CURRÍCULUM VÍTAE NORMALIZADO

Pablo Garcia Fernandez

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GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

FECYT INNOVACIÓN

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.

En este resumen se incluyen los méritos más relevantes de investigación, transferencia, docencia y gestión incluidos en el CV.

1) Méritos de investigación.

- 3 tramos de investigación evaluados por la CNEAI

- IP de 1 proyecto de I+D+i de convocatorias competitivas internacionales: TALENT. Cost Effective Technological Developments For accelerating Energy Transition. C.E.E.-Comunidad Economica Eur. UE-19-TALENT-864459.
- IP de 4 proyectos de I+D+i de convocatorias competitivas nacionales: MICROHOLO. Desarrollo De Una Aproximación Holística Y Sistemática Al Diseño Y La Gestión De Microrredes De Alterna. Ministerio De Economía Y Competitividad. Ref: MINECO-13-ENE2013-44245-R; B2BENERGY. Nuevas vías hacia la gestión descentralizada de la energía de edificio-a-edificio. Agencia Estatal De Investigación (Mo. ECON. IND). Ref: MCI-20-PID2019-111051RB-I00; SIETEC -Desarrollo de un sistema para la mejora de la eficiencia energética en edificios basado en técnicas de Cloud Computing. Ministerio De Economia Y Competitividad. Ref: MINECO-16-RTC-2016-4792-3; SIBALI - Simulación de Baterías de Litio-ion. Agencia Estatal De Investigación. Ref: MCIU-18-RTC-2017-6538-3.
- Participación como investigador en 12 proyectos de convocatorias competitivas nacionales y 2 europeas.
- 35 publicaciones en revista internacional indexadas JCR

- 73 ponencias en congresos, de los cuales 68 de ellas lo son internacionales.

- Estancia predoctoral en la Universidad de Wisconsin-Madison, USA.

- Estancia postdoctoral en la Universidad de Nottingham, UK
- Revisor ANEP. Evaluador presencial en la convocatoria de Retos y Plan de Generación de Conocimiento 2017 y 2018 (Comisión Energía y Transporte). Evaluador remoto ANEP en las convocatorias 2011, 2014 y 2016.
- Editor de la edición especial de la revista Energies, indexada en JCR. "Energy Storage Applications for Hybrid DC/AC Microgrids"

- 5 premios internacionales otorgados por el IEEE.

2) Méritos de docencia.

- Dirección de 3 tesis doctorales, una de ellas como director único y las otras dos en co-dirección.
- Dirección de un total de 61 trabajos, entre PFC, TFG, TFM y trabajos DEA.
- Miembro de la Comisión Académica del Máster en Conversión de Energía Eléctrica y Sistemas de Potencia entre los años 2011 a 2018.
- He formado parte por invitación del tribunal de evaluación de 8 tesis doctorales, 4 de ellas fuera de España.

- Ponente en 4 publicaciones docentes en congreso internacional.
- Proyectos innovación docente. Miembro del equipo del proyecto en: ELEVTRA - Training for Electric Vehicles- Training für Elektrofahrzeuge- Formation pour les véhicules électriques. Financiación. UE. 01/10/2011 a 31/12/2014
- Estancia en National Cheng Kung University, College of Engineering en el contexto de las becas Scholar del programa Erasmus Mundus en Transporte Sostenible y Sistemas de Potencia.

3) Méritos de transferencia.

- 1 tramo de transferencia reconocido por la CNEAI.
- IP de 41 proyectos Art. 83 suscritos con empresa desde el año 2009.
- Fundador de la empresa de base tecnológica Enfasys S.L. La empresa ha sido reconocida como spin-off por la Universidad de Oviedo mediante los contratos de licencia entre la FUO y Enfasys S.L PAT-20-002 y PAT-20-003.

4) Méritos de gestión.

- Coordinador de la titulación Erasmus Mundus Master Course in Sustainable Transportation and Electrical Power Systems durante 5 ediciones (6 años), desde el curso 2012/2013 al 2016/201

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.

Se incluyen 3 tesis doctorales dirigidas: Islam El-Sayed, "Estimación de la Posición y Alternativas de Control de Sistemas de Cojinetes Magnéticos" (2012, Sobresaliente Cum Laude); Ángel Navarro Rodríguez, "Estrategias de control para una respuesta dinámica mejorada en microrredes híbridas AC/DC considerando la integración de almacenamiento de energía" (2019, Sobresaliente Cum Laude y Premio Especial de Doctorado); Andrés Suárez González, "Modelado de sistemas de baja tensión en 4 hilos para estrategias de control mejoradas de convertidores conectados a red" (2020, Sobresaliente Cum Laude).

Se presentan 34 aportaciones científicas relevantes (JCR). 31 de ellas con consideradas muy relevantes (Q1 y Q2) y las 3 restantes relevantes (Q3). Agrupadas por publicación, se presentan: IEEE Trans. on Industry Applications (24), IEEE Trans. on Power Electronics (2), IEEE Trans. on Smart Grid (1), IEEE Trans. on Industrial Informatics (1), IEEE Trans. on Industrial Electronics (1), Electric Power Systems Research (2), Energies (3). La suma total de citas en las citadas aportaciones, según Clarivate Analytics alcanzan un total de 1283. Considerando el total de citas acumuladas tanto en revistas JCR como en el resto de aportaciones (no indexadas y congresos internacionales), y utilizando en este caso Google Scholar (https://scholar.google.es/citations?user=QCMEGocAAAAJ&hl=es&authuser=1), el número total de citas es de 2639, permitiendo obtener un índice H 25.

Se incluyen 4 sexenios, 3 de investigación y uno de transferencia, todos ellos acreditados por la CNEAI.

Pablo Garcia Fernandez

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Personal web page: **http://pgarcia.dieecs.com/**

Current professional situation

Employing entity: Universidad de Oviedo **Type of entity:** University
Department: Escuela Politécnica de Ingeniería Gijón
Professional category: Catedrático de Universidad **Leadership and management (Y/N):** No
Start date: 19/04/2022
Type of contract: Permanent employment contract **Dedication regime:** Full time

Previous positions and activities

	Employing entity	Professional category	Start date
1	UNIVERSIDAD DE OVIEDO	Profesor Titular de Universidad	23/07/2016
2	Universidad de Oviedo	Profesor Contratado Doctor	08/10/2010
3	Universidad de Oviedo	IP Desarrollo De Una Aproximacion Holistica Y Sistematica Al Diseño Y La Gestion De Microrredes De Alterna (ENE2013-44245-R)	01/01/2014
4	Universidad de Oviedo	Coordinador "Erasmus Mundus Master Course Sustainable Transportation and Electrical Power Systems (STEPS)"	01/06/2011
5	Universidad de Oviedo	Profesor Ayudante Doctor	01/10/2008
6	Universidad de Oviedo	Profesor/a Laboral de Sustitución	12/12/2007
7	Universidad de Oviedo	Profesor/a Laboral de Sustitución	04/10/2007
8	Universidad de Oviedo	Investigador	16/02/2007
9	Universidad de Oviedo	Investigador	01/01/2007
10	Universidad de Oviedo	Investigador	15/09/2006
11	Universidad de Oviedo	Investigador	01/07/2006
12	Universidad de Oviedo	Investigador	01/01/2002

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Employing entity: UNIVERSIDAD DE OVIEDO
Professional category: Profesor Titular de Universidad
Start-End date: 23/07/2016 - 18/04/2022

2 **Employing entity:** Universidad de Oviedo
Professional category: Profesor Contratado Doctor
Leadership and management (Y/N): No
Start-End date: 08/10/2010 - 08/08/2016
Duration: 5 years - 10 months

3 **Employing entity:** Universidad de Oviedo
City employing entity: Spain
Professional category: IP Desarrollo De Una Aproximacion Holistica Y Sistematica Al Diseño Y La Gestion De Microrredes De Alterna (ENE2013-44245-R)
Leadership and management (Y/N): No
Start-End date: 01/01/2014 - 01/07/2015
Duration: 1 year - 6 months

4 **Employing entity:** Universidad de Oviedo
City employing entity: Spain
Professional category: Coordinador "Erasmus Mundus Master Course Sustainable Transportation and Electrical Power Systems (STEPS)"
Leadership and management (Y/N): No
Start-End date: 01/06/2011 - 01/06/2015
Duration: 4 years

5 **Employing entity:** Universidad de Oviedo
Type of entity: University
Professional category: Profesor Ayudante Doctor
Leadership and management (Y/N): No
Start-End date: 01/10/2008 - 07/10/2010
Duration: 2 years

6 **Employing entity:** Universidad de Oviedo
Type of entity: University
Professional category: Profesor/a Laboral de Sustitución
Leadership and management (Y/N): No
Start-End date: 12/12/2007 - 30/09/2008
Duration: 9 months - 18 days

7 **Employing entity:** Universidad de Oviedo
Type of entity: University
Professional category: Profesor/a Laboral de Sustitución
Leadership and management (Y/N): No
Start-End date: 04/10/2007 - 11/12/2007
Duration: 2 months - 7 days

8 **Employing entity:** Universidad de Oviedo
Type of entity: University
Professional category: Investigador
Leadership and management (Y/N): No
Start-End date: 16/02/2007 - 31/03/2007
Duration: 1 month - 15 days

9 **Employing entity:** Universidad de Oviedo
Type of entity: University
Professional category: Investigador
Leadership and management (Y/N): No
Start-End date: 01/01/2007 - 15/02/2007
Duration: 1 month - 14 days

10 **Employing entity:** Universidad de Oviedo
Type of entity: University
Professional category: Investigador
Leadership and management (Y/N): No
Start-End date: 15/09/2006 - 31/12/2006
Duration: 3 months - 16 days

11 **Employing entity:** Universidad de Oviedo
City employing entity: Spain
Professional category: Investigador
Start-End date: 01/07/2006 - 01/09/2006
Leadership and management (Y/N): No
Duration: 2 months

12 **Employing entity:** Universidad de Oviedo
City employing entity: Spain
Professional category: Investigador
Start-End date: 01/01/2002 - 01/07/2002
Leadership and management (Y/N): No
Duration: 6 months

Education

University education

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

University degree: Higher degree
Name of qualification: Ingeniero Industrial
Degree awarding entity: Universidad de Oviedo
Date of qualification: 19/07/2001
Standardised degree: No **Date of homologation:** 19/07/2001

Doctorates

Doctorate programme: Programa Oficial de Doctorado en Control de Procesos, Electrónica Industrial e Ingeniería Eléctrica
Degree awarding entity: Universidad de Oviedo
Date of degree: 14/07/2006
European doctorate: No
Thesis title: Control y Diagnóstico de Máquinas de Alterna Mediante el Rastreo de Saliencias Espaciales
Thesis director: FERNANDO BRIZ DEL BLANCO
Obtained qualification: Sobresaliente, "Cum Laude"
Recognition of quality: Yes
Special doctorate award: No
Standardised degree: No

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

1 **Training title:** A Physical Systems-Based Methodology For Non-Linear, Multivariable Control System Design" (Me 746)
Awarding entity: University of Wisconsin-Madison
End date: 14/12/2004

2 **Training title:** Analysis, Design, And Control Of Interior Permanent Magnet Synchronous Machines
Awarding entity: Tutorial Industry Applications Society Annual Meeting
End date: 03/10/2004

3 **Training title:** Power Electronics: Circuits, Systems And Industrial Applications
Awarding entity: University of Wisconsin-Madison
End date: 25/08/2004

4 **Training title:** Tutorial On Multisensor Information Fusion
Awarding entity: Tutorial International Conference on Advanced Robotics
End date: 29/06/2003

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

1 **Title of course/seminar:** Formación Inicial
Goals of the course/seminar: N.D.
City organizing entity: Spain
Organising entity: Instituto de Ciencias de la Educación
End date: 30/06/2010

2 **Title of course/seminar:** Cómo diseñar y organizar un programa de postgrado para la mención de calidad
Goals of the course/seminar: N.D.
City organizing entity: Spain
Organising entity: Instituto de Ciencias de la Educación
End date: 04/12/2009

3 **Title of course/seminar:** Qué es y cómo funciona el curriculum vitae normalizado I+D+I
Goals of the course/seminar: N.D.
City organizing entity: Spain
Organising entity: Instituto de Ciencias de la Educación
End date: 26/11/2009

4 **Title of course/seminar:** Cómo diseñar el plan de acción tutorial en los nuevos planes de estudio: alternativas y estrategias
Goals of the course/seminar: N.D.
City organizing entity: Spain
Organising entity: Instituto de Ciencias de la Educación
End date: 16/07/2009

5 **Title of course/seminar:** Cómo utilizar el campus virtual de la Universidad de Oviedo (nivel avanzado)
Goals of the course/seminar: N.D.
City organizing entity: Spain
Organising entity: Instituto de Ciencias de la Educación
End date: 15/07/2009

6 **Title of course/seminar:** Utilización del Campus Virtual de la Universidad de Oviedo (nivel básico)
Goals of the course/seminar: Introducción al uso del campus virtual
City organizing entity: Spain
Organising entity: Instituto Ciencias Educación
End date: 15/10/2008

7 **Title of course/seminar:** Utilización del campus virtual de la Universidad de Oviedo (nivel basico)
Goals of the course/seminar: Introduccion al gestor de contenidos electroncios de la universidad de oviedo. dicho gestor es utilizado en la universidad para mejorar la comunicacion con el alumno. para ello, existen diversas herramientas que permiten realizar examentes online, entrega de trabajos, cuesionarios y disposicion del material necesario para realizar la asignatura
City organizing entity: Spain
Organising entity: Instituto de Ciencias de la Educación
End date: 29/09/2008

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	B1	B1	B1	B1	B1

Teaching experience

Experience supervising doctoral thesis and/or final year projects

1 **Project title:** Desarrollo de una metodología para el diseño óptimo y la emulación de sistemas híbridos de almacenamiento de energía
Entity: Universidad de Oviedo **Type of entity:** University
Student: Irene Peláez Acedo
Date of reading: 16/12/2022

2 **Project title:** Modelado de sistemas de baja tensión en 4 hilos para estrategias de control mejoradas de convertidores conectados a red
Type of project: Doctoral thesis
Entity: Universidad de Oviedo **Type of entity:** University
Student: Andrés Suárez González
Obtained qualification: Sobresaliente, Cum Laude
Date of reading: 24/07/2020
European doctorate: No
Quality recognition: No

3 **Project title:** Control strategies for enhanced dynamic response in Hybrid AC/DC microgrids considering energy storage integration
Type of project: Doctoral thesis
Entity: Universidad de Oviedo **Type of entity:** University
Student: Ángel Navarro Rodríguez
Obtained qualification: Cum Laude
Date of reading: 24/06/2019
European doctorate: Yes
Quality recognition: Yes

4 **Project title:** Estimación de la posición y alternativas de control de sistemas de cojinetes magnéticos
Type of project: Doctoral thesis
Co-director of thesis: FERNANDO BRIZ DEL BLANCO
Entity: Universidad de Oviedo **Type of entity:** University
Student: Islam El-Sayed Mahmoud
Obtained qualification: Sobresaliente, Cum Laude
Date of reading: 20/12/2012
European doctorate: No
Quality recognition: Yes

Participation in conferences with talks focused on teacher training

1 **Name of the event:** International Conference on New Concepts in Smart Cities: Fostering Public and Private Alliances (SmartMILE)
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Gijón, Spain
Hurdles for an ubiquitous electric vehicle: The experiences of ELEVTRA Project. ISBN 978-1-4799-2911-5

2 **Name of the event:** Mastering the Career Development for Smart Electrical Systems: EECPS Master and EMMC STEPS
Aims of the event: Captación de estudiantes graduados en ingeniería hacia los másteres relacionados con la conversión de energía.
Target group profile: Graduados en Ingeniería
City of event: Spain

3 **Name of the event:** 2013 Brazilian Power Electronics Conference
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
Aims of the event: Presentar la experiencia docente según una metodología Project Base Learning desarrollada en los máster "Electrical Energy Conversion and Power Systems" y "Erasmus Mundus Master Course Sustainable Transportation and Electrical Power Systems"
Target group profile: - Profesores de Universidad de Brasil - Estudiantes de Grado, Máster y Doctorado Brasil
City of event: Gramado, Rio Grande do Sur, Brasil, Brazil
Organising entity: IEEE
"Laboratory": A Project-Based Learning Example On Power Electronics. pp. 754 - 760. ISSN 2165-0454

4 **Name of the event:** IEEE EDUCON 2010 Conference
Type of event: Conference
Corresponding author: Yes
City of event: Madrid, Spain
Organising entity: IEEE
Collaborative Subjects for Embedded Systems Learning in the EHEA Frame: A Practical Approach. ISSN 2165-9559

5 **Name of the event:** 2019 IEEE Vehicle Power and Propulsion Conference (VPPC)
Type of event: Conference
Corresponding author: No
Presentation language: English
City of event: Hanoi, Vietnam
Organising entity: IEEE **Type of entity:** Associations and Groups
Publication type: Popular science article
Empowering International, Intersectoral and Interdisciplinary Dimensions in Higher Education: The STEPS and EECPS Master Courses Experience. ISBN 978-1-7281-1250-3

Scientific and technological experience

Scientific or technological activities

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

1 **Name of the project:** MCINN-24-PLEC2023-010252. AYUDAS A PROYECTOS DE I+D EN LÍNEAS ESTRATÉGICAS TRANSMISIONES 2023 "Nuevas Soluciones basadas en Inteligencia Artificial para la eficiencia y la flexibilidad de la producción industrial"
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): Pablo Arboleya Arboleya; Pablo Garcia Fernandez
Nº of researchers: 7
Funding entity or bodies:
Agencia estatal de investigación

Start-End date: 01/01/2024 - 31/12/2027

2 **Name of the project:** MCINN-23-PID2022-139479OB-C22. Proyecto de Generación del Conocimiento 2022: "Diseño y control de centrales hidroeléctricas flexibles mediante hibridación con baterías de 2ª vida"
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): Pablo Garcia Fernandez; Cristian Blanco Charro
Nº of researchers: 7
Start-End date: 01/09/2023 - 31/08/2026

3 **Name of the project:** Soluciones para la respuesta rápida y el soporte a red mediante sistemas de almacenamiento con capacidades de grid-forming en redes eléctricas de baja inercia y alta penetración de generación distribuida y renovable
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): Cristian Blanco Charro; Pablo García Fernández
Nº of researchers: 3
Start-End date: 01/12/2022 - 30/11/2024

4 **Name of the project:** ENFYO-FLX. SV-PA-21-AYUD/2021/57546
Entity where project took place: Universidad de Oviedo **Type of entity:** University
City of entity: Gijón,
Name principal investigator (PI, Co-PI....): Pablo García Fernández
Nº of researchers: 5
Start-End date: 01/10/2021 - 30/09/2023
Participating entity/entities: Enfasys S.L
Total amount: 124.400 €

5 **Name of the project:** MCI-20-PID2019-111051RB-I00. Nuevas vías hacia la gestión descentralizada de la energía de edificio-a-edificio
Entity where project took place: Universidad de Oviedo **Type of entity:** University
City of entity: Spain
Name principal investigator (PI, Co-PI....): Pablo García Fernández; Cristian Blanco Charro
Nº of researchers: 5
Funding entity or bodies:
agencia estatal de investigaciçon **Type of entity:** State agency

Start-End date: 01/06/2020 - 31/05/2023
Total amount: 278.300 €

6 **Name of the project:** COST EFFECTIVE TECHNOLOGICAL DEVELOPMENTS FOR ACCELERATING ENERGY TRANSITION
Geographical area: European Union
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 5
Code according to the funding entity: UE-19-TALENT- 864459
Start-End date: 01/10/2019 - 30/09/2022 **Duration:** 3 years
Dedication regime: Part time

7 **Name of the project:** SIBALI - Simulación de Baterías de Litio-ion
Geographical area: National
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 1
Funding entity or bodies:
AGENCIA ESTATAL DE INVESTIGACION (Mº. ECON. IND.)

Code according to the funding entity: MCIU-18-RTC-2017-6338-3
Start-End date: 01/01/2018 - 31/12/2021 **Duration:** 4 years
Total amount: 131.464,88 €
Dedication regime: Part time

8 **Name of the project:** TECNOLOGIAS DE CONVERSION DE ENERGIA EN REDES HIBRIDAS RESILIENTES AC/DC
Geographical area: National
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): JORGE GARCIA GARCIA; PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 4
Funding entity or bodies:
Ministerio de Economía y Competitividad

Code according to the funding entity: CI-MINECO-17-ENE2016-77919-R
Start-End date: 30/12/2016 - 29/12/2019 **Duration:** 3 years
Dedication regime: Part time
Applicant's contribution: Desrrollo de sistemas de control para integración de almacenamiento eléctrico en redes DC/AC

9 **Name of the project:** Plan Propio "Ayudas a Grupos de Investigación"
Geographical area: Regional
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): JORGE GARCIA GARCIA
Nº of researchers: 4
Code according to the funding entity: PAPI-18-GR-2015-0004
Start-End date: 01/01/2018 - 31/12/2018 **Duration:** 1 year
Dedication regime: Part time

10 **Name of the project:** SIETEC -Desarrollo de un sistema para la mejora de la eficiencia energética en edificios basado en técnicas de Cloud Computing
Geographical area: National
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): Pablo Garcia; PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 4
Funding entity or bodies:
Ministerio de Economía y Competitividad

Code according to the funding entity: MINECO-16-RTC-2016-4792-3
Start-End date: 07/03/2016 - 31/12/2018 **Duration:** 2 years - 9 months - 24 days
Total amount: 185.919,36 €
Dedication regime: Part time
Applicant's contribution: Desarrollo de plataforma para implementación de monitorización. Algoritmos de segregación de catgas

11 **Name of the project:** Gestión integral de energía eléctrica en elevadores y pasarelas
Geographical area: Regional
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): JORGE GARCIA GARCIA
Nº of researchers: 4
Funding entity or bodies:
IDEPA INSTITUTO DE DESARROLLO ECONOMICO DEL PRINCIPADO DE ASTURIAS

Code according to the funding entity: SV-PA-17-RIS3-3
Start-End date: 19/06/2017 - 19/06/2018 **Duration:** 1 year
Dedication regime: Part time
Applicant's contribution: Validación experimental. Desarrollo de algoritmos de control y estrategias de reparto de energía

12 **Name of the project:** LEMUR-LABORATORY For Enhanced Microgrid Unbalance Research
Geographical area: Regional
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 5
Funding entity or bodies:
Regional Plan project

Code according to the funding entity: FC-15-GRUPIN14-127
Start-End date: 31/12/2014 - 31/12/2017 **Duration:** 3 years
Dedication regime: Part time

Applicant's contribution: Implementación del sistema de control en tiempo real de la microrred sobre plataforma de control de bajo coste

13 **Name of the project:** Desarrollo De Una Aproximacion Holistica Y Sistematica Al Diseño Y La Gestion De Microrredes De Alterna (MICROHOLO)
Geographical area: National
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): Pablo García Fernández; CRISTINA GONZALEZ MORAN
Nº of researchers: 4
Funding entity or bodies:
MINISTERIO DE ECONOMIA Y COMPETITIVIDAD

Code according to the funding entity: ENE2013-44245-R
Start-End date: 01/01/2014 - 31/12/2016 **Duration:** 3 years
Total amount: 205.700 €
Dedication regime: Full time
Applicant's contribution: IP del proyecto

14 **Name of the project:** Advanced Wide Band Gap Semiconductor Devices for Rational Use of Energy (RUE)
Geographical area: National
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): José Millán Gómez; FRANCISCO JAVIER SEBASTIAN ZUÑIGA
Nº of researchers: 10
Funding entity or bodies:
Ministerio de Ciencia e Innovación, Programa Consolider-Ingenio 2010

Code according to the funding entity: MICINN-10-CSD2009-00046
Start-End date: 17/12/2009 - 16/12/2015 **Duration:** 6 years
Dedication regime: Part time
Applicant's contribution: Evaluación de interruptores de potencia

15 **Name of the project:** ELEVTRA - TRAining for ELEctric Vehicles
Geographical area: European Union
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): JORGE GARCIA GARCIA
Nº of researchers: 5
Funding entity or bodies:
European Union, Education, Audiovisual and Culture Executive Agency

Code according to the funding entity: 518423-LLP-1-2011-1-ES-LEONARDO-LMP
Start-End date: 01/10/2011 - 01/10/2014 **Duration:** 3 years
Dedication regime: Part time
Applicant's contribution: - Redacción y traducción de unidades técnicas

16 **Name of the project:** Sistema de monitorización y medida de un STATCON con almacenamiento de energia para la compensación transitoria de frecuencia de red
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): CRISTINA GONZALEZ MORAN
Nº of researchers: 3

Funding entity or bodies:
Ayuntamiento de Gijón

Code according to the funding entity: UNOV-13-EMERG-GIJON-01
Start-End date: 23/07/2013 - 31/12/2013 **Duration:** 5 months - 8 days
Dedication regime: Part time
Applicant's contribution: Desarrollo del sistema de control del convertidor

17 **Name of the project:** TECNOLOGÍAS PARA CONVERTIDORES TRIFÁSICOS DE MEDIA TENSIÓN BASADOS EN DISPOSITIVOS SIC
Geographical area: National
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 6
Code according to the funding entity: MICINN-10-ENE2010-14941
Start-End date: 01/01/2011 - 31/12/2013 **Duration:** 3 years
Dedication regime: Part time

18 **Name of the project:** Minimizing Energy Loss in Hot Rolling by Intelligent Manufacturing "HR Energy Control"
Geographical area: European Union
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 11
Funding entity or bodies:
European Comisión- 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 - 30/12/2013 **Duration:** 3 years - 5 months - 29 days
Dedication regime: Part time
Applicant's contribution: N.D.

19 **Name of the project:** Control sin sensor de un sistema de almacenamiento de energía cinetico
Geographical area: National
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 7
Code according to the funding entity: MEC-07-ENE2007-67842-C03-01
Start-End date: 01/10/2007 - 30/09/2010 **Duration:** 3 years
Dedication regime: Part time

20 **Name of the project:** Estimación de velocidad/posicion en accionamientos electricos de alterna mediante el rastreo de saliencias espaciales
Geographical area: National
Entity where project took place: Universidad de Oviedo **Type of entity:** University
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Funding entity or bodies:
MINISTERIO DE EDUCACIÓN Y CIENCIA

Code according to the funding entity: MEC-04-DPI2004-00527

Start-End date: 13/12/2004 - 13/12/2007 **Duration:** 3 years
Dedication regime: Full time
Applicant's contribution: Investigador/a

21 **Name of the project:** Alternativas de diseño en la implementacion de tecnicas de estimacion de la posicion mediante inyeccion de una señal portadora en accionamientos con control vectorial
Geographical area: National
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Funding entity or bodies:
MINISTERIO DE CIENCIA Y TECNOLOGIA

Code according to the funding entity: DPI2001-3815
Start-End date: 28/12/2001 - 28/12/2004 **Duration:** 3 years
Dedication regime: Full time
Applicant's contribution: N.D.

22 **Name of the project:** Estimación de la posición en accionamientos eléctricos con control vectorial sin sensor de velocidad/posición, utilizando la técnica de rastreo de saliencias mediante inyección de una señal portadora
Geographical area: National
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Funding entity or bodies:
Fundación para el Fomento en Asturias de la Investigación Científica Aplicada y de la Tecnología (FICYT)

Code according to the funding entity: FC-01-PB-EXP-24
Start-End date: 01/10/2001 - 01/07/2002 **Duration:** 9 months
Dedication regime: Full time
Applicant's contribution: Técnicas de estimación de posición y desacoplo de saliencias secundarias

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

1 **Name of the project:** FUO-24-276. Desarrollo de tarjeta para el control de convertidores de potencia
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Pablo García Fernández
Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Start date: 01/08/2024 **Duration:** 7 months

2 **Name of the project:** FUO-24-262. Algoritmos de control Grid Forming para la integración de recursos distribuidos
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Ángel Navarro Rodríguez
Nº of researchers: 4
Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Start date: 26/07/2024 **Duration:** 1 year

3 **Name of the project:** FUO-24-249. Sistema para la predicción de generación y carga
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): Pablo García Fernández
Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Start date: 11/07/2024 **Duration:** 6 months

4 **Name of the project:** LI-24-001. Lemur. Estrategias de control y monitorización
Degree of contribution: Coordinator of total project, network or consortium
Nº of researchers: 3
Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Start date: 15/05/2024 **Duration:** 2 years - 7 months

5 **Name of the project:** FOR83-24-009. Control de convertidores conectados a red
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Angel Navarro Rodriguez
Nº of researchers: 4
Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Start date: 09/04/2024 **Duration:** 1 year - 3 months

6 **Name of the project:** FUO-23-327. HIdrógeno Verde Estable en MicrorREDes
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Cristian Blanco Charro
Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Start date: 11/10/2023 **Duration:** 1 year

7 **Name of the project:** FUO-315-20. Desarrollo de un convertidor de potencia para la ecualización de módulos de baterías conectados en serie
Degree of contribution: Scientific coordinator
Name principal investigator (PI, Co-PI....): Pablo García Fernández
Nº of researchers: 4
Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Funding entity or bodies:
Cegasa Energía SLU
City funding entity: Spain

Start date: 31/10/2020 **Duration:** 12 months
Total amount: 9.036,14 €

8 **Name of the project:** FUO-236-20. Desarrollo de algoritmo para la definición de la consigna de tensión óptima en smart transformers
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Arboleya Arboleya
Nº of researchers: 5
Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Funding entity or bodies:
ORMAZABAL CORPORATE TECHNOLOGY, A.I.E **Type of entity:** Business
City funding entity: Spain

Start date: 28/08/2020 **Duration:** 120 months
Total amount: 12.394,92 €

9 **Name of the project:** FUO-003-20. Centro de control y monitorización de datos en tiempo real para redes eléctricas basado en web en un entorno de realidad virtual
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Arboleya Arboleya; Islam El-Sayed
Nº of researchers: 4
Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Funding entity or bodies:
TSK ELECTRÓNICA Y ELECTRICIDAD, S.A.
City funding entity: Spain

Start date: 01/01/2020 **Duration:** 240 months
Total amount: 43.140 €

10 **Name of the project:** Desarrollo de un sistema de sensorless para DFIG (DFIGLESS)
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 1
Code according to the funding entity: FUO-100-19
Start date: 01/12/2019 **Duration:** 2 months

11 **Name of the project:** Desarrollo de un sistema de estimación de estado y monitorización vía web en tiempo real aplicado a redes de distribución terminal en baja tensión
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 5
Code according to the funding entity: FUO-295-19
Start date: 01/09/2019 **Duration:** 5 months - 28 days

12 **Name of the project:** Desarrollo de un sistema de control Master-Slave para soluciones paralelizables de almacenamiento de energía utilizando baterías de Li-ion
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 6
Code according to the funding entity: FUO-340-19
Start date: 20/07/2019 **Duration:** 1 year

13 **Name of the project:** Sistemas de control y gestión de módulos de baterías de Li-Ion para aplicaciones estacionarias
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 6
Code according to the funding entity: FUO-335-19
Start date: 17/07/2019 **Duration:** 1 year

14 **Name of the project:** Uso de sistemas de almacenamiento híbridos basados en baterías y supercondensadores para apoyo a instalaciones fotovoltaicas mediante algoritmos de predicción de meteorología
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): CRISTIAN BLANCO CHARRO
Nº of researchers: 5

Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Funding entity or bodies:
TSK ELECTRÓNICA Y ELECTRICIDAD, S.A. **Type of entity:** Business
City funding entity: Spain

Code according to the funding entity: FUO-284-19
Start date: 19/06/2019 **Duration:** 1 year
Total amount: 66.950 €

15 **Name of the project:** Desarrollo de plataforma IoT para SmartCities como entorno de pruebas para la red 6LowPan de Gijón
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 4
Code according to the funding entity: FUO-230-19
Start date: 02/06/2019 **Duration:** 7 months

16 **Name of the project:** Plataforma SVMAC para agricultura de precisión SVMAC P4PA
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 1
Funding entity or bodies:
SVMAC **Type of entity:** Business
City funding entity: Spain

Code according to the funding entity: FUO-125-19
Start date: 02/03/2019 **Duration:** 6 months

17 **Name of the project:** Railway infrastructure calculations for DC traction networks considering on-board and off-board acccumulation systems
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 2
Code according to the funding entity: FUO-024-19
Start date: 16/01/2019 **Duration:** 6 months

18 **Name of the project:** Sistema de simulación, análisis de datos y generación automática de informes energéticos en redes eléctrica de tracción ferroviaria en DC
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 5
Code according to the funding entity: FUO-395-18
Start date: 01/01/2019 **Duration:** 1 year

19 **Name of the project:** Desarrollo de herramientas para la gestión energética a nivel de edificio integrando los distintos equipos de transporte de personas y otras cargas generadores del edificio
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): JORGE GARCIA GARCIA
Nº of researchers: 5
Code according to the funding entity: FUO-397-18

Start date: 11/12/2018 **Duration:** 2 months - 17 days

20 **Name of the project:** Proyecto GSPRO
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 5
Funding entity or bodies:
Gestión e Innovación en Eficiencia Energética S.L.

Code according to the funding entity: FUO-374-18
Start date: 06/11/2018 **Duration:** 1 year
Total amount: 70.576,63 €

21 **Name of the project:** Desarrollo de un modelo de la red de distribución de energía eléctrica de EDP en el término municipal de Pola de Siero para ser resuelto de forma estática a través de un motor de cálculo basado en OpenDSS y analizado mediante el uso de técnicas basadas en Visual Analytics
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 4
Code according to the funding entity: FUO-344-18
Start date: 21/09/2018 **Duration:** 2 months

22 **Name of the project:** Análisis de Aplicaciones y Usos de la Realidad Virtual, Realidad Aumentada y Realidad Mixta en el ámbito de los sistemas de potencia y las aplicaciones industriales
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 5
Code according to the funding entity: FUO-323-18
Start date: 01/09/2018 **Duration:** 2 months

23 **Name of the project:** Generación de modelos de generadores doblemente alimentados durante transitorios
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 1
Funding entity or bodies:
GAMESA ELECTRIC, S.A.U.

Code according to the funding entity: FUO-187-18
Start date: 24/05/2018 **Duration:** 2 months - 1 day
Total amount: 3.000 €

24 **Name of the project:** Test and Validation of Railway Infrastructure Simulation Software
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA

Nº of researchers: 4
Start date: 01/05/2018 **Duration:** 6 months

25 **Name of the project:** Desarrollo de un sistema de gestión de energía para aplicaciones domésticas e industriales
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; JORGE GARCIA GARCIA
Nº of researchers: 5
Funding entity or bodies:
CEGASA PORTABLE ENERGY, S.L.U.

Code according to the funding entity: FUO-156-18
Start date: 28/04/2018 **Duration:** 1 year
Total amount: 91.886,32 €

26 **Name of the project:** FUO-200-18. Development of a visual analytics tool for analysisng and representing and analysing the on-board electrical network of the vehicles
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 4
Participating entity/entities: FUNDACION UNIVERSIDAD DE OVIEDO
Funding entity or bodies:
RÜCKER LYPSA, S.L **Type of entity:** Business
City funding entity: Spain

Code according to the funding entity: FUO-200-18
Start date: 19/04/2018 **Duration:** 3 years - 3 months - 12 days
Total amount: 154.650 €

27 **Name of the project:** Desarrollo de un sistema piloto basado en IoT para el control de la iluminación pública y sistemas de riego en smartcities mediante aplicaciones móviles
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 4
Code according to the funding entity: FUO-110-18
Start date: 08/03/2018 **Duration:** 3 months

28 **Name of the project:** Sistemas de control y gestión de módulos de batería de Li-Ion para aplicaciones estacionarias
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 5
Funding entity or bodies:
CEGASA PORTABLE ENERGY, S.L.U.

Code according to the funding entity: FUO-173-18
Start date: 01/01/2018 **Duration:** 6 months
Total amount: 4.337,35 €

29 **Name of the project:** Fomento del conocimiento y las investigaciones vinculadas al campo de la industria extractiva, obras subterráneas y la energía, impulsando proyectos de I+D+i en estos campos, en especial en lo referente a modelado de incendios, comportamiento térmicos de bienes de equipo y elementos estructurales, y edificios de energía casi nula.
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; MONICA GALDO VEGA; MAR ALONSO MARTINEZ
Nº of researchers: 11
Funding entity or bodies:
FUNDACION BARREDO

Code according to the funding entity: FUO-428-17
Start date: 29/12/2017 **Duration:** 1 year
Total amount: 66.686,67 €

30 **Name of the project:** Desarrollo de una plataforma de tracción híbrida para maquinaria agrícola
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 4
Funding entity or bodies:
SVMAC INGENIERÍA SISTEMAS Y VEHÍCULOS, S.L.

Code according to the funding entity: FUO-423-17
Start date: 20/12/2017 **Duration:** 6 months
Total amount: 6.554,19 €

31 **Name of the project:** Mejoras en el sistema de control y gestión de módulos de baterías de Li-Ion para aplicaciones estacionarias
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 5
Funding entity or bodies:
CEGASA PORTABLE ENERGY, S.L.U.

Code according to the funding entity: FUO-424-17
Start date: 20/12/2017 **Duration:** 6 months
Total amount: 38.939,69 €

32 **Name of the project:** Desarrollo de herramientas para la simulación eléctrica y térmica la red de a bordo de vehículos
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 4

Code according to the funding entity: FUO-371-17
Start date: 20/10/2017 **Duration:** 2 years - 11 months - 10 days

33 **Name of the project:** Mantenimiento y mejora software Visor de detección de fugas de caldera CTA
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 4
Funding entity or bodies:
EDP ENERGIA SA

Hidroeléctrica del Cantábrico Generación

Code according to the funding entity: FUO-356-17
Start date: 11/10/2017 **Duration:** 5 months
Total amount: 4.542 €

34 **Name of the project:** Modelado de parques renovables para cumplimiento de códigos de red de alta exigencia
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 4
Funding entity or bodies:
GAMESA ELECTRIC, S.A.U.

Gamesa Electric S.A.

Code according to the funding entity: FUO-285-17
Start date: 21/07/2017 **Duration:** 3 months
Total amount: 3.000 €

35 **Name of the project:** Integración de la medida y el diagnóstico de variables eléctricas en un equipo para la monitorización de turbinas eólicas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 4
Funding entity or bodies:
TWave S.L.

Code according to the funding entity: FUO-111-17
Start date: 03/07/2017 **Duration:** 8 months
Total amount: 9.975,9 €

36 **Name of the project:** Simulación de almacenamiento eléctrico
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 4
Funding entity or bodies:
Arcelor Mittal

Code according to the funding entity: FUO-211-17
Start date: 25/05/2017 **Duration:** 1 year
Total amount: 54.216,87 €

37 **Name of the project:** Análisis y diseño de alternativas para transformadores en drivers de potencia
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; JORGE GARCIA GARCIA
Nº of researchers: 2
Funding entity or bodies:
Electrónica y Comunicaciones Noroeste S.L.

Code according to the funding entity: FUO-178-17
Start date: 02/04/2017 **Duration:** 2 months - 29 days
Total amount: 750 €

38 **Name of the project:** Diseño de drivers para IGBTS de potencia
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): JORGE GARCIA GARCIA
Nº of researchers: 2
Funding entity or bodies:
Electrónica y Comunicaciones Noroeste S.L.

Code according to the funding entity: FUO-193-17
Start date: 02/04/2017 **Duration:** 2 months - 29 days

39 **Name of the project:** Desarrollo del sistema de comunicaciones de un convertidor de potencia para aplicaciones de redes aisladas
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia; JORGE GARCIA GARCIA
Nº of researchers: 3
Funding entity or bodies:
Cegasa Portable Energía S.L.

Code according to the funding entity: FUO-118-17
Start date: 17/03/2017 **Duration:** 7 months
Total amount: 30.129,46 €

40 **Name of the project:** Desarrollo del sistema de control y gestión de módulos de baterías de LI-ON
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; JORGE GARCIA GARCIA
Nº of researchers: 5
Funding entity or bodies:
CEGASA PORTABLE ENERGY, S.L.U.

Code according to the funding entity: FUO-269-16
Start date: 22/07/2016 **Duration:** 9 months
Total amount: 36.637,28 €

41 **Name of the project:** Plataforma de ensayo para el diagnóstico de convertidores de potencia (Inverters) para aplicaciones industriales
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO

Name principal investigator (PI, Co-PI....): Pablo Garcia; JORGE GARCIA GARCIA
Nº of researchers: 4
Funding entity or bodies:
ELECTRÓNICA Y COMUNICACIONES NOROESTE, S.L.

Code according to the funding entity: FUO-194-16
Start date: 09/06/2016 **Duration:** 1 month - 30 days
Total amount: 5.033,98 €

42 **Name of the project:** Planta piloto de almacenamiento de energía
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 4
Funding entity or bodies:
ARCELORMITTAL INNOVACIÓN, INVESTIGACIÓN E INVERSIÓN, S.L.

Code according to the funding entity: FUO-170-16
Start date: 15/04/2016 **Duration:** 7 months - 29 days
Total amount: 45.000 €

43 **Name of the project:** Desarrollo de una aplicación para el control y monitorización de un sistema estacionario de baterias de Li-Ion
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 5
Funding entity or bodies:
CEGASA PORTABLE ENERGY, S.L.U.

Code according to the funding entity: FUO-086-16
Start date: 23/02/2016 **Duration:** 5 months - 30 days
Total amount: 7.250 €

44 **Name of the project:** Investigación sobre las necesidades de remodelación de sistemas de protección
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): CRISTINA GONZALEZ MORAN
Nº of researchers: 4
Code according to the funding entity: FUO-EM-307-15
Start date: 03/11/2015 **Duration:** 6 months - 28 days

45 **Name of the project:** Plataforma para el ensayo y diagnóstico de módulos de potencia.
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; JORGE GARCIA GARCIA
Nº of researchers: 4
Funding entity or bodies:
Electrónica y Comunicaciones

Code according to the funding entity: FUO-EM-276-15
Start date: 02/10/2015 **Duration:** 6 months - 3 days
Total amount: 11.800 €

46 **Name of the project:** Desarrollo de estación de transporte intermodal eficiente y sostenible (ESTEFI)
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 5
Funding entity or bodies:
CAF TURNKEY & ENGINEERING

Code according to the funding entity: FUO-EM-155-15
Start date: 01/10/2015 **Duration:** 1 year - 7 months - 10 days

47 **Name of the project:** Desarrollo de modelos en Matlab de baterías de litio
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia
Nº of researchers: 4
Funding entity or bodies:
Gamesa Electric

Code according to the funding entity: FUO-EM-191-15
Start date: 29/04/2015 **Duration:** 2 months
Total amount: 3.000 €

48 **Name of the project:** Large Scale Integration of Wind Power in the Nordic Power System
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): PABLO ARBOLEYA ARBOLEYA
Nº of researchers: 6
Code according to the funding entity: FUO-EM-051-14
Start date: 21/01/2014 **Duration:** 8 months - 9 days

49 **Name of the project:** Estudio Soluciones de diagnóstico de fallos de aislamiento del rotor
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Funding entity or bodies:
Gamesa Innovation and Technology S.L.U.

Code according to the funding entity: FUO-EM-230-13
Start date: 16/07/2013 **Duration:** 5 months
Total amount: 11.750 €

50 **Name of the project:** Industrialización de un sistema de generación microeólico. Proyecto Microwind II
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): JUAN MANUEL GUERRERO MUÑOZ
Nº of researchers: 4
Funding entity or bodies:
AZ Renovables S.L.

Code according to the funding entity: FUO-EM-125-13
Start date: 02/04/2013 **Duration:** 8 months - 29 days

51 **Name of the project:** Programación de controladores digitales (DSCs) Texas Instruments
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; JUAN MANUEL GUERRERO MUÑOZ
Nº of researchers: 2
Code according to the funding entity: FUO-EM-300-12
Start date: 31/10/2012 **Duration:** 5 days

52 **Name of the project:** Sensorless power converter control
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 4
Funding entity or bodies:
GAMESA INNOVATION AND TECHNOLOGY S.L.U.

Code according to the funding entity: FUO-EM-271-12
Start date: 01/07/2012 **Duration:** 6 months
Total amount: 11.176,47 €

53 **Name of the project:** Control of power converter for sensorless
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Funding entity or bodies:
GAMESA INNOVATION AND TECHNOLOGY S.L.U.

Code according to the funding entity: FUO-EM-042-12
Start date: 31/01/2012 **Duration:** 1 month
Total amount: 3.000 €

54 **Name of the project:** Maleta Adwina Móvil
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Funding entity or bodies:
ALSTOM TRANSPORTE S.A

Code according to the funding entity: FUO-EM-028-12
Start date: 18/11/2011 **Duration:** 2 months - 13 days
Total amount: 4.548 €

55 **Name of the project:** Componentes de electrónica de potencia con materiales WBG
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher

Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 5
Code according to the funding entity: FUO-EM-200-11
Start date: 01/09/2011 **Duration:** 6 months

56 **Name of the project:** Diagnóstico de Generadores Síncronos de Imanes Permanentes Mediante Convertidores Full Converter
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 4
Funding entity or bodies:
Gamesa Innovation and Tecnology S.L.U

Code according to the funding entity: FUO-EM-219-11
Start date: 05/08/2011 **Duration:** 8 months
Total amount: 30.475 €

57 **Name of the project:** Estudio para el desarrollo de un sistema de generación microeólico Microwind
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): JUAN MANUEL GUERRERO MUÑOZ
Nº of researchers: 4
Funding entity or bodies:
AZ Renovables S.L.

Code according to the funding entity: FUO-EM-169-12
Start date: 14/06/2011 **Duration:** 6 months

58 **Name of the project:** Supervisión y análisis de fallos eléctricos en alternadores de cogeneración (MEDISCO)
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Pablo Garcia; ABEL ALBERTO CUADRADO VEGA; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 6
Code according to the funding entity: CN-11-041
Start date: 16/04/2011 **Duration:** 1 year - 5 months - 29 days

59 **Name of the project:** Sistema Adquisición
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Funding entity or bodies:
ALCOA INESPAL, S.A. - EXTINGUIDA

Code according to the funding entity: FUO-EM-102-11
Start date: 25/03/2011 **Duration:** 1 month
Total amount: 2.848 €

60 **Name of the project:** Investigación de un Sistema de Seguridad Electrónico Avanzado para túneles. Proyecto VELECTRA
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): JUAN MANUEL GUERRERO MUÑOZ
Nº of researchers: 5
Code according to the funding entity: FUO-EM-374-10
Start date: 18/11/2010 **Duration:** 6 months

61 **Name of the project:** Desarrollo de la segunda fase del proyecto Adwina
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 4
Funding entity or bodies:
ALSTOM TRANSPORTE S.A

Code according to the funding entity: FUO-EM-254-10
Start date: 01/08/2010 **Duration:** 1 year
Total amount: 32.000 €

62 **Name of the project:** Desarrollo de un Sistema para la mejora de la eficiencia energética de motores de inducción trifásicos alimentados desde la red
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; JUAN MANUEL GUERRERO MUÑOZ; DAVID DIAZ REIGOSA; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 4
Funding entity or bodies:
GAMESA NUEVOS DESARROLLOS, S.A.U.

Code according to the funding entity: FUO-EM-047-10
Start date: 02/02/2010 **Duration:** 6 months
Total amount: 10.076 €

63 **Name of the project:** Trabajos para el proyecto implantación de un sistema de monitorización y supervisión de la línea de colada continua de la acería-Factoría de Avilés
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 4
Funding entity or bodies:
AcerlorMittal España, S.A..

Code according to the funding entity: FUO-EM-311-09
Start date: 04/11/2009 **Duration:** 2 months - 11 days
Total amount: 8.000 €

64 **Name of the project:** Desarrollo de un Sistema de Diagnóstico de Motores Eléctricos de Inducción Trifásicos empleados en máquinas de ferrocarril
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): Pablo Garcia; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 4
Funding entity or bodies:
ALSTOM TRANSPORTE S.A

Code according to the funding entity: FUO-EM-155-09
Start date: 19/03/2009 **Duration:** 9 months - 12 days
Total amount: 17.130 €

65 **Name of the project:** Desarrollo y optimización de los sistemas electrónicos de medida y control para la línea de decapado.
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): JUAN MANUEL LOPERA RONDA
Nº of researchers: 8
Funding entity or bodies:
CONSEJERIA DE CULTURA Y DEPORTE

Code according to the funding entity: FC-09-PEST08-19-1
Start date: 01/03/2009 **Duration:** 1 year - 10 months

66 **Name of the project:** 15008 -Diseño de un sistema automatizado para el tratamiento y almacenaje de vidrio
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Code according to the funding entity: FUO-EM-161-08
Start date: 19/06/2008 **Duration:** 29 days

67 **Name of the project:** Sistema de seguimiento y mejora de la eficiencia en grupos de cogeneración
Entity where project took place: Universidad de Oviedo
Degree of contribution: Researcher
Entity where project took place: Universidad de Oviedo
Name principal investigator (PI, Co-PI....): Pablo Garcia; FERNANDO BRIZ DEL BLANCO
Nº of researchers: 6
Code according to the funding entity: CN-08-066
Start date: 16/06/2008 **Duration:** 1 year - 5 months - 29 days

68 **Name of the project:** Monotorización remota del sistema de detección de barras rotas en el rotor de motores auxiliares de la central térmica de Aboño
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 4
Code according to the funding entity: FUO-EM-097-08

Start date: 16/04/2008 **Duration:** 5 months - 29 days

69 **Name of the project:** Monitorización y supervisión de la línea de colada continua
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 5
Funding entity or bodies:
ARCELORMITTAL ESPAÑA

Code according to the funding entity: CN-08-093-IE07-113A
Start date: 26/03/2008 **Duration:** 6 months

70 **Name of the project:** Evaluación de tecnologías de medida de la posición de una bola que levita magnéticamente insertada en poliestireno expandido
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): ANTONIO ROBLES ALVAREZ; FERNANDO BRIZ DEL BLANCO; IGNACIO DIAZ BLANCO
Nº of researchers: 4
Code according to the funding entity: FUO-EM-193-07
Start date: 21/09/2007 **Duration:** 1 year - 3 months - 10 days

71 **Name of the project:** Ingeniería y puesta en marcha de la ampliación del sistema de monitorización y supervisión de las Líneas de Colada Continua de la LD-A
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Code according to the funding entity: FUO-EM-167-07
Start date: 02/08/2007 **Duration:** 5 months - 29 days

72 **Name of the project:** Monotorización y Supervisión de la Línea de Colada Continua de la Acería LD-A-Factoría de Avilés
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Degree of contribution: Researcher
Entity where project took place: FUNDACION UNIVERSIDAD DE OVIEDO FUO
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Code according to the funding entity: FUO-EM-028-07
Start date: 26/01/2007 **Duration:** 11 months - 5 days

73 **Name of the project:** La detección de fugas en calderas de vapor mediante análisis del ruido de caldera
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO
Nº of researchers: 2
Code according to the funding entity: FUO-EM-157-06
Start date: 29/09/2006 **Duration:** 1 year

74 **Name of the project:** Diseño y construcción de un equipo de resonancia para la inspección automática del 100% de la producción de sincros de referencia 5800, 5797, 5798 y 5799
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): FERNANDO BRIZ DEL BLANCO; CARLOS MANUEL SUAREZ ALVAREZ
Nº of researchers: 3
Code according to the funding entity: FUO-EM-190-05
Start date: 02/11/2005 **Duration:** 6 months - 29 days

Scientific and technological activities

Scientific production

Publications, scientific and technical documents

1 Daniel del Rivero; Pablo García; Cristian Blanco; Ángel Navarro-Rodríguez. Control of Aggregated Virtual Synchronous Generators for PV Plants Considering Communication Delays. IEEE Transactions on Industry Applications. 60 - 4, pp. 6512 - 6523. 2024.
Type of production: Scientific paper **Format:** Journal

2 Mhret Berhe Gebremariam; Pablo García; Ángel Navarro-Rodríguez; Cristian Blanco. Energy exchange optimization for a building-to-building grid: A non-cooperative game-theory method. Sustainable Energy, Grids and Networks. 39, pp. 101420 - 101420. 2024. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S2352467724001498>. ISSN 2352-4677
Type of production: Scientific paper **Format:** Journal

3 Carlos Gómez-Aleixandre; Ángel Navarro-Rodríguez; Marius Langwasser; Pablo García; Marco Liserre. Weighted DC Virtual Generator Control Scheme for Interlinking Converters in DC Microgrids. IEEE Transactions on Industrial Electronics. 71 - 8, pp. 8960 - 8969. 2024.
Type of production: Scientific paper **Format:** Journal

4 Miguel Crespo; Irene Peláez; Pablo García; Ramy Georgious; Cristian Blanco; Igor Cantero. Series/Parallel Li-ion battery modules active equalisation considering load and no-load operation. IEEE Transactions on Industry Applications. IEEE, 23/01/2023.
DOI: 10.1109/TIA.2023.3239045
Type of production: Scientific paper **Format:** Journal

5 Carlos Gómez-Aleixandre; Ángel Navarro-Rodríguez; Cristian Blanco; Geber Villa; Andrés Suárez; Pablo García. Analysis of a Complex-Valued Droop Method for Complete Steady-State Frequency Compensation Using dq-Decomposition. IEEE Transactions on Industry Applications. 59 - 6, pp. 7657 - 7668. 2023.
Type of production: Scientific paper **Format:** Journal

6 Ángel Navarro-Rodríguez; Pablo García; Jose M. Cano; Mark Sumner. 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. 2023.
Type of production: Scientific paper **Format:** Journal

7 Andrés Suárez; Cristian Blanco; Pablo García; Ángel Navarro-Rodríguez; José Manuel Cano Rodríguez. Grid Impedance Estimator for Active Multisource AC Grids. IEEE Transactions on Smart Grid. 14 - 3, pp. 2023 - 2033. 2023.

Type of production: Scientific paper **Format:** Journal

8 Ángel Navarro-Rodríguez; Pablo García; Carlos Gómez-Aleixandre; Cristian Blanco. Cooperative Primary Control of a Hybrid AC/DC Microgrid Based on AC/DC Virtual Generator. IEEE Transactions on Energy Conversion. 37 - 4, pp. 2837 - 2850. IEEE, 02/09/2022.
DOI: 10.1109/TEC.2022.3203770
Type of production: Scientific paper **Format:** Journal

9 Cristian Blanco; Francisco Paz; Ignacio Galiano Zurbriggen; Pablo García; Martin Ordonez. Distributed Islanding Detection in Multisource DC Microgrids: Pilot Signal Cancelation. IEEE Access. 10, pp. 78370 - 78383. IEEE, 25/07/2022.
DOI: 10.1109/ACCESS.2022.3193491
Type of production: Scientific paper **Format:** Journal

10 Carlos Gómez-Aleixandre; Ángel Navarro-Rodríguez; Geber Villa; Cristian Blanco; Pablo García. Adaptive Droop Controller for a Hybrid 375 Vdc/48 Vdc/400 Vac AC/DC Microgrid. IEEE Transactions on Industry Applications. 58 - 4, pp. 5104 - 5116. IEEE, 23/05/2022.
DOI: 10.1109/TIA.2022.3176597
Type of production: Scientific paper **Format:** Journal

11 Cristian Blanco; Andres Suarez; Carlos Gomez-Aleixandre; Irene Pelaez; Pablo Garcia. Passive and online DC bus Status Monitoring for Back-to-Back Converters applied to Doubly-Fed Induction Machines. IEEE Transactions on Power Electronics. 37 - 4, pp. 4697 - 4707. 01/04/2022. ISSN 1941-0107
DOI: 10.1109/TPEL.2021.3128021
Type of production: Scientific paper **Format:** Journal

12 Geber Villa; Sarah Saeed; Pablo Garcia-Fernandez; Carlos Gomez-Aleixandre Tiemblo; Ramy Georgious. Compensation Alternatives for Power Sharing Mismatch in Multi-Port DC/DC/AC Converters. IEEE Transactions on Industry Applications. 57 - 6, pp. 6221 - 6236. IEEE, 01/12/2021. ISSN 1939-9367
DOI: 10.1109/TIA.2021.3115721
Type of production: Scientific paper **Format:** Journal

13 Irene Pelaez; Pablo Garcia-Fernandez; Geber Villa; Sarah Saeed. Real-time Measurement of Li-Ion Battery Cells Using Power Converter Pulse-Signal Injection and Fusion Methods. IEEE Transactions on Industry Applications. 57 - 6, pp. 6350 - 6361. IEEE, 01/12/2021. ISSN 1939-9367
DOI: 10.1109/TIA.2021.3101777
Type of production: Scientific paper **Format:** Journal

14 RAMY GEORGIOUS ZAHER GEORGIOUS; JORGE GARCIA GARCIA; Sumner Mark; SARAH SAEED HAZKIAL GERGES; Pablo Garcia. Fault Ride-Through Power Electronic Topologies for Hybrid Energy Storage Systems. Energies (Switzerland). 13/1, pp. 1 - 19. (Switzerland): 2020. ISSN 1996-1073
Type of production: Scientific paper **Format:** Journal
Position of signature: 5
Total no. authors: 5

15 ANDRES SUAREZ GONZALEZ; Pablo Garcia; ANGEL NAVARRO RODRIGUEZ; Geber Villa; JOSE MANUEL CANO RODRIGUEZ. 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, 2019. ISSN 0093-9994
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 5

16 Pablo Garcia; SARAH SAEED HAZKIAL GERGES; ANGEL NAVARRO RODRIGUEZ; JORGE GARCIA GARCIA; Hannes Schneider. Switching Frequency Optimization for a Solid State Transformer With Energy Storage Capabilities. IEEE Transactions on Industry Applications. 54/6, pp. 6223 - 6233. (United States of America): 27/07/2018. ISSN 0093-9994
DOI: 10.1109/TIA.2018.2860561
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 5

17 CRISTIAN BLANCO CHARRO; Pablo Garcia; ANGEL NAVARRO RODRIGUEZ; Mark Sumner. Predictive frequency-based sequence estimator for control of grid-tied converters under highly distorted conditions. IEEE Transactions on Industry Applications. 54/5, pp. 5306 - 5317. (United States of America): 12/06/2018. ISSN 0093-9994
DOI: 10.1109/TIA.2018.2846552
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 4

18 RAMY GEORGIOUS ZAHER GEORGIOUS; JORGE GARCIA GARCIA; ANGEL NAVARRO RODRIGUEZ; Pablo Garcia. A Study on the Control Design of Non-Isolated Converter Configurations for Hybrid Energy Storage Systems. IEEE Transactions on Industry Applications. 54/5, pp. 4660 - 4671. (United States of America): 18/05/2018. ISSN 0093-9994
DOI: 10.1109/TIA.2018.2838086
Type of production: Scientific paper **Format:** Journal
Position of signature: 4
Total no. authors: 4

19 JOSE MANUEL CANO RODRIGUEZ; ANGEL NAVARRO RODRIGUEZ; ANDRES SUAREZ GONZALEZ; Pablo Garcia. 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): 15/05/2018. ISSN 0093-9994
DOI: 10.1109/TIA.2018.2836365
Type of production: Scientific paper **Format:** Journal
Position of signature: 4
Total no. authors: 4

20 RAMY GEORGIOUS ZAHER GEORGIOUS; JORGE GARCIA GARCIA; Pablo Garcia; ANGEL NAVARRO RODRIGUEZ. A Comparison of Non-Isolated High-Gain Three-Port Converters for Hybrid Energy Storage Systems. Energies (Switzerland). 11/3, (Switzerland): 15/03/2018. ISSN 1996-1073
DOI: 10.3390/en11030658
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 4

21 Pablo Garcia; Mark Sumner; ANGEL NAVARRO RODRIGUEZ; JUAN MANUEL GUERRERO MUÑOZ; JORGE GARCIA GARCIA. Observer-Based Pulsed Signal Injection for Grid Impedance Estimation in Three-Phase Systems. IEEE Transactions on Industrial Electronics. 65/10, pp. 7888 - 7899. (United States of America): 05/02/2018. ISSN 0278-0046
DOI: 10.1109/TIE.2018.2801784
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 5

22 RAMY GEORGIOUS ZAHER GEORGIOUS; JORGE GARCIA GARCIA; Pablo Garcia; ANGEL NAVARRO RODRIGUEZ. A Comparison of Non-Isolated High-Gain Three-Port Converters for Hybrid Energy Storage Systems. Energies (Switzerland). 11/3, pp. 1 - 24. (Switzerland): 2018. ISSN 1996-1073
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 4

23 ANGEL NAVARRO RODRIGUEZ; Pablo Garcia; RAMY GEORGIOUS ZAHER GEORGIOUS; JORGE GARCIA GARCIA; SARAH SAEED HAZKIAL GERGES. Observer-based Transient Frequency Drift Compensation in AC Microgrids. IEEE Transactions on Smart Grid. 21/12/2017. ISSN 1949-3053
DOI: 10.1109/TSG.2017.2786085
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 5

24 Juan Manuel Guerrero; Carlos Lumbreras; David Reigosa; Pablo Garcia; Fernando Briz. Control and Emulation of Small Wind Turbines Using Torque Estimators. IEEE Transactions on Industry Applications. 53/5, pp. 4863 - 4876. (United States of America): 25/05/2017. ISSN 0093-9994
DOI: 10.1109/TIA.2017.2708027
Type of production: Scientific paper **Format:** Journal
Position of signature: 4
Total no. authors: 5

25 Pablo Arboleya; Pablo Garcia; Bassam Mohamed; Cristina González-Morán. Distributed resources coordination inside nearly-zero energy buildings providing grid voltage support from a symmetrical component perspective. Electric Power Systems Research. 144, pp. 208 - 214. (Holland): 2017. ISSN 0378-7796
DOI: 10.1016/j.epsr.2016.11.011
Type of production: Scientific paper **Format:** Journal
Position of signature: 2
Total no. authors: 4

26 Pablo Garcia; Pablo Arboleya; Bassam Mohamed; ABEL ALBERTO CUADRADO VEGA; MARCOS CUADRADO VEGA. Implementation of a Hybrid Distributed/ Centralized Real-Time Monitoring System for a DC/AC Microgrid With Energy Storage Capabilities. IEEE Transactions on Industrial Informatics. 12/5, pp. 1900 - 1909. (United States of America): 01/06/2016. ISSN 1551-3203
DOI: 10.1109/TII.2016.2574999
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 5

27 Carlos Lumbreras; Juan Manuel Guerrero; Pablo Garcia; Fernando Briz; David Reigosa. Control of a Small Wind Turbine in the High Wind Speed Region. IEEE Transactions on Power Electronics. 31/10, pp. 6980 - 6991. (United States of America): 17/12/2015. ISSN 0885-8993
DOI: 10.1109/TPEL.2015.2508674
Type of production: Scientific paper **Format:** Journal
Position of signature: 3
Total no. authors: 5

28 DAVID DIAZ REIGOSA; FERNANDO BRIZ DEL BLANCO; Cristian Blanco; Pablo Garcia; JUAN MANUEL GUERRERO MUÑOZ. Active Islanding Detection for Multiple Parallel-Connected Inverter-Based Distributed Generators Using High-Frequency Signal Injection. IEEE Transactions on Power Electronics. 29/3, pp. 1192 - 1199. (United States of America): 03/2014. ISSN 0885-8993
DOI: 10.1109/TPEL.2013.2263845

Type of production: Scientific paper **Format:** Journal
Position of signature: 4
Total no. authors: 5

29 DAVID DIAZ REIGOSA; FERNANDO BRIZ DEL BLANCO; CRISTIAN BLANCO CHARRO; Antonio Di Gioia; Pablo Garcia; JUAN MANUEL GUERRERO MUÑOZ. Sensorless Control of Doubly Fed Induction Generators Based on Rotor High-Frequency Signal Injection. IEEE Transactions on Industry Applications. 49/6, pp. 2593 - 2601. (United States of America): 20/05/2013. ISSN 0093-9994
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Total no. authors: 6

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Total no. authors: 5

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Position of signature: 1
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Type of production: Scientific paper **Format:** Journal
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Total no. authors: 5

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Total no. authors: 4

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Type of production: Book chapter **Format:** Book
Position of signature: 3
Total no. authors: 5

Works submitted to national or international conferences

1 **Title of the work:** Active equalization of series/parallel Li-ion battery modules including no-load conditions
Name of the conference: 2020 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Detroit, United States of America
Date of event: 11/10/2020
End date: 15/10/2020
Organising entity: IEEE
Type of contribution: Scientific book or monograph
Miguel Crespo; Ramy Georgious; Pablo García; Geber Villa. "2020 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 4431 - 4437. 2020.

2 **Title of the work:** Control Strategies for a Unified Power Quality Conditioner with Hybrid Energy Storage in a Low-Voltage Distribution Network
Name of the conference: 2020 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Detroit, United States of America
Date of event: 11/10/2020
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3 **Title of the work:** Impedance estimator for multi-source DC microgrids with islanding detection capabilities
Name of the conference: 2020 IEEE Energy Conversion Congress and Exposition (ECCE)
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4 **Title of the work:** Online Li-ion battery state of health implementation for grid-tied applications
Name of the conference: 2020 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Detroit, United States of America
Date of event: 11/10/2020
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Name of the conference: 2020 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Detroit, United States of America
Date of event: 11/10/2020
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Name of the conference: Annual Conference on the Industrial Electronics Society 2019 (IECON 2019)
Geographical area: Non EU International
City of event: Portugal
Date of event: 14/10/2019
End date: 17/10/2019
City organizing entity: Portugal
CARLOS GOMEZ-ALEIXANDRE TIEMBLO; Pablo Garcia; ANGEL NAVARRO RODRIGUEZ; GEBER VILLA FERNANDEZ.

7 **Title of the work:** Homopolar harmonic injection and grid synchronization in distributed control systems for grid-tied intelligent power electronic blocks in 4-wire 3-phase converters
Name of the conference: Annual Conference on the Industrial Electronics Society 2019 (IECON 2019)
Geographical area: Non EU International
City of event: Portugal
Date of event: 14/10/2019
End date: 17/10/2019
City organizing entity: Portugal
CARLOS GOMEZ-ALEIXANDRE TIEMBLO; GEBER VILLA FERNANDEZ; Pablo Garcia; ANDRES SUAREZ GONZALEZ; ANGEL NAVARRO RODRIGUEZ.

8 **Title of the work:** Compensation Alternatives for Power Sharing Errors in Multi-Port Converters for Hybrid DC/AC Microgrids
Name of the conference: Energy Conversion Conference and Exposition 2019 (ECCE 2019)
Geographical area: Non EU International
City of event: United States of America
Date of event: 29/09/2019
End date: 03/10/2019
City organizing entity: United States of America
GEBER VILLA FERNANDEZ; SARAH SAEED HAZKIAL GERGES; Pablo Garcia; CARLOS GOMEZ-ALEIXANDRE TIEMBLO.

9 **Title of the work:** Design and Control of a Modular 48/400V Power Converter for the Grid Integration of Energy Storage Systems
Name of the conference: Energy Conversion Conference and Exposition 2019 (ECCE 2019)
Geographical area: Non EU International
City of event: United States of America
Date of event: 29/09/2019
End date: 03/10/2019
City organizing entity: United States of America
Miguel Crespo; Pablo Garcia; RAMY GEORGIOUS ZAHER GEORGIOUS; GEBER VILLA FERNANDEZ; JORGE GARCIA GARCIA.

10 **Title of the work:** Li-ion Batteries Parameter Estimation Using Converter Excitation and Fusion Methods
Name of the conference: Energy Conversion Conference and Exposition 2019 (ECCE 2019)
Geographical area: Non EU International
City of event: United States of America
Date of event: 20/09/2019
End date: 03/10/2019
City organizing entity: United States of America
IRENE PELAEZ ACEDO; Pablo Garcia; GEBER VILLA FERNANDEZ; SARAH SAEED HAZKIAL GERGES.

11 **Title of the work:** Online parameter estimator of the DC bus capacitor bank for Doubly-Fed Induction Generators
Name of the conference: 2019 21th European Conference on Power Electronics and Applications (EPE'19 ECCE Europe)
City of event: Génova, Italy
Date of event: 02/09/2019
End date: 06/09/2019
City organizing entity: Génova, Italy
Cristian Blanco; CRISTIAN BLANCO CHARRO; Pablo Garcia; CARLOS GOMEZ-ALEIXANDRE TIEMBLO; IRENE PELAEZ ACEDO. "Online parameter estimator of the DC bus capacitor bank for Doubly-Fed Induction Generators".

12 **Title of the work:** Cooperative Control in a Hybrid DC/AC Microgrid based on Hybrid DC/AC Virtual Generators
Name of the conference: 2018 IEEE Energy Conversion Congress and Exposition (ECCE)
Geographical area: Non EU International
City of event: Portland, United States of America
Date of event: 23/09/2018
End date: 27/09/2018
City organizing entity: Portland, United States of America

ANGEL NAVARRO RODRIGUEZ; Pablo Garcia; CRISTIAN BLANCO CHARRO; RAMY GEORGIOUS ZAHER GEORGIOUS; JORGE GARCIA GARCIA. pp. 1156 - 1163. ISBN 978-1-4799-7312-5
DOI: 10.1109/ECCE.2018.8558184

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Name of the conference: 2018 IEEE Energy Conversion Congress and Exposition (ECCE)
Geographical area: Non EU International
City of event: Portland, United States of America
Date of event: 23/09/2018
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GEBER VILLA FERNANDEZ; CARLOS GOMEZ-ALEIXANDRE TIEMBLO; Pablo Garcia; JORGE GARCIA GARCIA. pp. 6379 - 6386. ISBN 978-1-4799-7312-5
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14 **Title of the work:** Efficiency Comparison in Power Converters Under Transient Operation Conditions: Application to Hybrid Energy Storage Systems
Name of the conference: 2018 IEEE Energy Conversion Congress and Exposition (ECCE)
Geographical area: Non EU International
City of event: Portland, United States of America
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JORGE GARCIA GARCIA; CRISTINA GONZALEZ MORAN; Pablo Garcia; PABLO ARBOLEYA ARBOLEYA. pp. 5344 - 5350. ISBN 978-1-4799-7312-5
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15 **Title of the work:** Online Impedance Estimation in AC Grids Considering Parallel-Connected Converters
Name of the conference: 2018 IEEE Energy Conversion Congress and Exposition (ECCE)
Geographical area: Non EU International
City of event: Portland, United States of America
Date of event: 23/09/2018
End date: 27/09/2018
City organizing entity: Portland, United States of America
ANDRES SUAREZ GONZALEZ; CRISTIAN BLANCO CHARRO; Pablo Garcia; ANGEL NAVARRO RODRIGUEZ; JOSE MANUEL CANO RODRIGUEZ. pp. 5912 - 5919. ISBN 978-1-4799-7312-5
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16 **Title of the work:** Optimization Method for the Integration of Hybrid Energy Storage Systems in Industrial Applications
Name of the conference: 2018 IEEE Energy Conversion Congress and Exposition (ECCE)
Geographical area: Non EU International
City of event: Portland, United States of America
Date of event: 23/09/2018
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Irene Peláez; SARAH SAEED HAZKIAL GERGES; GEBER VILLA FERNANDEZ; Pablo Garcia. pp. 6646 - 6653. ISBN 978-1-4799-7312-5
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17 **Title of the work:** SoC Estimation in Li-ion Batteries Exploiting High-Frequency Model Properties
Name of the conference: 2018 IEEE Energy Conversion Congress and Exposition (ECCE)
Geographical area: Non EU International
City of event: Portland, United States of America
Date of event: 23/09/2018
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City organizing entity: Portland, United States of America
Pablo Garcia; ANGEL NAVARRO RODRIGUEZ; SARAH SAEED HAZKIAL GERGES; JORGE GARCIA GARCIA. pp. 1103 - 1110. ISBN 978-1-4799-7312-5
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18 **Title of the work:** Adaptive active power sharing techniques for DC and AC voltage control in a hybrid DC/AC microgrid
Name of the conference: IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 02/10/2017
End date: 02/10/2017
City organizing entity: Cincinnati, Spain
Angel Navarro; Pablo Garcia; Ramy Georgious; Jorge García.

19 **Title of the work:** Predictive frequency-based sequence estimator for control of grid-tied converters under highly distorted conditions
Name of the conference: IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 02/10/2017
End date: 02/10/2017
City organizing entity: Cincinnati, Spain
Cristian Blanco; Pablo Garcia; Angel Navarro; Mark Sumner.

20 **Title of the work:** Self-supplied isolated gate driver for SiC power MOSFETs based on bi-level modulation scheme
Name of the conference: IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 02/10/2017
End date: 02/10/2017
City organizing entity: Cincinnati, Spain
Jorge García; Pablo Garcia; Emre Gurpinar; Alberto Castellazi.

21 **Title of the work:** Sensorless unbalance correction as an ancillary service for LV 4-wire/3-phase power converters
Name of the conference: IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 02/10/2017
End date: 02/10/2017
City organizing entity: Cincinnati, Spain
Andrés Suárez; Pablo Garcia; Angel Navarro; Geber Villa; Jose Manual Cano.

22 **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 constant power loads
Name of the conference: European Conference on Power Electronics and Applications
Geographical area: Non EU International

City of event: Varsovia, Poland
Date of event: 11/09/2017
End date: 14/09/2017
City organizing entity: Varsovia, Poland
Pablo Garcia.
DOI: 10.23919/EPE17ECCEEurope.2017.8099228

23 **Title of the work:** MTPA and Field Weakening Control of Synchronous Reluctance motor
Name of the conference: 2016 9th International Conference on Electrical and Computer Engineering (ICECE)
City of event: Spain
Date of event: 20/12/2016
End date: 20/12/2016
City organizing entity: Dhaka, Spain
Pablo Garcia; S. M. Ferdous; M. A. M. Oninda; M. A. Hoque.

24 **Title of the work:** Analysis of hybrid energy storage systems with DC link fault ride-through capability
Name of the conference: IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 19/09/2016
End date: 19/09/2016
City organizing entity: Milwaukee, Spain
Ramy Georgious; Pablo Garcia; Jorge García; Mark Sumner.

25 **Title of the work:** Hierarchical Coordination of a Hybrid AC/DC SmartGrid with Central/Distributed Energy Storage
Name of the conference: IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 19/09/2016
End date: 19/09/2016
City organizing entity: Milwaukee, Spain
Pablo Arboleya; Pablo Garcia; Cristina González-Morán; Jorge García; Bassam Mohamed.

26 **Title of the work:** Improved efficiency of local EPS through variable switching frequency control of distributed resources
Name of the conference: IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 19/09/2016
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City organizing entity: Milwaukee, Spain
Jose Manual Cano; Pablo Garcia; Andrés Suárez; Angel Navarro.

27 **Title of the work:** Series-Parallel Connection of Low-Voltage sources for integration of galvanically isolated Energy Storage Systems
Name of the conference: IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 19/09/2016
End date: 19/09/2016
City organizing entity: Milwaukee, Spain
Ramy Georgious; Pablo Garcia; Jorge García; Angel Navarro; Sarah Saeed.

28 **Title of the work:** Switching frequency optimization for a solid-state transformer with energy storage capabilities
Name of the conference: IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 19/09/2016
End date: 19/09/2016
City organizing entity: Milwaukee, Spain
Pablo Garcia; Sarah Saeed; Angel Navarro; Jorge García; Hannes Schneider.

29 **Title of the work:** Series-Parallel Connection of Low-Voltage sources for integration of galvanically isolated Energy Storage Systems
Name of the conference: 2016 IEEE Applied Power Electronics Conference and Exposition (APEC)
City of event: Spain
Date of event: 22/03/2016
End date: 22/03/2016
City organizing entity: Long Beach, Spain
R. Georgious; Pablo Garcia; J. Garcia; A. Navarro-Rodriguez; S. Saeed. pp. 3508 - 3513.

30 **Title of the work:** A communication-less solution for transient frequency drift compensation on weak microgrids using a D-statcom with an energy storage system
Name of the conference: 2015 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 20/09/2015
End date: 20/09/2015
City organizing entity: Montreal, Spain
A. Navarro-Rodriguez; Pablo Garcia; R. Georgious; J. Garcia. pp. 6904 - 6911.

31 **Title of the work:** Control and emulation of small wind turbines using torque estimators
Name of the conference: 2015 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: Spain
Date of event: 20/09/2015
End date: 20/09/2015
City organizing entity: Montreal, Spain
J. M. Guerrero; Pablo Garcia; C. Lumbreras; D. Reigosa; Fernando Briz. pp. 997 - 1004.

32 **Title of the work:** Control of a Small Wind Turbine in the High Wind Speed Region
Name of the conference: IEEE Energy Conversion Congress and Exposition 2014
City of event: Spain
Date of event: 18/09/2014
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City organizing entity: Pittsburgh, Spain
Carlos Lumbreras; Pablo Garcia; Juan M. Guerrero; Fernando Briz; David Díaz.

33 **Title of the work:** Analysis, modeling and control of half-bridge current-source converter for supercapacitor applications
Name of the conference: IEEE Energy Conversion Congress and Exposition 2014
City of event: Spain
Date of event: 17/09/2014
End date: 17/09/2014
City organizing entity: Pittsburgh, Spain
Jorge García; Pablo Garcia; Fabio Giulii Capponi; Gabriele Borocci; Giulio De Donato. pp. 3786 - 3793.

34 **Title of the work:** Low Frequency Signal Injection for Grid Impedance Estimation in Three Phase Systems
Name of the conference: IEEE Energy Conversion Congress and Exposition 2014
City of event: Spain
Date of event: 16/09/2014
End date: 16/09/2014
City organizing entity: Pittsburgh, Spain
Pablo Garcia; Juan M. Guerrero; Jorge García; Ángel Navarro-Rodríguez; Mark Sumner. pp. 1542 - 1549.

35 **Title of the work:** Control Strategy for Bidirectional HBCS Converter for Supercapacitor Applications
Name of the conference: IEEE ISIE 2014 - International Symposium on Industrial Electronics
City of event: Spain
Date of event: 01/06/2014
End date: 01/06/2014
City organizing entity: Istambul, Spain
Jorge García; Pablo Garcia; Fabio Giulii Capponi; Gabriele Borocci.

36 **Title of the work:** Minimization of Current Harmonics Content in Conventional Lighting Distribution Lines Without Current Sensing
Name of the conference: IECON 2013
City of event: Spain
Date of event: 12/11/2013
End date: 12/11/2013
City organizing entity: Viena, Spain
Pablo Garcia.

37 **Title of the work:** Impact of Saturation and Current Command Selection on the Performance of Sensorless Controlled Three-Pole Active Magnetic Bearings
Name of the conference: 2010 IEEE Energy Conversion Congress and Exposition
City of event: Spain
Date of event: 01/09/2010
End date: 01/09/2010
City organizing entity: Atlanta, Georgia, Spain
Pablo Garcia; Pablo Garcia; Juan M. Guerrero; Islam El-Sayed; Fernando Briz; David Reigosa.

38 **Title of the work:** Temperature Issues in Saliency-Tracking Based Sensorless Methods for PM Synchronous Machines
Name of the conference: 2010 IEEE Energy Conversion Congress and Exposition
City of event: Spain
Date of event: 01/09/2010
End date: 01/09/2010
City organizing entity: Atlanta, Georgia, Spain
David Reigosa; Pablo Garcia; Fernando Briz; Michael W. Degner; Juan M. Guerrero; Pablo Garcia.

39 **Title of the work:** Carrier Signal Injection Alternatives for Sensorless Control of Active Magnetic Bearings
Name of the conference: First IEEE International Symposium on Sensorless Control for Electrical Drives (SLED)
City of event: Spain
Date of event: 01/07/2010
End date: 01/07/2010
City organizing entity: Padova, Italia, Spain

Pablo Garcia; Pablo Garcia; Juan M. Guerrero; Islam El-Sayed; Fernando Briz; David Reigosa.

40 **Title of the work:** Control of Three-Pole Active Magnetic Bearings
Name of the conference: seminario anual de automatica, electronica industrial e instrumentacion (SAAEI)
City of event: Spain
Date of event: 01/07/2010
End date: 01/07/2010
City organizing entity: Bilbao, España, Spain
Pablo Garcia; Pablo Garcia; Juan M. Guerrero; Fernando Briz; Islam El-Sayed; David Reigosa.

41 **Title of the work:** Analysis of grid connected converters using a feed-forward disturbance decoupling current control
Name of the conference: International Power Electronics Conference (IPEC)
City of event: Spain
Date of event: 01/01/2010
End date: 01/01/2010
City organizing entity: Sapporo, Spain
David Reigosa; Pablo Garcia; Pablo Arboleya; Juan Manuel Guerrero; Pablo Garcia; Fernando Briz.

42 **Title of the work:** Current Sampling and Measurement in PWM Operated AC Drives and Power Converters
Name of the conference: International Power Electronics Conference (IPEC)
City of event: Spain
Date of event: 01/01/2010
End date: 01/01/2010
City organizing entity: Sapporo, Japan, Spain
Fernando Briz; Pablo Garcia; David Diaz-Reigosa; Michael W. Degner; Pablo Garcia; Juan Manuel Guerrero.

43 **Title of the work:** Sensorless Control of Three-Pole Active Magnetic Bearings Using Saliency-tracking Based Methods
Name of the conference: 2009 IEEE Energy Conversion Congress and Exposition
City of event: Spain
Date of event: 24/09/2009
End date: 24/09/2009
City organizing entity: San Jose, California, USA, Spain
Pablo Garcia; Pablo Garcia; Juan M. Guerrero; Fernando Briz; David Reigosa.

44 **Title of the work:** Magnet Temperature Estimation in Surface PM Machines Using High Frequency Signal Injection
Name of the conference: 2009 IEEE Energy Conversion Congress and Exposition
City of event: Spain
Date of event: 20/09/2009
End date: 20/09/2009
City organizing entity: San Jose, California, USA, Spain
David Reigosa; Pablo Garcia; Fernando Briz; Pablo Garcia; Juan M. Guerrero; Michael W. Degner.

45 **Title of the work:** Diagnostics of induction machines operated from inverters and soft-starters using high frequency negative sequence currents
Name of the conference: INDUSTRY APPLICATIONS SOCIETY ANNUAL MEETING, 2008. IAS '08. IEEE
City of event: Spain
Date of event: 05/10/2008

End date: 05/10/2008
City organizing entity: EDMONTON, ALTA., CAN, Spain
Fernando Briz; Pablo Garcia; Michael W. Degner; Juan M. Guerrero; Pablo Garcia.

46 **Title of the work:** Broken rotor bar detection in line-fed induction machines using complex wavelet analysis of startup transients
Name of the conference: INDUSTRY APPLICATIONS CONFERENCE, 2007. 42ND IAS ANNUAL MEETING
City of event: Spain
Date of event: 23/09/2007
End date: 23/09/2007
City organizing entity: NEW ORLEANS, LA, USA, Spain
Fernando Briz; Pablo Garcia; Michael W. Degner; Pablo Garcia; David Bragado.

47 **Title of the work:** Automatic self-commissioning for secondary-saliencies decoupling in sensorless-controlled ac machines using structured neural networks
Name of the conference: 2007 IEEE INTERNATIONAL SYMPOSIUM ON INDUSTRIAL ELECTRONICS
City of event: Spain
Date of event: 05/06/2007
End date: 05/06/2007
City organizing entity: VIGO, SPAIN, Spain
Pablo Garcia; Pablo Garcia; David Reigosa; Fernando Briz; Dejan Raca; Robert D. Lorenz.

48 **Title of the work:** Sistema integral para la monitorizacion, supervision y diagnostico de motores de induccion
Name of the conference: SEMINARIO ANUAL DE AUTOMATICA, ELECTRONICA INDUSTRIAL E INSTRUMENTACION (SAAEI)
City of event: Spain
Date of event: 15/09/2006
End date: 15/09/2006
City organizing entity: GIJON, ESPAÑA, Spain
Pablo Garcia; Pablo Garcia; Fernando Briz; Marcos Cuadrado; David Bragado.

49 **Title of the work:** Induction machine diagnostics using zero sequence components
Name of the conference: IEEE INDUSTRY APPLICATIONS SOCIETY ANNUAL MEETING
City of event: Spain
Date of event: 03/10/2005
End date: 03/10/2005
City organizing entity: HONG-KONG, CHINA, Spain
Fernando Briz; Pablo Garcia; Michael W. Degner; Pablo Garcia; Alberto B. Diez.

50 **Title of the work:** Rotor and flux position estimation in delta-connected ac machines using the zero sequence carrier signal current
Name of the conference: IEEE INDUSTRY APPLICATIONS SOCIETY ANNUAL MEETING
City of event: Spain
Date of event: 03/10/2005
End date: 03/10/2005
City organizing entity: HONG-KONG, CHINA, Spain
Fernando Briz; Pablo Garcia; Michael W. Degner; Pablo Garcia; Alberto B. Diez.

51 **Title of the work:** Saliency tracking-based, sensorless control of ac machines using structured neural networks
Name of the conference: IEEE INDUSTRY APPLICATIONS SOCIETY ANNUAL MEETING
City of event: Spain
Date of event: 03/10/2005
End date: 03/10/2005
City organizing entity: HONG-KONG, CHINA, Spain
Pablo Garcia; Pablo Garcia; Fernando Briz; Dejan Raca; Robert D. Lorenz.

52 **Title of the work:** Deteccion de fugas en generadores de vapor mediante general regression neural networks
Name of the conference: SEMINARIO ANUAL DE AUTOMATICA, ELECTRONICA INDUSTRIAL E INSTRUMENTACION (SAAEI)
City of event: Spain
Date of event: 30/09/2005
End date: 30/09/2005
City organizing entity: SANTANDER, ESPAÑA, Spain
Pablo Garcia; Pablo Garcia; Fernando Briz; Abel A. Cuadrado; Marcos Cuadrado.

53 **Title of the work:** Diagnostics of induction machines using the zero sequence voltage
Name of the conference: IEEE INDUSTRY APPLICATIONS SOCIETY ANNUAL MEETING
City of event: Spain
Date of event: 05/10/2004
End date: 05/10/2004
City organizing entity: SEATLE, WA, USA, Spain
Pablo Garcia; Pablo Garcia; Fernando Briz; Michael W. Degner; Alberto B. Diez.

54 **Title of the work:** Rotor position estimation of ac machines using the zero sequence carrier signal voltage
Name of the conference: IEEE INDUSTRY APPLICATIONS SOCIETY ANNUAL MEETING
City of event: Spain
Date of event: 03/10/2004
End date: 03/10/2004
City organizing entity: SEATLE, USA, Spain
Fernando Briz; Pablo Garcia; Michael W. Degner; Pablo Garcia; Juan M. Guerrero.

55 **Title of the work:** Transient operation of carrier signal injection based sensorless techniques
Name of the conference: 29TH IECON
City of event: Spain
Date of event: 02/11/2003
End date: 02/11/2003
City organizing entity: ROANOKE, VIRGINIA (USA), Spain
Fernando Briz; Pablo Garcia; Michael W. Degner; Pablo Garcia; Alberto B. Diez.

56 **Title of the work:** Heading estimation for kalman filter based localization: analysis and experiments
Name of the conference: INTERNATIONAL CONFERENCE ON ADVANCED ROBOTICS
City of event: Spain
Date of event: 01/01/2003
End date: 01/01/2003
City organizing entity: COIMBRA, PORTUGAL, Spain
Pablo Garcia. ISBN 972-96889-9-0

57 **Title of the work:** A comparison between single-stage and dual-stage high-gain GaN dc/dc converters for Li-Ion battery modules
Name of the conference: 2021 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Miguel Crespo; Pablo García; Konstantin Edl; Ramy Georgious; Cristian Blanco; Igor Cantero. "2021 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 3507 - 3512. 2021.

58 **Title of the work:** A comparison on the feasibility of small-scale hybrid PV installations in distribution grids under fixed and variable rate energy prices: Spain as a lens
Name of the conference: 2022 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Hafte H. Adhena; Irène Peláez; Cristian Blanco; Pablo García. "2022 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 1 - 7. 2022.

59 **Title of the work:** Analysis of a Complex-Valued Droop Method in AC Microgrids with Complete Steady-State Frequency Compensation Using dq-Decomposition
Name of the conference: 2021 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Carlos Gómez-Aleixandre; Cristian Blanco; Andrés Suárez-González; Ángel Navarro-Rodríguez; Pablo García. "2021 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 1122 - 1127. 2021.

60 **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 (PESGM)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Karim Elfeky; Geber Villa; Pablo García; José M. Cano. "2023 IEEE Power & Energy Society General Meeting (PESGM)". pp. 1 - 5. 2023.

61 **Title of the work:** Hybrid Grid Control using Smart Transformer with Multiport Grid Forming Capabilities and Interlinked Primary Control
Name of the conference: 2023 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Ángel Navarro-Rodríguez; Carlos Gómez-Aleixandre; Pablo García; Marius Langwasser; Marco Liserre. "2023 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 837 - 842. 2023.

62 **Title of the work:** Improved Delay Compensation in Communication-based Hierarchical Control of a Low Voltage 3-phase AC Microgrid using a Secondary Control based on Smith Predictor
Name of the conference: 2021 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph

Ángel Navarro-Rodríguez; Cristian Blanco; Pablo García; Mohammad Irfan Yousuf. "2021 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 1116 - 1121. 2021.

63 **Title of the work:** Integration of Modular Energy Storage Solutions in the Distribution Grid
Name of the conference: 2024 IEEE 15th International Symposium on Power Electronics for Distributed Generation Systems (PEDG)
City of event: Luxembourg
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Miguel Crespo; Carlos Gómez-Aleixandre; Gleisson Balen; Daniel Del Rivero; Ángel Navarro-Rodríguez; Cristian Blanco; Pablo García. "2024 IEEE 15th International Symposium on Power Electronics for Distributed Generation Systems (PEDG)". pp. 1 - 6. 2024.

64 **Title of the work:** Levelized Cost of Energy Optimization in Hybrid PV Plants by Energy Storage for Ramp-Rate Control Operation
Name of the conference: 2021 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Irene Peláez; Cristian Blanco; Andrés Suarez; Ángel Navarro; Pablo García. "2021 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 595 - 600. 2021.

65 **Title of the work:** Multi-step machine learning forecasting of power consumption and PV generation for distributed energy management applications
Name of the conference: 2023 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Óscar Pasarín; Pablo García; Leticia González; Geber Villa. "2023 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 1472 - 1479. 2023.

66 **Title of the work:** NPC Converter-Based Grid Current Quality Improvement through Adaptive Phase-Shift at Single-Phase AC Ports
Name of the conference: 2023 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Gleisson Balen; Cristian Blanco; Ángel Navarro-Rodríguez; Pablo García. "2023 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 1181 - 1187. 2023.

67 **Title of the work:** Pulsating DC Power Minimization in a Multi-port DC/AC Converter by an Adaptive Phase-Shift in the Single-Phase AC Ports
Name of the conference: 2022 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Gleisson Balen; Cristian Blanco; Ángel Navarro-Rodríguez; Pablo García. "2022 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 1 - 7. 2022.

68 **Title of the work:** Real-Time Cosimulation of Power Systems: Integration of eMEGASIM and ePHASORSIM Using OPAL-RT Simulators
Name of the conference: 2024 IEEE 15th International Symposium on Power Electronics for Distributed Generation Systems (PEDG)
City of event: Luxembourg
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Daniel del Rivero; Shailendra Singh; Pablo García; Pedro Rodríguez. "2024 IEEE 15th International Symposium on Power Electronics for Distributed Generation Systems (PEDG)". pp. 1 - 6. 2024.

69 **Title of the work:** Transformer-less Alternative Topologies of a Unified Power Quality Conditioner with Embedded Hybrid Energy Storage
Name of the conference: 2021 IEEE Energy Conversion Congress and Exposition (ECCE)
City of event: United States of America
City organizing entity: United States of America
Type of contribution: Scientific book or monograph
Jose M. Piedra; Pablo García; Ramy Georgious; Geber Villa; Mhret Berhe Gebremariam. "2021 IEEE Energy Conversion Congress and Exposition (ECCE)". pp. 3176 - 3181. 2021.

R&D management and participation in scientific committees

R&D management

1 **Name of the activity:** IP del proyecto MCINN-24-PLEC2023-010252. AYUDAS A PROYECTOS DE I+D EN LÍNEAS ESTRATÉGICAS TRANSMISIONES 2023 "Nuevas Soluciones basadas en Inteligencia Artificial para la eficiencia y la flexibilidad de la producción industrial"
Performed tasks: Coordinación y gestión del proyecto
Entity: Universidad de Oviedo **Type of entity:** University
Start date: 01/01/2024 **Duration:** 3 years

2 **Name of the activity:** IP del proyecto MCINN-23-PID2022-139479OB-C22. Proyecto de Generación del Conocimiento 2022: "Diseño y control de centrales hidroeléctricas flexibles mediante hibridación con baterías de 2ª vida"
Performed tasks: Coordinación y gestuión del proyecto
Entity: Universidad de Oviedo **Type of entity:** University
Start date: 01/09/2023 **Duration:** 3 years

3 **Name of the activity:** IP del proyecto Soluciones para la respuesta rápida y el soporte a red mediante sistemas de almacenamiento con capacidades de grid-forming en redes eléctricas de baja inercia y alta penetraci
Type of management: Management of R&D&I actions and projects
Performed tasks: Coordinación y gestión del proyecto
Entity: Universidad de Oviedo **Type of entity:** University
Start date: 01/12/2022

4 **Name of the activity:** IP del proyecto ENFYO-FLX (SV-PA-21-AYUD/2021/57546)
Type of management: Management of R&D&I actions and projects
Performed tasks: Coordinación y gestión del proyecto
Entity: Universidad de Oviedo **Type of entity:** University
Start date: 01/10/2021

5 **Name of the activity:** IP del proyecto B2BENERGY. Ayudas correspondientes a la convocatoria 2019 de Proyectos I+D+i / Retos de Investigación. Nuevas vías hacia la gestión descentralizada de la energía de edificio-a-edificio. AGENCIA ESTATAL DE INVESTIGACION (Mo. ECON. IND). MCI-20-PID2019-111051RB-I00
Type of management: Management of R&D&I actions and projects
Performed tasks: Coordinación y gestión del proyecto
Entity: Universidad de Oviedo **Type of entity:** University
Start date: 01/06/2020 **Duration:** 1 year - 1 month

6 **Name of the activity:** IP del proyecto TALENT. Cost Effective Technological Developments Foaccelerating Energy Transition. C.E.E.-COMUNIDAD ECONOMICA EUR. UE-19-TALENT-864459
Type of management: Management of R&D&I actions and projects
Performed tasks: Coordinación y gestión del proyecto
Entity: Universidad de Oviedo **Type of entity:** University
Start date: 01/10/2019 **Duration:** 24 months

7 **Name of the activity:** IP del proyecto SIBALI. Simulación de Baterías de Litio-Ion- Ayudas correspondientes a la convocatoria RETOS COLABORACIÓN del Programa Estatal de Investigación, Desarrollo e Innovación Orientada a los Retos de la Sociedad. Agencia Estatal De Investigacion. MCIU-18-RTC-2017-6538-3
Type of management: Management of R&D&I actions and projects
Performed tasks: Coordinación y gestión del proyecto
Entity: Universidad de Oviedo **Type of entity:** University
Start date: 01/01/2018 **Duration:** 3 years

8 **Name of the activity:** IP del proyecto SIETEC. Desarrollo De Un Sistema Para La Mejora De La Eficiencia Energética En Edificios Basado En Técnicas De Cloud Computing. Ministerio De Economia Y Competitivad. MINECO-16-RTC-2016-4792-3
Type of management: Management of R&D&I actions and projects
Performed tasks: Labores de coordinación y gestión del proyecto
Entity: Universidad de Oviedo **Type of entity:** University
Start date: 07/03/2016 **Duration:** 2 years - 9 months

9 **Name of the activity:** IP del proyecto MIROHOLO. Desarrollo De Una Aproximacion Holistica Y Sistematica Al Diseño Y La Gestion De Microrre De Alterna. Ministerio De Economia Y Competitividad. Ref: MINECO-13-ENE2013-44245-R. De 01-01-2014
Type of management: Management of R&D&I actions and projects
Performed tasks: labores de coordinación y gestión del proyecto
Entity: Universidad de Oviedo **Type of entity:** University
Start date: 01/01/2014 **Duration:** 3 years

Other achievements

Stays in public or private R&D centres

1 **Entity:** The University of Nottingham **Type of entity:** University
City of entity: Nottingham, United Kingdom
Start-End date: 16/05/2013 - 16/07/2013 **Duration:** 2 months
Funding entity: Universidad de Oviedo
Goals of the stay: Post-doctoral
Provable tasks: Estancia de investigación postdoctoral en el grupo de investigación "Power Electronics, Machines and Control Group (PEMC)" http://www.nottingham.ac.uk/engineering/research/electricalsystemsandoptics/powerelectronics,machineandcontrolgroup/pemcgrouphome.aspx#, bajo la supervisión de Mark Sumner p { margin-bottom: 0.21cm; }a:link { }

2 **Entity:** University of Wisconsin-Madison **Type of entity:** University
City of entity: WISCONSIN, United States of America
Start-End date: 19/06/2004 - 19/12/2004 **Duration:** 6 months
Funding entity: Ministerio de Educación y Ciencia
Goals of the stay: Guest
Provable tasks: Estancia predoctoral

Obtained grants and scholarships

1 **Name of the grant:** BECARIO DEL PROYECTO DE INVESTIGACION CN-06-037
Aims: Post-doctoral
Awarding entity: Hidroeléctrica del Cantábrico
Conferral date: 01/07/2006 **Duration:** 4 months
End date: 01/11/2006
Entity where activity was carried out: Universidad de Oviedo

2 **Name of the grant:** Becario FPI
Aims: Pre-doctoral
Awarding entity: Ministerio de Educación y Ciencia
Conferral date: 01/07/2002 **Duration:** 4 years
End date: 30/06/2006
Entity where activity was carried out: Universidad de Oviedo

3 **Name of the grant:** Becario de investigacion del proyecto "Estimacion De La Posicion En Accionamientos Electricos Con Control Vectorial Sin Sensor De Velocidad/Posicion, Utilizando La Tecnica Del Rastreo De Saliencias Mediante Inyeccion De Una Señal Portadora"
Aims: Pre-doctoral
Awarding entity: Ministerio de Educación y Ciencia
Conferral date: 01/10/2001 **Duration:** 9 months
End date: 30/06/2002
Entity where activity was carried out: Universidad de Oviedo

4 **Name of the grant:** Beca asociada al proyecto "Diagnosis Assistance For Process Performance, Dynamic Plant Condition And Periodic Quality Defects In The Cold Rolling Area"
Aims: Pre-doctoral
Awarding entity: Arcelor
Conferral date: 01/05/2001 **Duration:** 5 months
End date: 30/09/2001
Entity where activity was carried out: Universidad de Oviedo

Periods of research activity and knowledge transfer

Geographical area: National
Certifying entity: CNEAI **Type of entity:** State agency
Date of recognition: 15/04/2020