Asturias, Principado de, Spain
Start-End date: 01/09/1999 - 03/09/1999

R&D management

- 1** **Name of the activity:** 6th International Conference on Power Electronics Systems and Applications, PESA 2015
Type of management: Management of organised events
Performed tasks: Miembro del "PESA paper review committee"
City of entity: Hong Kong, Hong Kong
Entity: IEEE
Start date: 15/12/2015
Geographical area: Non EU International
- 2** **Name of the activity:** International Conference on Modeling and Simulation of Electrical Machines, Converters and Systems, ELECTRIMACS 2014
Type of management: Management of organised events
Performed tasks: Revisor
Entity: IEEE
Start date: 19/05/2014
Geographical area: Non EU International
- 3** **Name of the activity:** 17th IEEE Mediterranean Electrotechnical Conference, MELECON 2014
Type of management: Management of organised events
Performed tasks: Track co-chair for Power Electrical Systems on the technical program committee (TPC)
City of entity: Beirut, Lebanon
Entity: IEEE
Start date: 13/04/2014
Geographical area: Non EU International
- 4** **Name of the activity:** Programa de Doctorado Interuniversitario en Ingeniería Eléctrica y Electrónica
Type of management: Programme management
Performed tasks: Miembro de la Comisión Docente del Programa y Secretario de la misma
Entity: Universidad Politécnica de Madrid y Universidad de Oviedo
Start date: 04/03/2014
- 5** **Name of the activity:** Programa de Doctorado en Control de Procesos, Electrónica Industrial e Ingeniería Eléctrica (Mención hacia la Excelencia)
Type of management: Programme management
Performed tasks: Miembro de la Comisión de Seguimiento del Programa
Entity: Universidad de Oviedo
Start date: 28/09/2012

Evaluation and revision of R&D projects and articles

- 1** **Name of the activity:** Evaluación de calidad científica de solicitudes de Ayuda para Investigación Post-doctoral dentro de la línea "Post-doctoral Research Aid" del programa "Growth and Employment" de los Fondos Europeos de Cohesión Estructural (2014-2020)
Performed tasks: Evaluador de Proyectos para Ayudas de Investigación Post-doctoral
Entity where activity was carried out: State Education Development Agency (SEDA), Letonia
City of entity: Riga, Latvia



Start-End date: 28/02/2017 - 22/03/2017

- 2** **Name of the activity:** Evaluación de propuestas en los topics "AC and DC power supplies; lithium-ion batteries; energy storage systems; energy monitoring" dentro de la línea "Industry-driven Research" del programa "Growth and Employment" de los Fondos Europeos de Cohesión Estructural (2014-2020)
Performed tasks: Evaluador de Proyectos de Investigación
Entity where activity was carried out: Central Finance and Contracting Agency (CFCA), Letonia
City of entity: Riga, Latvia
Start-End date: 04/07/2016 - 01/09/2016
- 3** **Name of the activity:** Colaboración en el proceso de evaluación (7 evaluaciones)
Performed tasks: Evaluador ANEP
Entity where activity was carried out: Agencia Nacional de Evaluación y Prospectiva
Type of entity: State agency
City of entity: Madrid, Spain
Start-End date: 2006 - 2016
- 4** **Name of the activity:** Concurso Nacional de Proyectos FONDECYT Regular 2015
Performed tasks: Evaluador de Proyectos
Entity where activity was carried out: Fondo Nacional de Desarrollo Científico y Tecnológico (FONDECYT) de la Comisión Nacional de Investigación Científica y Tecnológica (CONICYT) de Chile
City of entity: Santiago de Chile, Chile
Start-End date: 21/10/2014 - 31/10/2014
- 5** **Name of the activity:** HC Ørsted Postdoc Programme cofunded by Marie Curie Actions
Performed tasks: Soporte al Comité de Selección emitiendo una segunda opinión ante la refutación del informe del Panel Internacional de Expertos por parte del candidato
Entity where activity was carried out: Universidad Técnica de Dinamarca (DTU)
City of entity: Lyngby, Denmark
Start-End date: 31/07/2014 - 06/08/2014
- 6** **Name of the activity:** Tesis Mr. Amir Fazeli: The Application of a Novel Deterministic Algorithm for Controlling the Power Flow Through Real Time Dispatch of the Available Distributed Energy Resources within a Microgrid
Performed tasks: Miembro Tribunal Evaluación de Tesis Doctoral (External examiner)
Entity where activity was carried out: Universidad de Nottingham
Type of entity: University
City of entity: Nottingham, United Kingdom
Start-End date: 28/05/2014 - 28/05/2014
- 7** **Name of the activity:** Tesis D. Manuel Barragán Villarejo: Control Activo de Flujos de Potencia en Redes de Distribución
Performed tasks: Miembro Tribunal Evaluación de Tesis Doctoral (Presidente)
Entity where activity was carried out: Universidad de Sevilla
Type of entity: University
City of entity: Sevilla, Spain
Start-End date: 23/05/2014 - 23/05/2014
- 8** **Name of the activity:** Tesis Dña: Esther Torres Iglesias - Metodología para el Análisis del Comportamiento de Fusibles de Media Tensión, en Instalación Horizontal
Performed tasks: Miembro Tribunal Evaluación de Tesis Doctoral (Vocal)
Type of entity: University



Entity where activity was carried out: Universidad del País Vasco
City of entity: Bilbao, Spain
Start-End date: 01/02/2008 - 01/02/2008

Other achievements

Stays in public or private R&D centres

- 1** **Entity:** University of Bologna (ARWU-2015 201-300)
City of entity: Bologna, Emilia-Romagna, Italy
Start-End date: 22/05/2016 - 29/05/2016 **Duration:** 8 days
Goals of the stay: Guest
Provable tasks: 1. Held a Seminar within the Master (Laurea Magistrale) in Electrical Engineering - "Distributed Generation and Power Quality"; 2. Held a Seminar within the PhD program in Biomedical, Electrical, and System Engineering - "Direct Power Control of Three-phase Active Rectifiers"
- 2** **Entity:** Universidad de British Columbia (ARWU-2014 37)
City of entity: Vancouver, Canada
Start-End date: 01/08/2014 - 31/10/2014 **Duration:** 3 months
Goals of the stay: Guest
- 3** **Entity:** Universidad de British Columbia (ARWU-2012 39)
City of entity: Vancouver, Canada
Start-End date: 01/07/2012 - 31/12/2012 **Duration:** 6 months
Goals of the stay: Guest
- 4** **Entity:** Fábrica de motores eléctricos de la empresa Bosch GmbH
City of entity: Bülh (Baden-Württemberg), Germany
Start date: 01/11/1995 **Duration:** 5 months
Funding entity: Bosch GmbH
Goals of the stay: Contracted
Narrative explanation: Construcción de pequeños motores eléctricos para automoción. Los trabajos fueron realizados en calidad de Praktikant a lo largo de un ciclo formativo de 5 meses, en los que estuve destinado en distintos departamentos de la empresa

Obtained grants and scholarships

- 1** **Name of the grant:** Ayuda de Movilidad Docente en el Marco del Programa Erasmus + (resolución 10/11/2015)
City awarding entity: Bolonia, Italy
Aims: Post-doctoral
Awarding entity: Universidad de Oviedo **Type of entity:** University
Amount of the grant: 700 €
Conferral date: 09/05/2016 **Duration:** 8 days
End date: 28/05/2016
Entity where activity was carried out: Universidad de Bolonia
Faculty, institute or centre: Dipartimento di Ingegneria dell'Energia Elettrica e dell'Informazione "Guglielmo Marconi"



- 2** **Name of the grant:** Ayuda Económica Movilidad de Excelencia para Docentes e Investigadores (convocatoria 07/03/2014)
City awarding entity: Vancouver, Canada
Aims: Post-doctoral
Awarding entity: Universidad de Oviedo **Type of entity:** University
Amount of the grant: 5.100 €
Conferral date: 19/06/2014 **Duration:** 3 months
End date: 31/10/2014
Entity where activity was carried out: Estancia Universidad de British Columbia
Faculty, institute or centre: Electrical and Computer Engineering Department
- 3** **Name of the grant:** Estancias de Profesores e Investigadores Seniores en Centros Extranjeros 2012 (convocatoria 20/06/2012)
City awarding entity: Vancouver, Canada
Aims: Post-doctoral
Awarding entity: Ministerio de Educación Cultura y Deporte - Programa Nacional de Movilidad de Recursos Humanos en el marco del Plan Nacional de Investigación Científica, Desarrollo e Innovación Tecnológica 2008-2011
Amount of the grant: 12.000 €
Conferral date: 19/11/2013 **Duration:** 3 months
End date: 31/12/2012
Entity where activity was carried out: Estancia Universidad de British Columbia
Faculty, institute or centre: Electrical and Computer Engineering Department
- 4** **Name of the grant:** Ayuda Económica Movilidad de Excelencia para Docentes e Investigadores (convocatoria 04/01/2012)
City awarding entity: Vancouver, Canada
Aims: Post-doctoral
Awarding entity: Universidad de Oviedo **Type of entity:** University
Amount of the grant: 5.620 €
Conferral date: 13/03/2012 **Duration:** 3 months
End date: 30/09/2012
Entity where activity was carried out: Estancia Universidad de British Columbia
Faculty, institute or centre: Electrical and Computer Engineering Department
- 5** **Name of the grant:** Beca Académica de Prácticas en la Empresa HIDROELÉCTRICA DEL CANTÁBRICO, S.A.
City awarding entity: Oviedo, Asturias, Principado de, Spain
Aims: Pre-doctoral
Awarding entity: Fundación HC Energía
Amount of the grant: 2.705 €
Conferral date: 01/01/1995 **Duration:** 10 months
End date: 31/10/1995
Entity where activity was carried out: Hidroeléctrica del Cantábrico, S.A.
Faculty, institute or centre: Departamento de Medida y Control de Calidad de la Dirección de Distribución



Scientific societies and professional associations

- 1 Name of the society:** Industry Applications Society
Affiliation entity: Institute of Electrical and Electronics Engineers
Start date: 2017
- 2 Name of the society:** Power & Energy Society
Affiliation entity: Institute of Electrical and Electronics Engineers
Start date: 2015
- 3 Name of the society:** Industrial Electronics Society
Affiliation entity: Institute of Electrical and Electronics Engineers
Start date: 2013

Editorial councils

Name of the editorial council: IET Power Electronics - Editor Asociado
Affiliation entity: IET - Institute of Engineering and Technology
Start date: 04/05/2017

Prizes, mentions and distinctions

- 1 Description:** Selected to the grade of IEEE Senior Member
Awarding entity: IEEE - Board of Directors
City awarding entity: United States of America
Conferral date: 15/08/2020
Recognition linked: In recognition of professional standing.
- 2 Description:** Outstanding Paper Award
Awarding entity: IEEE Industry Applications Society - Metal Industry Committee
City awarding entity: United States of America
Conferral date: 10/2017
Recognition linked: Por el trabajo "Overcurrent Protection Response of a Hot Rolling Mill Filtering System: Analysis of the Process Conditions".
- 3 Description:** 2017 Best Reviewer - International Journal of Electrical Power and Energy Systems [Impact factor 3.289 (2016 JCR SE)]
Awarding entity: Elsevier
City awarding entity: Noord-Holland, Holland
Conferral date: 2017
Recognition linked: Selected by the editors and publisher of International Journal of Electrical Power & Energy Systems as one of the 20 Best Reviewers in 2017.
- 4 Description:** Premio al Mejor Poster
Awarding entity: International Conference on Renewable Energy and Power Quality (ICREPQ'10)
Conferral date: 03/2010



Recognition linked: Por el trabajo "Experimental application of leakage flux to the detection of insulation faults on disc-type winding transformers".

5 Description: Premio Extraordinario de Doctorado

Awarding entity: Universidad de Oviedo

Type of entity: University

Conferral date: 2001

Recognition linked: Por la Tesis Doctoral "Funciones de transferencia para el análisis en distintas condiciones de funcionamiento de la distorsión armónica asociada a rectificadores trifásicos".

Periods of research activity and knowledge transfer

1 Name of the action: Five-year teaching evaluation

Certifying entity: Administración Pública

Date of recognition: 31/10/2021

Six-year period of active research: No

Type of activity: Teaching

Starting year: 2016

Completion date: 2021

Evaluation period: :/:/:

2 Name of the action: CNEAI Six-year research evaluation

Certifying entity: Comisión Nacional Evaluadora de la Actividad Investigadora (CNEAI) **Type of entity:** State agency

Date of recognition: 31/01/2021

Six-year period of active research: Yes

Type of activity: Research

Starting year: 2015

Completion date: 2020

Evaluation period: 2015, 2016, 2017, 2018, 2019, 2020:/:/:2015, 2016, 2017, 2018, 2019, 2020

Call year: 2020

3 Name of the action: Five-year teaching evaluation

Certifying entity: Administración Pública

Date of recognition: 31/10/2016

Six-year period of active research: No

Type of activity: Teaching

Starting year: 2011

Completion date: 2016

Evaluation period: :/:/:

4 Name of the action: CNEAI Six-year research evaluation

Certifying entity: Comisión Nacional Evaluadora de la Actividad Investigadora (CNEAI) **Type of entity:** State agency

Date of recognition: 31/01/2015

Six-year period of active research: No

Type of activity: Research

Starting year: 2009

Completion date: 2014

Evaluation period: 2009, 2010, 2011, 2012, 2013, 2014:/:/:2009, 2010, 2011, 2012, 2013, 2014

Call year: 2014



- 5 Name of the action:** CNEAI Six-year research evaluation
Certifying entity: Comisión Nacional Evaluadora de la Actividad Investigadora (CNEAI) **Type of entity:** State agency
Date of recognition: 31/01/2014
Type of activity: Knowledge transfer
Starting year: 1998
Completion date: 2013
Evaluation period: 1998, 2004, 2008, 2009, 2010, 2013
Call year: 2014
- 6 Name of the action:** Five-year teaching evaluation
Certifying entity: Administración Pública
Date of recognition: 31/10/2011
Six-year period of active research: No
Type of activity: Teaching
Starting year: 2006
Completion date: 2011
Evaluation period: :
- 7 Name of the action:** CNEAI Six-year research evaluation
Certifying entity: Comisión Nacional Evaluadora de la Actividad Investigadora (CNEAI) **Type of entity:** State agency
Date of recognition: 31/01/2009
Six-year period of active research: No
Type of activity: Research
Starting year: 2003
Completion date: 2008
Evaluation period: 2003, 2004, 2005, 2006, 2007, 2008
Call year: 2008
- 8 Name of the action:** Five-year teaching evaluation
Certifying entity: Administración Pública
Date of recognition: 31/10/2006
Six-year period of active research: No
Type of activity: Teaching
Starting year: 2001
Completion date: 2006
Evaluation period: :
- 9 Name of the action:** CNEAI Six-year research evaluation
Certifying entity: Comisión Nacional Evaluadora de la Actividad Investigadora (CNEAI) **Type of entity:** State agency
Date of recognition: 31/01/2003
Six-year period of active research: No
Type of activity: Research
Starting year: 1997
Completion date: 2002
Evaluation period: 1997, 1998, 1999, 2000, 2001, 2002
Call year: 2002



- 10** **Name of the action:** Five-year teaching evaluation
Certifying entity: Administración Pública
Date of recognition: 30/10/2001
Six-year period of active research: No
Type of activity: Teaching
Starting year: 1996
Completion date: 2001