CURRÍCULUM VÍTAE NORMALIZADO

Adrián Amor Martín

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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.

My primary research interest lies in the field of computational electromagnetics (CEM) and lately I have also been engaged in interdisciplinary research collaborating with international groups in physics , mathematical modeling , heterogeneous computing , and geophysics . Regarding CEM, I have made substantial contributions to the development of a code based on the Finite Element Method (FEM) which focuses on High-Performance Computing (HPC) technologies, with significant contributions to the development of new curl-conforming basis functions for different element shapes (tetrahedra, triangular prisms, hexahedra) to approximate the electromagnetic fields and parallelization techniques to tackle large-scale simulations (e.g., Domain Decomposition Methods , DDM). These contributions are the core of high-impact publications , a national research project (TEC2016-80386-P), one PhD thesis I tutored in 2020, and an ongoing private contract funded by AIRBUS from 2022 where I am part of the research team.

Lately, I have benefited from my experience with **antenna measurements** (as the **laboratory coordinator** for antenna certification with Telefónica, see C.4) to being involved in the **design** and **manufacturing of sensors and antennas** for **microwave imaging** and **non-destructive testing**, tutoring **one ongoing PhD thesis**, **three MSc, and two BSc theses**. In the years to come, I will use my CEM background to solve the so-called **inverse problem** (focusing on the new possibilities brought by **Artificial Intelligence**) using the measurements provided by these manufactured circuits. This problem is very **demanding** from the computational perspective to be deployed in **real-time applications** (needed in the industry), so I joined forces with Dr. Belloch and explored the potential of new HPC paradigms such as **heterogeneous computing**. This research line has led to getting funding as **Principal Investigators** for **two public research projects** (national and regional) in 2022 and 2023 and the interest in this project for the industry made us get a **private contract** funded by Arquimea in 2023.

I have been a **postdoctoral** researcher at **Saarland University** with Prof. Dyczij-Edlinger for **two years** (where I grew as an autonomous researcher, collaborating with PhD students to develop new curl-conforming basis functions producing **two Q1 papers**), with whom I continue to collaborate (six papers to be submitted). I have been funded in competitive calls to do **two stays** to go to the **Politecnico di Torino** (May 2023) and **Pontificia Universidad Católica del Perú** (July 2023), where I started collaborations in **microwave imaging.** During my Ph.D., I was also **funded to visit** the University of Macau for two months (working in an international group to develop specific parts of the HPC-enabled FEM code and producing a Q4 paper), and the **ElectroScience Laboratory** (Ohio) under the direction of Prof. Jin-Fa Lee for seven months in two different stays (where I further characterized the accuracy of DDM, and produced a **Q1 paper**).

Also, I have disseminated the results of my research at well-known conferences (12 in the last year), where I noticed the absence of a **standard benchmark** to compare different CEM solvers; so, I published in open access a testbench of arbitrary accuracy,

and I enrolled in the **Working Group P2816 APS/SC/CEM of the IEEE**. I also serve regularly as a **reviewer** in reference journals on signal processing, supercomputing, and microwave fields, and I am an **IEEE Senior Member** from 2023.
Since receiving one of the **start-up awards** in 2012 (with an **HPC project**), I am also committed to the **scientific** and **social impact** of my research, either through **transfer** or **dissemination activities**. Since 2020, I have been the **coordinator** of an active working group (**GT Jóvenes**) at the Spanish Professional College of Telecommunication Engineers (**COIT**), where I have co-founded a **mentoring program** (**ment-it**, now in its fourth edition with more than a hundred engineers connected) that gives **professional advice** to young engineers. In the same vein, I am the **Principal Investigator** of an **outreach plan** where I created the **Ambassadors program** aimed at promoting **STEAM careers** and **reducing the gender gap** in our field. I have promoted young careers by being part of the **national committee** of URSI.Quantitatively, I have authored or co-authored **24 JCR-indexed papers** (ten Q1, nine Q2, four Q3, and one Q4) and **47 conference contributions**. I have **one six-year research period** (2015-2020). Also, I am the **Principal Investigator (PI)** of a regional public research project (where we **hired** three graduate students, 60,000€), a national public research project (42,000€), a private research contract (60,500€), and a public promotion project (250,000€). I have been part of the team in **7 research projects** and **10 private contracts**, and I have tutored **one PhD, six MSc,** and **three BSc theses.**

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.

My primary research interest lies in the field of computational electromagnetics (CEM) and lately I have also been engaged in interdisciplinary research collaborating with international groups in physics, mathematical modeling, heterogeneous computing, and geophysics. Regarding CEM, I have made substantial contributions to the development of a code based on the Finite Element Method which focuses on High-Performance Computing technologies, with significant contributions to the development of new curl-conforming basis functions for different element shapes and parallelization techniques to tackle large-scale simulations (e.g., Domain Decomposition Methods). These contributions are the core of high-impact publications, one Ph.D. thesis I tutored in 2020, and a private contract funded by AIRBUS from 2022 where I am part of the research team.

Lately, I have been involved in the design and manufacturing of sensors and antennas for microwave imaging and non-destructive testing, tutoring three ongoing PhD thesis, three MSc, and three BSc theses. In the years to come, I will use my CEM background to solve the so-called inverse problem (focusing on the new possibilities brought by Artificial Intelligence) using the measurements provided by these manufactured circuits. This problem is very demanding from the computational perspective to be deployed in real-time applications (needed in the industry), so I joined forces with J. A. Belloch and explored the potential of new HPC paradigms such as heterogeneous computing. This research line has led to getting funding as Principal Investigators for two public research projects (national and regional) in 2022 and 2023 and the interest in this project for the industry made us get a private contract funded by Arquimea in 2023.

I have been a postdoctoral researcher at Saarland University with Prof. Dyczij-Edlinger for two years (producing two Q1 papers). During my Ph.D., I was also funded to visit the University of Macau for two months (producing a Q4 paper) and the ElectroScience Laboratory under the direction of Prof. Jin-Fa Lee for seven months in two different stays (producing a Q1 paper).

Also, I have disseminated the results of my research at well-known conferences (12 in the last year). I enrolled in the Working Group P2816 APS/SC/CEM of the IEEE, and I am an IEEE Senior Member from 2023.

I am also committed to the scientific and social impact of my research. Since 2020, I have been the coordinator of an active working group (GT Jóvenes) at COIT, where I have co-founded a mentoring program, ment-it, now in its fourth edition with more than

a hundred engineers connected. In the same vein, I am the Principal Investigator of an outreach plan where I created the Ambassadors program. I have also promoted young careers by being part of the national committee of URSI.

Quantitatively, I have authored or co-authored 24 JCR-indexed papers (tenQ1, nine Q2, four Q3, and one Q4) and 47 conference contributions. Also, I am the Principal Investigator (PI) of a regional public research project (where we hired three graduate students, 60,000€), a national public research project (42,000€), a private research contract (60,500€), and a public promotion project (250,000€). I have been part of the team in 7 research projects and 10 private contracts, and I have tutored one PhD, four MSc, and two BSc thesis.

Adrián Amor Martín

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Name: **Adrián**
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ResearcherID: **F-9881-2016**
Contact aut. region/reg.: **Castile-La Mancha**
Personal web page: **https://aamorm.github.io**

Current professional situation

Employing entity: Universidad Carlos III de Madrid **Type of entity:** University
Department: Escuela Politécnica Superior
Professional category: Profesor Ayudante Doctor
Start date: 01/02/2021
Type of contract: Temporary **Dedication regime:** Full time
Performed tasks: Docencia y tareas de investigación.

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universität des Saarlandes	Postdoctoral researcher	14/01/2019
2	Universidad Carlos III de Madrid	Ayudante específico	01/10/2018
3	Universidad Carlos III de Madrid	Personal con contrato predoctoral (FPU)	11/09/2015
4	Universidad Carlos III de Madrid	Personal con contrato predoctoral (PIF)	01/10/2014
5	Universidad Carlos III de Madrid	Beca de ayuda al estudio de máster oficial	03/09/2012

1 **Employing entity:** Universität des Saarlandes **Type of entity:** University
Department: Lehrstuhl für Theoretische Elektrotechnik
City employing entity: Saarbrücken, Saarland, Germany
Professional category: Postdoctoral researcher **Leadership and management (Y/N):** Yes
Start-End date: 14/01/2019 - 31/12/2020 **Duration:** 2 years
Type of contract: Temporary employment contract
Dedication regime: Full time
Performed tasks: Tareas de investigación e impartición de docencia en asignaturas de Grado y Máster
Area of leadership and/or management activity: University

2 **Employing entity:** Universidad Carlos III de Madrid **Type of entity:** University
Department: Teoría de la Señal y Comunicaciones, Escuela Politécnica Superior
City employing entity: Leganés, Community of Madrid, Spain
Professional category: Ayudante específico **Leadership and management (Y/N):** Yes

Start-End date: 01/10/2018 - 04/01/2019 **Duration:** 3 months - 3 days
Type of contract: Temporary employment contract
Dedication regime: Full time
Performed tasks: Funciones de investigación y enseñanza en asignaturas de Máster
Area of leadership and/or management activity: University

3 **Employing entity:** Universidad Carlos III de Madrid **Type of entity:** University
Department: Teoría de la Señal y Comunicaciones, Escuela Politécnica Superior
City employing entity: Leganés, Community of Madrid, Spain
Professional category: Personal con contrato predoctoral (FPU) **Leadership and management (Y/N):** Yes
Start-End date: 11/09/2015 - 30/09/2018 **Duration:** 3 years - 19 days
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Performed tasks: Tareas de investigación y docencia en asignaturas de grado

4 **Employing entity:** Universidad Carlos III de Madrid **Type of entity:** University
Department: Teoría de la Señal y Comunicaciones, Escuela Politécnica Superior
City employing entity: Leganés, Community of Madrid, Spain
Professional category: Personal con contrato predoctoral (PIF) **Leadership and management (Y/N):** Yes
Start-End date: 01/10/2014 - 10/09/2015 **Duration:** 11 months - 9 days
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Performed tasks: Tareas de investigación e impartición de docencia en asignaturas de Grado
Area of leadership and/or management activity: University

5 **Employing entity:** Universidad Carlos III de Madrid **Type of entity:** University
Department: Teoría de la Señal y Comunicaciones, Escuela Politécnica Superior
City employing entity: Leganés, Community of Madrid, Spain
Professional category: Beca de ayuda al estudio de máster oficial **Leadership and management (Y/N):** Yes
Start-End date: 03/09/2012 - 30/09/2014 **Duration:** 2 years - 27 days
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Performed tasks: Tareas de investigación e impartición de docencia en asignaturas de Grado
Area of leadership and/or management activity: University

Education

University education

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

1 **University degree:** Máster de Investigación
Name of qualification: Máster Interuniversitario en Multimedia y Comunicaciones
Degree awarding entity: Universidad Carlos III de Madrid **Type of entity:** University
Date of qualification: 12/09/2014
Average mark: Excellent

2 **University degree:** Higher degree
Name of qualification: Ingeniero de Telecomunicación
Degree awarding entity: Universidad Carlos III de Madrid **Type of entity:** University
Date of qualification: 25/07/2012
Average mark: Good
Prize: Premio ALTRAN en modelos de negocio disruptivos basados en soluciones conectadas al mejor Proyecto Fin de Carrera en la XXXIII edición de los premios del COIT (Colegio Oficial de Ingenieros de Telecomunicación).

Doctorates

Doctorate programme: Doctorado Interuniversitario en Multimedia y Comunicaciones
Degree awarding entity: Universidad Carlos III de Madrid **Type of entity:** University
Date of degree: 05/12/2018
Thesis title: Advanced Techniques in Scientific Computing: Application to Electromagnetics
Thesis director: Luis Emilio García Castillo
Obtained qualification: 10, cum laude

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
German	A2	B1	A2	A2	B1
English	C1	C2	C1	C1	C1

Teaching experience

General teaching experience

1 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería de Comunicaciones Móviles y Espaciales
Course given: 2
Start date: 01/02/2024 **End date:** 01/06/2024
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 27,5
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

2 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2024 **End date:** 01/06/2024
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 55
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

3 **Type of teaching:** Official teaching
Name of the course: Fundamentos de electromagnetismo computacional para comunicaciones I
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey

University degree: Máster Universitario en Tecnologías Avanzadas de Comunicaciones
Course given: 1
Start date: 01/02/2024 **End date:** 01/06/2024
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 12
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Top mark possible: 5
Subject language: English

4 **Type of teaching:** Official teaching
Name of the course: Tecnologías de Alta Frecuencia
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 3
Start date: 01/02/2024 **End date:** 01/06/2024
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 57,5
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

5 **Type of teaching:** Official teaching
Name of the course: Dispositivos Inalámbricos en IoT
Type of teaching: In person theory
Type of subject: Core
University degree: Máster Universitario en Internet de las Cosas
Course given: 1
Start date: 01/02/2024 **End date:** 01/06/2024
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Subject language: Spanish

6 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory

Assessment type: Survey
University degree: Grado en Ingeniería de Comunicaciones Móviles y Espaciales
Course given: 2
Start date: 01/02/2023 **End date:** 01/06/2023
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 27,5
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

7 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2023 **End date:** 01/06/2023
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 27,5
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

8 **Type of teaching:** Official teaching
Name of the course: Fundamentos de electromagnetismo computacional para comunicaciones I
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Máster Universitario en Tecnologías Avanzadas de Comunicaciones
Course given: 1
Start date: 01/02/2023 **End date:** 01/06/2023
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 12
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University

Top mark possible: 5
Subject language: English

9 **Type of teaching:** Official teaching
Name of the course: Tecnologías de Alta Frecuencia
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 3
Start date: 01/02/2023 **End date:** 01/06/2023
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 57,5
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

10 **Type of teaching:** Official teaching
Name of the course: Dispositivos Inalámbricos en IoT
Type of teaching: In person theory
Type of subject: Core
University degree: Máster Universitario en Internet de las Cosas
Course given: 1
Start date: 01/02/2023 **End date:** 01/06/2023
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 30
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Subject language: Spanish

11 **Type of teaching:** Official teaching
Name of the course: Subsistemas de Radiofrecuencia y Antenas
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Máster Universitario en Ingeniería de Telecomunicación
Course given: 1
Start date: 01/09/2022 **End date:** 31/01/2023
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 10
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey

Type of entity: University
Subject language: Spanish

12 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería de Comunicaciones Móviles y Espaciales
Course given: 2
Start date: 01/02/2022 **End date:** 01/06/2022
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 27,5
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

13 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2022 **End date:** 01/06/2022
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 27,5
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

14 **Type of teaching:** Official teaching
Name of the course: Fundamentos de electromagnetismo computacional para comunicaciones I
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Máster Universitario en Tecnologías Avanzadas de Comunicaciones
Course given: 1
Start date: 01/02/2022 **End date:** 01/06/2022
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 12

Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Top mark possible: 5
Subject language: English

15 **Type of teaching:** Official teaching
Name of the course: Fundamentos de electromagnetismo computacional para comunicaciones II
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Máster Universitario en Tecnologías Avanzadas de Comunicaciones
Course given: 1
Start date: 01/02/2022 **End date:** 01/06/2022
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 12
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Top mark possible: 5
Subject language: English

16 **Type of teaching:** Official teaching
Name of the course: Tecnologías de Alta Frecuencia
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 3
Start date: 01/02/2022 **End date:** 01/06/2022
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 57,5
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

17 **Type of teaching:** Official teaching
Name of the course: Dispositivos Inalámbricos en IoT
Type of teaching: In person theory
Type of subject: Core
University degree: Máster Universitario en Internet de las Cosas
Course given: 1
Start date: 01/02/2022 **End date:** 01/06/2022
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 20
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Subject language: Spanish

18 **Type of teaching:** Official teaching
Name of the course: Subsistemas de Radiofrecuencia y Antenas
Type of programme: Engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Máster Universitario en Ingeniería de Telecomunicación
Course given: 1
Start date: 01/09/2021 **End date:** 31/01/2022
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 35
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 4.48 **Top mark possible:** 5
Subject language: Spanish

19 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2021 **End date:** 01/06/2021
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 27,5
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

20 **Type of teaching:** Official teaching
Name of the course: Fundamentos de electromagnetismo computacional para comunicaciones I
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Máster Universitario en Tecnologías Avanzadas de Comunicaciones
Course given: 1
Start date: 01/02/2021 **End date:** 01/06/2021
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 12
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Top mark possible: 5
Subject language: English

21 **Type of teaching:** Official teaching
Name of the course: Tecnologías de Alta Frecuencia
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 3
Start date: 01/02/2021 **End date:** 01/06/2021
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 98,5
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

22 **Type of teaching:** Official teaching
Name of the course: Dispositivos Inalámbricos en IoT
Type of teaching: In person theory
Type of subject: Core
University degree: Máster Universitario en Internet de las Cosas
Course given: 1
Start date: 01/02/2021 **End date:** 01/06/2021
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 14
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior

Subject language: Spanish

23 **Type of teaching:** Official teaching
Name of the course: Computational Electromagnetics I
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Core
University degree: Master in Systems Engineering
Course given: 1
Start date: 01/10/2020 **End date:** 20/12/2020
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 15
Entity: Saarland University **Type of entity:** University
Faculty, institute or centre: Lehrstuhl für Elektrotechnik
City of entity: Saarbrücken, Saarland, Germany
Subject language: English

24 **Type of teaching:** Official teaching
Name of the course: Computational Electromagnetics I
Type of programme: Master's degree **Type of teaching:** In person theory
Type of subject: Core
University degree: Master in Systems Engineering
Course given: 1
Start date: 01/10/2019 **End date:** 20/12/2020
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 15
Entity: Saarland University **Type of entity:** University
Faculty, institute or centre: Lehrstuhl für Elektrotechnik
City of entity: Saarbrücken, Saarland, Germany
Subject language: English

25 **Type of teaching:** Official teaching
Name of the course: Introduction to Electromagnetic Fields-Simulation I
Type of programme: Diploma **Type of teaching:** In person theory
Type of subject: Optional
University degree: Bachelor Degree in Systems Engineering
Course given: 3
Start date: 01/04/2019 **End date:** 20/07/2020
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 15
Entity: Saarland University **Type of entity:** University
Faculty, institute or centre: Lehrstuhl für Elektrotechnik
City of entity: Saarbrücken, Saarland, Germany
Subject language: English

26 **Type of teaching:** Official teaching
Name of the course: Subsistemas de Radiofrecuencia y Antenas
Type of programme: Engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Máster Universitario en Ingeniería de Telecomunicación
Course given: 1

Start date: 01/09/2018 **End date:** 20/12/2018
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 55
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 4.48 **Top mark possible:** 5
Subject language: Spanish

27 **Type of teaching:** Official teaching
Name of the course: Tecnologías de Alta Frecuencia
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 3
Start date: 01/02/2018 **End date:** 01/06/2018
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 2,54
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Subject language: Spanish

28 **Type of teaching:** Official teaching
Name of the course: Análisis y Diseño de Circuitos
Type of programme: Engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2017 **End date:** 01/06/2017
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 27,96
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 4.19 **Top mark possible:** 5
Subject language: Spanish

29 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2017 **End date:** 01/06/2017
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 12,71
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 4 **Top mark possible:** 5
Subject language: Spanish

30 **Type of teaching:** Official teaching
Name of the course: Análisis y Diseño de Circuitos
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2016 **End date:** 01/06/2016
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 27,96
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 3.73 **Top mark possible:** 5
Subject language: Spanish

31 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2016 **End date:** 01/06/2016
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 20,33

Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 3.86 **Top mark possible:** 5
Subject language: Spanish

32 **Type of teaching:** Official teaching
Name of the course: Análisis y Diseño de Circuitos
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2015 **End date:** 01/06/2015
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 25,42
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 3.88 **Top mark possible:** 5
Subject language: Spanish

33 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería de Sistemas de Comunicaciones
Course given: 2
Start date: 01/02/2015 **End date:** 01/06/2015
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 20,33
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 3.47 **Top mark possible:** 5
Subject language: Spanish

34 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2015 **End date:** 01/06/2015
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 20,33
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 3.6 **Top mark possible:** 5
Subject language: Spanish

35 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería de Sistemas de Comunicaciones
Course given: 2
Start date: 01/02/2014 **End date:** 01/06/2014
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 10,17
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 3.8 **Top mark possible:** 5
Subject language: Spanish

36 **Type of teaching:** Official teaching
Name of the course: Campos Electromagnéticos
Type of programme: Engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería en Tecnologías de Telecomunicación
Course given: 2
Start date: 01/02/2014 **End date:** 01/06/2014
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 10,17
Entity: Universidad Carlos III de Madrid **Type of entity:** University

Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 3.8 **Top mark possible:** 5
Subject language: Spanish

37 **Type of teaching:** Official teaching
Name of the course: Sistemas Electroacústicos y Sonorización
Type of programme: Technical engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería de Sistemas de Audiovisuales
Course given: 3
Start date: 01/02/2014 **End date:** 01/06/2014
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 38,12
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 4 **Top mark possible:** 5
Subject language: Spanish

38 **Type of teaching:** Official teaching
Name of the course: Sistemas y Canales de Transmisión
Type of programme: Engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería de Sistemas de Comunicaciones
Course given: 3
Start date: 01/09/2013 **End date:** 31/01/2014
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 10,17
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 4.2 **Top mark possible:** 5
Subject language: Spanish

39 **Type of teaching:** Official teaching
Name of the course: Sistemas Electroacústicos y Sonorización
Type of programme: Technical engineering **Type of teaching:** Laboratory work
Type of subject: Obligatory
Assessment type: Survey
University degree: Grado en Ingeniería de Sistemas de Audiovisuales
Course given: 3
Start date: 01/02/2013 **End date:** 01/06/2013
Type of hours/ ECTS credits: Hours
Hours/ECTS credits: 52,46
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Teoría de la Señal y Comunicaciones
City of entity: Leganés, Community of Madrid, Spain
Assessment entity: Universidad Carlos III de Madrid
Assessment type: Survey
Type of entity: University
Mark obtained: 4 **Top mark possible:** 5
Subject language: Spanish

Experience supervising doctoral thesis and/or final year projects

1 **Project title:** Implementación de un simulador 2D de elementos finitos en Julia
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Student: Mario Núñez-Domínguez
Date of reading: 14/03/2024

2 **Project title:** Comparativa entre las tecnologías LTE-M, LTE Cat 1 y LTE Cat 1 bis
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Student: Marta López-Izquierdo
Date of reading: 10/03/2024

3 **Project title:** Sonda de monitorización para redes privadas
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Student: Marta López-Izquierdo
Date of reading: 05/03/2024

4 **Project title:** Creación e investigación de un prototipo para la identificación de materiales en la banda de microondas
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Student: Pablo Iglesias-García
Date of reading: 20/09/2023

5 **Project title:** Clasificación y detección de contaminantes en datos generados por microondas
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Student: César Turienzo-Forcada
Date of reading: 05/07/2023

6 **Project title:** Predicción de resultados de circuitos de alta frecuencia con técnicas de inteligencia artificial
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Student: Antonio Rueda-Escalona
Date of reading: 05/07/2023

7 **Project title:** Análisis Electromagnético de Estructuras Finitas de Tipo Periódico mediante el Método de los Elementos Finitos
Type of project: Doctoral thesis
Co-director of thesis: Luis E. García Castillo
Entity: Universidad Carlos III de Madrid **Type of entity:** University
City of entity: Leganés, Community of Madrid, Spain
Student: Ignacio Martínez Fernández
Obtained qualification: 10 SOBRESALIENTE
Date of reading: 09/10/2020

8 **Project title:** Plataforma Web de Simulación Electromagnética para un Cluster deComputación Científica
Type of project: End of course project
Co-director of thesis: GARCIA-CASTILLO, L.E.
Entity: Universidad Carlos III de Madrid
City of entity: Leganés, Community of Madrid, Spain
Student: Cristina García Muñoz
Obtained qualification: 10 MATRICULA DE HONOR
Date of reading: 03/10/2014
European doctorate: No
Quality recognition: No

Participation in innovative teaching projects

1 **Project title:** Creación de equipos interdisciplinares para resolver un problema aplicado de comunicación inalámbrica
Type of participation: Co-ordinator
Start-End date: 01/02/2024 - 01/06/2024

2 **Project title:** Aplicación de técnicas de gamificación para engagement del estudiantado y aprendizaje colaborativo
Type of participation: Co-ordinator
Start-End date: 01/02/2023 - 01/06/2023

3 **Project title:** Incremento del engagement mediante estrategias de gamificación y seguimiento personalizado, con vista a una docencia semipresencial
Type of participation: Team member
Start-End date: 01/02/2022 - 01/06/2022

4 **Project title:** Incremento del engagement mediante estrategias de gamificación y seguimiento personalizado, con énfasis en las aplicaciones profesionales de la asignatura
Type of participation: Team member
Start-End date: 01/02/2021 - 01/06/2021

5 **Project title:** Incremento del engagement mediante estrategias de gamificación y seguimiento personalizado, con énfasis en las aplicaciones profesionales de la asignatura
Type of participation: Team member

Start-End date: 01/02/2021 - 01/06/2021

Other activities/achievements not included above

1 **Description of the activity:** Programa Erasmus+ de docencia
Organising entity: Universidad Pontificia del Perú **Type of entity:** University
End date: 16/07/2023

2 **Description of the activity:** Programa Erasmus+ de docencia
Organising entity: Politecnico di Torino **Type of entity:** University
End date: 28/05/2023

3 **Description of the activity:** Teaching at European School of Antennas
Organising entity: Universidad Carlos III de Madrid **Type of entity:** University
End date: 21/10/2022

4 **Description of the activity:** Programa Ecuador
Organising entity: Universidad Carlos III de Madrid **Type of entity:** University
End date: 01/06/2022

5 **Description of the activity:** Programa de Colaboración con Secundaria
City of activity: Leganés, Community of Madrid, Spain
Organising entity: Universidad Carlos III de Madrid **Type of entity:** University
End date: 01/09/2018

6 **Description of the activity:** Programa 4 ESO + Empresa
City of activity: Leganés, Community of Madrid, Spain
Organising entity: Universidad Carlos III de Madrid **Type of entity:** University
End date: 01/09/2017

7 **Description of the activity:** Programa de Ingeniería para Estudiantes Internacionales
City of activity: Leganés, Community of Madrid, Spain
Organising entity: Universidad Carlos III de Madrid **Type of entity:** University
End date: 01/06/2017

Scientific and technological experience

Research and development groups/teams

Name of the group: Grupo de Radiofrecuencia, Electromagnetismo, Microondas y Antenas
Aims of the group: Investigación
Name of principal investigator: Daniel Segovia Vargas **Number of members in the group:** 15
Type of collaboration: Co-authorship of publications
City of group: Leganés, Community of Madrid, Spain
Affiliation entity: Universidad Carlos III de Madrid **Type of entity:** University
Number of directed thesis: 14 **Number of directed postdoc:** 4
Start date: 01/09/2011 **Duration:** 9 years - 3 months

Scientific or technological activities

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

1 **Name of the project:** Spatial Audio and Array processing for Industrial Applications and Digital Transformation: Efficient Implementations Through Parallel and Approximate Computing - STARRING-IMPLE
Entity where project took place: Universidad Carlos III de Madrid **Type of entity:** University
Name principal investigator (PI, Co-PI....): José A. Belloch-Rodríguez; Adrián Amor-Martín
Nº of researchers: 5
Funding entity or bodies:
Agencia Estatal de Investigación **Type of entity:** Public Research Body
Start-End date: 01/09/2023 - 31/08/2026
Total amount: 42.000 €

2 **Name of the project:** Plan de promoción de estudios de Telecomunicaciones y atracción de talento UC3M - PTec_UC3M
Entity where project took place: Universidad Carlos III de Madrid **Type of entity:** University
City of entity: Leganés, Spain
Name principal investigator (PI, Co-PI....): Adrian Amor-Martin
Nº of researchers: 4
Funding entity or bodies:
Ministerio de Economía y Hacienda **Type of entity:** Economía, Comercio y Empresa
Start-End date: 29/11/2021 - 31/12/2024
Total amount: 250.000 €

3 **Name of the project:** Microwave Materials Characterization Using Heterogeneous Systems-on-Chip for the Space Environment
Entity where project took place: Universidad Carlos III de Madrid **Type of entity:** University

City of entity: Leganés, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Adrián Amor Martín; José Antonio Belloch Rodríguez
Nº of researchers: 7
Funding entity or bodies:
Comunidad de Madrid **Type of entity:** Public institution

Start-End date: 01/01/2022 - 31/01/2024
Total amount: 60.000 €

4 **Name of the project:** MARTINLARA-CM. Millimeter wave Array at Room Temperature for INstruments in Leo Altitude Radio Astronomy
Geographical area: Regional
Entity where project took place: Universidad Carlos III de Madrid
Name principal investigator (PI, Co-PI....): GARCÍA MUÑOZ, LUIS ENRIQUE
Nº of researchers: 16
Funding entity or bodies:
CAM. CONSEJERÍA DE EDUCACIÓN E INVESTIGACION

Code according to the funding entity: S2018/NMT-4333
Start-End date: 01/01/2019 - 31/12/2022 **Duration:** 4 years
Total amount: 331.940,74 €

5 **Name of the project:** Simulador electromagnético para entorno HPC
Entity where project took place: Universidad Carlos III de Madrid **Type of entity:** University
City of entity: Leganés, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Luis E. García Castillo
Nº of researchers: 5
Funding entity or bodies:
Ministerio de Economía y Competitividad **Type of entity:** State agency

Start-End date: 01/01/2017 - 31/12/2019
Total amount: 119.427 €

6 **Name of the project:** DIFRAGEOS-CM. Desarrollos instrumentales fotónicos y de radiofrecuencia y aplicación a técnicas experimentales de geodesia espacial (difrageos)
Geographical area: Regional
Entity where project took place: Universidad Carlos III de Madrid
Name principal investigator (PI, Co-PI....): GUILLERMO CARPINTERO DEL BARRIO; Salazar Palma, Magdalena
Nº of researchers: 26
Funding entity or bodies:
CAM. CONSEJERÍA DE EDUCACIÓN E INVESTIGACION

Code according to the funding entity: S2013/ICE-3004
Start-End date: 01/10/2014 - 31/12/2018 **Duration:** 4 years - 3 months
Total amount: 411.952,31 €

7 **Name of the project:** Análisis de Estructuras Periódicas Finitas Regulares e Irregulares mediante Técnicas de Descomposición de Dominios en Paralelo con Adaptividad hp Automática
Entity where project took place: Universidad Carlos III de Madrid **Type of entity:** University
City of entity: Leganés, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Luis E. García Castillo

Nº of researchers: 5
Funding entity or bodies:
Ministerio de Ciencia e Innovación
Type of entity: Ministerio

Start-End date: 01/01/2012 - 31/12/2014
Total amount: 168.432 €

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

1 **Name of the project:** Caracterización de materiales mediante tecnología de microondas usando sistemas embebidos heterogéneos para el entorno espacial
Degree of contribution: Coordinator of total project, network or consortium
Name principal investigator (PI, Co-PI....): José A. Belloch-Rodríguez; Adrián Amor-Martín
Nº of researchers: 12
Participating entity/entities: Universidad Carlos III de Madrid; Universidad Jaime I
Funding entity or bodies:
ARQUIMEA INGENIERÍA S.L.

Start date: 25/04/2023
Duration: 8 years
Total amount: 60.500 €

2 **Name of the project:** Integration and Industrialization of FEM Solutions for Computational Electromagnetics
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Luis E García Castillo; Sergio Llorente Romano; Adrián Amor Martín
Nº of researchers: 3
Funding entity or bodies:
Airbus España, S.L.
Type of entity: Business

Start date: 13/05/2022
Duration: 3 years
Total amount: 180.000 €

3 **Name of the project:** Cátedra INDRA-UC3M en tecnologias de radiofrecuencia
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Daniel Segovia 1
Nº of researchers: 7
Funding entity or bodies:
Indra
Type of entity: Business

Start date: 26/10/2021
Duration: 2 years
Total amount: 29.011,76 €

4 **Name of the project:** Diseño e implementación de antenas directivas en la banda GPS para la industrialización del producto NOJAMZONE de CENTUM SOLUTIONS S.L.
Entity where project took place: Universidad Carlos III de Madrid
Degree of contribution: Researcher
Entity where project took place: Universidad Carlos III de Madrid
Name principal investigator (PI, Co-PI....): SEGOVIA VARGAS, DANIEL
Nº of researchers: 10
Funding entity or bodies:
CENTUM SOLUTIONS S.L.

Start date: 15/01/2018
Duration: 6 months

Total amount: 30.400 €

5 **Name of the project:** RKAF RADAR CROSS SECTION OFFSET. Pedido nº E 9777945 Q, Posición 00001
Entity where project took place: Universidad Carlos III de Madrid
Degree of contribution: Researcher
Entity where project took place: Universidad Carlos III de Madrid
Name principal investigator (PI, Co-PI....): GARCIA-CASTILLO, L.E.
Nº of researchers: 4
Funding entity or bodies:
AIRBUS DEFENCE AND SPACE S.A.U.

Code according to the funding entity: E 9777945 Q
Start date: 29/01/2016 **Duration:** 1 year
Total amount: 31.052,32 €

6 **Name of the project:** Contrato marco para la prestación de servicios tecnológicos en el área de Simulación Numérica de Dinámica de Fluidos
Entity where project took place: Universidad Carlos III de Madrid
Degree of contribution: Researcher
Entity where project took place: Universidad Carlos III de Madrid
Name principal investigator (PI, Co-PI....): GARCIA-CASTILLO, L.E.
Nº of researchers: 4
Funding entity or bodies:
INDRA SISTEMAS, S.A.

Start date: 20/12/2014 **Duration:** 1 year
Total amount: 16.040 €

7 **Name of the project:** Análisis mediante ordenador de un RFID 3DCOIL
Entity where project took place: Universidad Carlos III de Madrid
Degree of contribution: Researcher
Entity where project took place: Universidad Carlos III de Madrid
Name principal investigator (PI, Co-PI....): GARCIA-CASTILLO, L.E.
Nº of researchers: 4
Funding entity or bodies:
FUNDACIO PRIVADA CENTRE CIM

Start date: 23/06/2014 **Duration:** 13 days
Total amount: 3.000 €

8 **Name of the project:** Medida de antenas de distintas empresas con Starlab Satimo cedido por Telefónica
Degree of contribution: Researcher
Name principal investigator (PI, Co-PI....): Daniel Segovia Vargas
Nº of researchers: 10
Funding entity or bodies:
CENTRO DE ACUSTICA APLICADA Y EVALUACION NO DESTRUCTIVA **Type of entity:** Associations and Groups

Start date: 01/06/2014

9 **Name of the project:** Simulación electromagnética de antenas
Entity where project took place: Universidad Carlos III de Madrid
Degree of contribution: Researcher

Entity where project took place: Universidad Carlos III de Madrid
Name principal investigator (PI, Co-PI....): GARCIA-CASTILLO, L.E.
Nº of researchers: 4
Funding entity or bodies:
INDRA SISTEMAS, S.A.

Start date: 20/12/2013 **Duration:** 1 year
Total amount: 6.665 €

10 **Name of the project:** Simulación CAE electromagnética de bobina 3DCOIL
Entity where project took place: Universidad Carlos III de Madrid
Degree of contribution: Researcher
Entity where project took place: Universidad Carlos III de Madrid
Name principal investigator (PI, Co-PI....): GARCIA-CASTILLO, L.E.
Nº of researchers: 4
Funding entity or bodies:
FUNDACIO PRIVADA CENTRE CIM

Start date: 23/06/2013 **Duration:** 13 days
Total amount: 3.000 €

Scientific and technological activities

Scientific production

Publications, scientific and technical documents

1 Adrian Amor-Martin; Luis E. Garcia-Castillo. A Priori Verification Method for Curl-Conforming Basis Functions in Simplices. Mathematical Methods in the Applied Sciences. pp. L. Wiley, 2024.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

2 Adrian Amor-Martin; Luis E. Garcia-Castillo; Laszlo L. Toth; Oliver Floch; Romanus Dyczij-Edlinger. A Rigorous Code Verification Process of the Domain Decomposition Method in a Finite Element Method For Electromagnetics. IEEE Transactions on Antennas and Propagation. 72 - 1, pp. 100 - 109. IEEE, 2024.
Type of production: Scientific paper **Format:** Journal

3 Enderson {Falc{\'o}n-G{\'o}mez}; Vittorio De Falco; Kerlos Atia Abdalmalak; Adrian {Amor-Martin}; Valent{\'i}n De La Rubia; Gabriel {Santamar{\'i}a-Botello}; Luis Enrique Garc{\'i}a Mu{\~n}oz. Fully Metallic Geodesic Lenses as Analog Electromagnetic Models of Gravitational Fields Produced by Static and Spherically Symmetric Sources. Physical Review D. American Physical Society, 2024. ISSN 1434-6052
Type of production: Scientific paper **Format:** Journal
Corresponding author: No

4 Laszlo L. Toth; Adrian Amor-Martin; Romanus Dyczij-Edlinger. Hierarchical Universal Matrices for Curvilinear Tetrahedral H(Curl) Finite Elements with Inhomogeneous Material Properties. IEEE Transactions on Antennas and Propagation. 72 - 1, pp. 89 - 99. IEEE, 2024.
Type of production: Scientific paper **Format:** Journal

5 Jose A. Belloch; Raúl Coronado; Óscar Valls; Rocío del Amor; Germán León; Valery Naranjo; Manuel Dolz; Adrian {Amor-Martin}; Gema Pi{\~n}ero. Urban Sound Classification Using Neural Networks on Embedded FPGAs. The Journal of Supercomputing. Accepted, pp. 7648 - 7664. Springer US, 2024. ISSN 1573-0484
Type of production: Scientific paper **Format:** Journal

6 Octavio {Castillo-Reyes}; Paula Rulff; Evan Schankee Um; Adrian {Amor-Martin}. Meshing Strategies for 3d Geo-Electromagnetic Modeling in the Presence of Metallic Infrastructure. Computational Geosciences. American Physical Society, 09/2023. ISSN 1573-1499
Type of production: Scientific paper **Format:** Journal

7 Enderson {Falc{\'o}n-G{\'o}mez}; Vittorio De Falco; Kerlos Atia Abdalmalak; Adrian {Amor-Martin}; Valent{\'i}n De La Rubia; Gabriel {Santamar{\'i}a-Botello}; Luis Enrique Garc{\'i}a Mu{\~n}oz. Interaction between Linear Polarized Plane Gravitational Waves and a Plane Electromagnetic Wave in the Electromagnetic-Gravity Analogue. Physical Review D. 107, pp. 124042 - 124042. American Physical Society, 03/2023. ISSN 1434-6052
Type of production: Scientific paper **Format:** Journal

8 Adrian Amor-Martin; Luis E. Garcia-Castillo. Second-Order Nédélec Curl-Conforming Hexahedral Element for Computational Electromagnetics. IEEE Transactions on Antennas and Propagation. 71 - 1, pp. 859 - 868. IEEE, 2023.
Type of production: Scientific paper **Format:** Journal

9 Enderson {Falc{\'o}n-G{\'o}mez}; Adrian {Amor-Martin}; Valent{\'i}n De La Rubia; Gabriel {Santamar{\'i}a-Botello}; Vittorio De Falco; Luis Enrique Garc{\'i}a Mu{\~n}oz. Propagation of Light in the Presence of Gravity Generated by Static and Spherically Symmetric Curved Space-Times Using {{Maxwell}} Equations. The European Physical Journal C. 82 - 12, pp. 1175 - 1175. Springer, 12/2022. ISSN 1434-6052
Type of production: Scientific paper **Format:** Journal

10 Jose M. Badia; Adrian Amor-Martin; Jose A. Belloch; Luis Emilio Garcia-Castillo. Strategies to Parallelize a Finite Element Mesh Truncation Technique on Multi-Core and Many-Core Architectures. The Journal of Supercomputing. 79, pp. 7648 - 7664. Springer US, 12/2022. ISSN 1573-0484
Type of production: Scientific paper **Format:** Journal

11 Octavio Castillo-Reyes; David Modesto; Pilar Queralt; Alex Marcuello; Juanjo Ledo; Adrian Amor-Martin; Josep de la Puente; Luis Emilio García-Castillo. 3D Magnetotelluric Modeling Using High-Order Tetrahedral Nédélec Elements on Massively Parallel Computing Platforms. Computers & Geosciences. pp. 105030 - 105030. 2022. ISSN 0098-3004
Type of production: Scientific paper **Format:** Journal

12 Octavio Castillo-Reyes; Adrian Amor-Martin; Arnaud Botella; Pierre Anquez; Luis Emilio García-Castillo. Tailored Meshing for Parallel 3D Electromagnetic Modeling Using High-Order Edge Elements. Journal of Computational Science. pp. 101813 - 101813. Elsevier, 2022. Available on-line at: <https://www.sciencedirect.com/science/article/pii/S1877750322001818>. ISSN 1877-7503
Type of production: Scientific paper **Format:** Journal
Corresponding author: No

13 Adrian Amor-Martin; Luis E. Garcia-Castillo. Adaptive Semi-Structured Mesh Refinement Techniques for the Finite Element Method. Applied Sciences. 11 - 8, pp. 3683 - 3683. Multidisciplinary Digital Publishing Institute, 2021.
Type of production: Scientific paper **Format:** Journal
Position of signature: 1
Total no. authors: 2 **Corresponding author:** Yes

14 Adrian Amor-Martin; Luis E. Garcia-Castillo; Jin-Fa Lee. Study of Accuracy of a Non-Conformal Finite Element Domain Decomposition Method. Journal of Computational Physics. pp. 109989 - 109989. 2021. Available on-line at: <http://www.sciencedirect.com/science/article/pii/S0021999120307634>. ISSN 0021-9991

Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: ISI
Category: Physics, mathematical
Impact index in year of publication: 2.985
Journal in the top 25%: Yes
Position of publication: 4
No. of journals in the cat.: 55

15 Ignacio Martínez-Fernández; Adrian Amor-Martin; Luis E. Garcia-Castillo. Test-Driven Development of a Substructuring Technique for the Analysis of Electromagnetic Finite Periodic Structures. Applied Sciences. 11 - 24, pp. 11619 - 11619. Multidisciplinary Digital Publishing Institute, 2021.
Type of production: Scientific paper
Format: Journal
Position of signature: 2
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Total no. authors: 3
Corresponding author: Yes

16 Adrian Amor-Martin. A Testbench of Arbitrary Accuracy for Electromagnetic Simulations. International Journal of RF and Microwave Computer-Aided Engineering. 30 - 10, pp. e22342 - e22342. 2020. Available on-line at: <https://onlinelibrary.wiley.com/doi/abs/10.1002/mmce.22342>. ISSN 1099-047X
Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: ISI
Category: Engineering, Electrical and Electronic
Impact index in year of publication: 1.528
Journal in the top 25%: No
Position of publication: 184
No. of journals in the cat.: 266

17 José M. Badía; Adrian Amor-Martin; Jose A. Belloch; Luis E. García-Castillo. GPU Acceleration of a Non-Standard Finite Element Mesh Truncation Technique for Electromagnetics. IEEE Access. 8, pp. 94719 - 94730. 2020. ISSN 2169-3536
Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: ISI
Category: Engineering, Electrical and Electronic
Impact index in year of publication: 3.745
Journal in the top 25%: Yes
Position of publication: 61
No. of journals in the cat.: 266

18 Adrian Amor-Martin; Luis E. Garcia-Castillo. Construction of Higher-Order Curl-Conforming Finite Elements and Its Assembly. International Journal of RF and Microwave Computer-Aided Engineering. 29 - 8, pp. e21753 - e21753. John Wiley and Sons, Inc. Hoboken, USA, 2019.
Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Impact source: ISI
Category: Engineering, Electrical and Electronic
Impact index in year of publication: 1.528
Journal in the top 25%: No
Position of publication: 184
No. of journals in the cat.: 266

19 Jose A. Belloch; Adrian Amor-Martin; Daniel Garcia-Donoro; Francisco J. Martínez-Zaldívar; Luis E. Garcia-Castillo. On the Use of Many-Core Machines for the Acceleration of a Mesh Truncation Technique for FEM. The Journal of Supercomputing. pp. 1 - 11. Springer US, 2019.
Type of production: Scientific paper
Format: Journal
Impact source: ISI
Category: Engineering, Electrical and Electronic
Impact index in year of publication: 2.469
Journal in the top 25%: No
Position of publication: 123
No. of journals in the cat.: 266

20 Francisco-Javier González-Serrano; Adrian Amor-Martin; Jorge Casamayón-Antón. Supervised Machine Learning Using Encrypted Training Data. International Journal of Information Security. 17 - 4, pp. 365 - 377. Springer Berlin Heidelberg, 2018.

Type of production: Scientific paper
Format: Journal
Impact source: ISI
Category: Computer Science, Theory and Methods
Impact index in year of publication: 1.822
Journal in the top 25%: No
Position of publication: 42
No. of journals in the cat.: 105

21 Francisco-Javier González-Serrano; Ángel Navia-Vázquez; Adrian Amor-Martin. Training Support Vector Machines with Privacy-Protected Data. Pattern Recognition. 72, pp. 93 - 107. Pergamon, 2017.

Type of production: Scientific paper
Format: Journal
Impact source: ISI
Category: Engineering, Electrical and Electronic
Impact index in year of publication: 3.965
Journal in the top 25%: Yes
Position of publication: 25
No. of journals in the cat.: 266

22 Daniel Garcia-Donoro; Sioweng Ting; Adrian Amor-Martin; Luis E. Garcia-Castillo. Analysis of Planar Microwave Devices Using Higher Order Curl-Conforming Triangular Prismatic Finite Elements. Microwave and Optical Technology Letters. 58 - 8, pp. 1794 - 1801. 2016.

Type of production: Scientific paper
Format: Journal
Impact source: ISI
Category: Engineering, Electrical and Electronic
Impact index in year of publication: 0.731
Journal in the top 25%: No
Position of publication: 216
No. of journals in the cat.: 262

23 Adrian Amor-Martin; Luis E. Garcia-Castillo; Daniel Garcia-Donoro. Second-Order Nédélec Curl-Conforming Prismatic Element for Computational Electromagnetics. IEEE Transactions on Antennas and Propagation. 64 - 10, pp. 4384 - 4395. IEEE, 2016. ISSN 1558-2221

Type of production: Scientific paper
Format: Journal
Impact source: ISI
Category: Engineering, Electrical and Electronic
Impact index in year of publication: 2.957
Journal in the top 25%: Yes
Position of publication: 61
No. of journals in the cat.: 262

24 Adrian Amor-Martin; Ignacio Martinez-Fernandez; Luis E. Garcia-Castillo. Posidonia: A Tool for HPC and Remote Scientific Simulations [EM Programmer's Notebook]. IEEE Antennas and Propagation Magazine. 57 - 6, pp. 166 - 177. IEEE, 2015.

Type of production: Scientific paper
Format: Journal
Impact source: ISI
Category: Engineering, Electrical and Electronic
Impact index in year of publication: 0.896
Journal in the top 25%: No
Position of publication: 165
No. of journals in the cat.: 257

Works submitted to national or international conferences

1 **Title of the work:** High-Stability Oscillator-Based Sensor for Low-Cost Biological Phantom Validation
Name of the conference: 2024 IEEE MTT-S International Microwave Biomedical Conference (IMBioC)
City of event: Montreal,
Date of event: 2024
Organising entity: IEEE
Type of contribution: Scientific book or monograph

Sandra Santiago-Mesas; Elizabeth Fernandez-Aranzamendi; Adrian Amor-Martin; Vicente González-Posadas; Daniel Segovia-Vargas. "2024 IMBioc". 2023.

2 **Title of the work:** Implementacï on de un simulador 2D de elementos finitos en Julia
Name of the conference: Congreso nacional de la URSI
Corresponding author: Yes
City of event: Cuenca,
Date of event: 2024
Type of contribution: Scientific book or monograph
Mario Núñez-Domínguez; Adrian Amor-Martin; Luis E. García-Castillo. "Congreso nacional de la URSI". 2023.

3 **Title of the work:** A High-Stability and High-Sensitivity Active Sensor for Non-Invasive Breast Cancer Detection
Name of the conference: 53rd European Microwave Conference
City of event: Berlin,
Date of event: 2023
Organising entity: EuMA
Type of contribution: Scientific book or monograph
Sandra Santiago-Mesas; Elizabeth Fernandez-Aranzamendi; Daniel Segovia-Vargas; Adrian Amor-Martin; Vicente González-Posadas. "53rd European Microwave Conference". 2023.

4 **Title of the work:** A Priori Verification Method for Curl-Conforming Vector Functions in Simplices
Name of the conference: 23rd International Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE
City of event: Cádiz,
Date of event: 2023
Type of contribution: Scientific book or monograph
Adrian Amor-Martin; Luis E. Garcia-Castillo. "23rd International Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE". 2023.

5 **Title of the work:** Analogous Electromagnetic Wave Propagation in a Schwarzschild Black Hole Space-time Using Parallel Conducting Surfaces Waveguides
Name of the conference: 17th European Conference on Antennas and Propagation (EuCAP)
Date of event: 2023
Type of contribution: Scientific book or monograph
Enderson Falcón; Kerlos Atia Abdalmalak; Adrian Amor-Martin; Alfonso González-Jiménez; Valentín de la Rubia; Gabriel Santamaría-Botello; Vittorio De Falco; Luis E García-Muñoz. "17th European Conference on Antennas and Propagation (EuCAP)". 2023.

6 **Title of the work:** Estudio de técnicas de Inteligencia Artificial para la Detección de Contaminantes
Name of the conference: Congreso nacional de la URSI
City of event: Cáceres,
Date of event: 2023
Type of contribution: Scientific book or monograph
César Turienzo-Forcada; Adrian Amor-Martin; Jose A Belloch. "Congreso Nacional de La URSI". 2023.

7 **Title of the work:** Indirect Detection of Gravitational Waves Using an Analogue Electromagnetic Spacetime Modulated Medium
Name of the conference: 17th European Conference on Antennas and Propagation (EuCAP)
Date of event: 2023
Type of contribution: Scientific book or monograph

Enderson Falcón; Kerlos Atia Abdalmalak; Adrian Amor-Martín; Alfonso González-Jiménez; Valentín de la Rubia; Gabriel Santamaría-Botello; Vittorio De Falco; Luis E García-Muñoz. "17th European Conference on Antennas and Propagation (EuCAP)". 2023.

8 **Title of the work:** Numerically Stable Implementation of Ewald Method for 1D Periodicity
Name of the conference: XV Encuentro Ibérico de Electromagnetismo Computacional
Date of event: 2023
Type of contribution: Scientific book or monograph
Sergio Llorente-Romano; Luis E. Garcia-Castillo; Adrian Amor-Martin. "XV Encuentro Ibérico de Electromagnetismo Computacional". 2023.

9 **Title of the work:** On the Validation of Curl-Conforming Higher-Order Basis Functions using the Method of Manufactured Solutions
Name of the conference: 24th International Conference on Electromagnetics in Advanced Applications (ICEAA)
Date of event: 2023
Type of contribution: Scientific book or monograph
Adrian Amor-Martin; Luis E. Garcia-Castillo. "24th International Conference on Electromagnetics in Advanced Applications (ICEAA)". 2023.

10 **Title of the work:** On the use of the Method of Manufactured Solutions for the Domain Decomposition Method
Name of the conference: XV Encuentro Ibérico de Electromagnetismo Computacional
City of event: Cádiz,
Date of event: 2023
Type of contribution: Scientific book or monograph
Adrian Amor-Martin; Luis E. Garcia-Castillo. "XV Encuentro Ibérico de Electromagnetismo Computacional". 2023.

11 **Title of the work:** Parallel Plates Waveguide-based Analogous Electromagnetic model of the Gravitational Field of a Schwarzschild Black Hole
Name of the conference: Congreso nacional de la URSI
City of event: Cáceres,
Date of event: 2023
Type of contribution: Scientific book or monograph
Enderson Falcón; Kerlos Atia Abdalmalak; Adrian Amor-Martin; Alfonso González-Jiménez; Valentín de la Rubia; Gabriel Santamaría-Botello; Vittorio De Falco; Luis E García-Muñoz}. "Congreso nacional de la URSI". 2023.

12 **Title of the work:** Predicción de prestaciones de un resonador por técnicas de inteligencia artificial
Name of the conference: Congreso nacional de la URSI
City of event: Cáceres,
Date of event: 2023
Type of contribution: Scientific book or monograph
Antonio Rueda-Escalona; Adrian Amor-Martin; Jose A Belloch. "Congreso nacional de la URSI". 2023.

13 **Title of the work:** Sensor Activo de Alta Estabilidad y Sensibilidad Para Detección No Invasiva de Cáncer de Mama
Name of the conference: Congreso Nacional de La URSI
City of event: Cáceres,
Date of event: 2023
Type of contribution: Scientific book or monograph

Sandra Santiago-Mesas; Elizabeth Fernandez-Aranzamendi; Daniel Segovia-Vargas; Adrian Amor-Martin. "Congreso Nacional de La URSI". 2023.

14 **Title of the work:** Study of the Interaction Between Gravitational and Electromagnetic Waves through the Finite Differences Time Domain
Name of the conference: Congreso nacional de la URSI
City of event: Cáceres,
Date of event: 2023
Type of contribution: Scientific book or monograph
Enderson Falcón; Kerlos Atia Abdalmalak; Adrian Amor-Martin; Alfonso González-Jiménez; Valentín de la Rubia; Gabriel Santamaría-Botello; Vittorio De Falco; Luis E García-Muñoz. "Congreso nacional de la URSI". 2023.

15 **Title of the work:** Precise Active Sensor Design for Monitoring in Biological and Industrial Applications
Name of the conference: 52nd European Microwave Conference
Geographical area: National
Type of participation: Participatory - oral communication
City of event: MILÁN, Spain
Date of event: 29/09/2022
End date: 29/09/2022
Organising entity: EuMA
City organizing entity: Spain
SANDRA SANTIAGO MESAS; SEGOVIA VARGAS, DANIEL; AMOR MARTÍN, ADRIÁN; GONZÁLEZ POSADAS, VICENTE.

16 **Title of the work:** Diseño de un Sensor Activo para Monitorización no Invasiva
Name of the conference: XXXVII Simposium Nacional de la Unión Científica Internacional de Radio (URSI 2022)
Geographical area: National
Type of participation: Participatory - oral communication
City of event: MÁLAGA, Spain
Date of event: 06/09/2022
End date: 04/09/2018
Organising entity: URSI
City organizing entity: Spain
SANDRA SANTIAGO MESAS; SEGOVIA VARGAS, DANIEL; AMOR MARTÍN, ADRIÁN; ARANDA CONDE, IGNACIO.

17 **Title of the work:** Convergence Study of H(curl) Serendipity Basis Functions for Hexahedral Finite-Elements
Name of the conference: MIKON 2022: 24th International Microwave and Radar Conference
City of event: Gdansk, Poland
Date of event: 05/09/2022
Type of contribution: Scientific book or monograph
Laszlo L. Toth; Adrian Amor-Martin; Romanus Dyczij-Edlinger. 2019.

18 **Title of the work:** Strategies to parallelize a finite element mesh truncation technique on multi- and manycore architectures.
Name of the conference: 22th International Conference on Computational and Mathematical Methods in Science and Engineering, CMMSE
Geographical area: Non EU International
Type of participation: Participatory - others

City of event: ROTA, Spain
Date of event: 06/07/2022
End date: 25/07/2018
City organizing entity: ROTA, Andalusia, Spain
BADIA, JOSÉ M; AMOR MARTÍN, ADRIÁN; BELLOCH RODRÍGUEZ, JOSÉ ANTONIO; GARCÍA CASTILLO, LUIS E.

19 **Title of the work:** Analogous Maxwellian Algorithm for photon geodesic calculation in General Static Isotropic Metrics
Name of the conference: 51st european microwave conference (EuMC)
City of event: London, United Kingdom
Date of event: 04/06/2022
Organising entity: European Microwave Association
Type of contribution: Scientific book or monograph
Enderson Falcón; Gabriel Santamaría-Botello; Adrián Amor; Valentín de la Rubia; Luis E García-Muñoz. "51st European Microwave Conference (EuMC)".

20 **Title of the work:** Experimental insight into the Domain Decomposition Method for a Finite Element Method Code
Name of the conference: XIV Encuentro Ibérico de Electromagnetismo Computacional
Geographical area: Regional
Type of participation: Participatory - others
Corresponding author: Yes
City of event: Spain
Date of event: 24/05/2022
End date: 27/05/2018
City organizing entity: Spain
AMOR MARTÍN, ADRIÁN; GARCIA-CASTILLO, L.E.

21 **Title of the work:** Convergence Study of H(Curl) Serendipity Basis Functions for Hexahedral Finite-Elements
Name of the conference: 2022 24th International Microwave and Radar Conference (MIKON)
City of event: Gdansk,
Date of event: 2022
Type of contribution: Scientific book or monograph
László Levente Tóth; Adrián Amor-Martín; Romanus Dyczij-Edlinger. "2022 24th International Microwave and Radar Conference (MIKON)". pp. 1 - 3. 09/2022.

22 **Title of the work:** 3D Electromagnetic Modeling and Inversion Using an Open-Source Paradigm: Experiences and Perspectives
Name of the conference: SIAM Conference on Mathematical & Computational Issues in the Geosciences
Date of event: 21/06/2021
Organising entity: Society for Industrial and Applied **Type of entity:** Associations and Groups Mathematics
Type of contribution: Scientific book or monograph
Octavio Castillo-Reyes; Pilar Queralt; Alex Marcuello; Juanjo Ledo; Adrian Amor-Martin; Luis E {Garcia-Castillo}. "SIAM Conference on Mathematical & Computational Issues in the Geosciences". 2021.

23 **Title of the work:** H(Curl)-Conforming Hierarchical Basis Functions on Prisms and Hexahedra
Name of the conference: Kleinheubacher Tagung 2019
City of event: Miltenberg, Germany
Date of event: 23/09/2019

End date: 25/09/2019
Organising entity: URSI
Type of contribution: Scientific book or monograph
Adrian Amor-Martin; Laszlo L. Toth; Romanus Dyczij-Edlinger. 2019.

24 **Title of the work:** Hierarchical H(Div) Basis Functions and Universal Matrices for Curvilinear Finite Elements
Name of the conference: Kinetics and BEM on the Saar
City of event: Saarbrücken, Saarland, Germany
Date of event: 01/06/2019
Type of contribution: Scientific book or monograph
Laszlo L. Toth; Adrian Amor-Martin; Romanus Dyczij-Edlinger. 2019.

25 **Title of the work:** Electromagnetic Finite Element Solver for HPC Environments using Direct Substructuring Method
Name of the conference: European Microwave Conference (EuMC), 2018
Geographical area: European Union
Type of participation: Participatory - others
City of event: MADRID, Spain
Date of event: 24/09/2018
End date: 27/09/2018
Organising entity: European Microwave Association
City organizing entity: MADRID, Community of Madrid, Spain
AMOR MARTÍN, ADRIÁN; GARCIA-CASTILLO, L.E.; GARCÍA DOÑORO, D.; Salazar Palma, Magdalena.

26 **Title of the work:** Towards a Scalable hp Adaptive Finite Element Code Based on a Nonconformal Domain Decomposition Method
Name of the conference: European Microwave Conference (EuMC), 2018
Geographical area: European Union
Type of participation: Participatory - others
City of event: MADRID, Spain
Date of event: 24/09/2018
End date: 27/09/2018
Organising entity: European Microwave Association
City organizing entity: MADRID, Community of Madrid, Spain
AMOR MARTÍN, ADRIÁN; GARCIA-CASTILLO, L.E.; GARCÍA DOÑORO, D.

27 **Title of the work:** Non-Conformal Domain Decomposition Method supporting hp Discretizations
Name of the conference: 14th International Workshop on Finite Elements for Microwave Engineering
Geographical area: Non EU International
Type of participation: Participatory - others
City of event: Cartagena de Indias, Colombia
Date of event: 10/09/2018
End date: 14/09/2018
Organising entity: IEEE
City organizing entity: Colombia
AMOR MARTÍN, ADRIÁN; GARCIA-CASTILLO, L.E.; GARCÍA DOÑORO, D.

28 **Title of the work:** Three-level parallelization of a Finite Element Code with Hybrid Meshes
Name of the conference: XXXIII Simposium Nacional de la Unión Científica Internacional de Radio (URSI 2018)

Geographical area: National
Type of participation: Participatory - oral communication
City of event: GRANADA, Spain
Date of event: 02/09/2018
End date: 04/09/2018
Organising entity: URSI
City organizing entity: Spain
AMOR MARTÍN, ADRIÁN; GARCÍA DOÑORO, D.; GARCIA-CASTILLO, L.E.

29 **Title of the work:** Acceleration of a Mesh Truncation Technique for a Finite Element Electromagnetics Code
Name of the conference: 18th International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE 2018)
Geographical area: Non EU International
Type of participation: Participatory - others
City of event: ROTA, Spain
Date of event: 23/07/2018
End date: 25/07/2018
City organizing entity: ROTA, Andalusia, Spain
BELLOCH RODRÍGUEZ, JOSÉ ANTONIO; AMOR MARTÍN, ADRIÁN; GARCÍA DOÑORO, D.; MARTÍNEZ FERNÁNDEZ, I.

30 **Title of the work:** Higher Order Finite Element Method based on a Non-Conformal Domain Decomposition Method
Name of the conference: Emerging Trends in Applied Mathematics and
Geographical area: Non EU International
Type of participation: Participatory - others
City of event: Krakow, Poland
Date of event: 18/06/2018
End date: 22/06/2018
Organising entity: Universidad de Cracovia
City organizing entity: Poland
AMOR MARTÍN, ADRIÁN; GARCÍA CASTILLO, LUIS E.; GARCÍA DOÑORO, DANIEL.

31 **Title of the work:** Non-Conformal Domain Decomposition Method supporting hp-Discretizations
Name of the conference: XII Encuentro Ibérico de Electromagnetismo Computacional
Geographical area: Regional
Type of participation: Participatory - others
City of event: Portugal
Date of event: 16/05/2018
End date: 18/05/2018
City organizing entity: Portugal
AMOR MARTÍN, ADRIÁN; GARCÍA DOÑORO, D.; GARCIA-CASTILLO, L.E.

32 **Title of the work:** Recent Developments Regarding a Higher Order Finite Element Method Electromagnetic Simulator (HOFEM)
Name of the conference: XII Encuentro Ibérico de Electromagnetismo Computacional
Geographical area: Regional
Type of participation: Participatory - others
City of event: Portugal
Date of event: 16/05/2018
End date: 18/05/2018

City organizing entity: Portugal
AMOR MARTÍN, ADRIÁN; GARCÍA DOÑORO, D.; GARCIA-CASTILLO, L.E.

33 **Title of the work:** A finite element mesh truncation technique for scattering and radiation problems in HPC environments
Name of the conference: Computing and Electromagnetics International Workshop (CEM)
Geographical area: Non EU International
Type of participation: Participatory - others
City of event: Barcelona, Spain
Date of event: 10/06/2017
End date: 10/06/2017
Organising entity: IEEE
City organizing entity: Spain
AMOR MARTÍN, ADRIÁN; GARCÍA DOÑORO, D.; GARCIA-CASTILLO, L.E.

34 **Title of the work:** Algorithm for simultaneous adaptation and time step iterations for the electromagnetic waves propagation and heating of the human head induced by cell phone
Name of the conference: International Conference on Computational Science, ICCS
Geographical area: Non EU International
Type of participation: Participatory - others
City of event: Zurich, Switzerland
Date of event: 01/06/2017
End date: 04/06/2017
City organizing entity: Spain
GARCIA-CASTILLO, L.E.; GOMEZ REVUELTO, I; AMOR MARTÍN, ADRIÁN; LOS, MARCIN; PASZYNSKI, MACIEJ.

35 **Title of the work:** Higher-order finite element electromagnetics code for HPC environments
Name of the conference: International Conference on Computational Science, ICCS
Geographical area: Non EU International
Type of participation: Participatory - others
City of event: Zurich, Switzerland
Date of event: 01/06/2017
End date: 04/06/2017
City organizing entity: Spain
GARCÍA DOÑORO, D.; AMOR MARTÍN, ADRIÁN; GARCIA-CASTILLO, L.E.

36 **Title of the work:** Analysis of Dispersion Error of Higher-Order Curl-Conforming Prismatic Finite Element
Name of the conference: IEEE MTT-S Internation Conference on Numerical Electromagnetic and Multiphysics Modeling and Optimization for RF, Microwave and Terahertz Applications
Geographical area: Non EU International
Type of participation: Participatory - others
City of event: Sevilla, Spain
Date of event: 16/05/2017
End date: 18/05/2017
Organising entity: IEEE
City organizing entity: Spain
AMOR MARTÍN, ADRIÁN; GARCÍA DOÑORO, D.; GARCIA-CASTILLO, L.E.

37 **Title of the work:** On the Design of Higher-Order Curl-Conforming Finite Elements and its Assembly Features
Name of the conference: IEEE MTT-S Internation Conference on Numerical Electromagnetic and Multiphysics Modeling and Optimization for RF, Microwave and Terahertz Applications
Geographical area: Non EU International
Type of participation: Participatory - others
City of event: Sevilla, Spain
Date of event: 16/05/2017
End date: 18/05/2017
Organising entity: IEEE
City organizing entity: Spain
AMOR MARTÍN, ADRIÁN; GARCÍA DOÑORO, D.; GARCIA-CASTILLO, L.E.

38 **Title of the work:** Comparison between different assembly strategies for higher-order curl-conforming prismatic finite elements
Name of the conference: XI Iberian Meeting on Computational Electromagnetics
Geographical area: Non EU International
Type of participation: Participatory - oral communication
City of event: CALDAS, LAS, Spain
Date of event: 08/11/2016
End date: 11/11/2016
City organizing entity: CALDAS, LAS, Principality of Asturias, Spain
AMOR MARTÍN, ADRIÁN.

39 **Title of the work:** Posidonia: a software tool for HPC scientific simulations
Name of the conference: XI Iberian Meeting on Computational Electromagnetics
Geographical area: Non EU International
Type of participation: Participatory - oral communication
City of event: CALDAS, LAS, Spain
Date of event: 08/11/2016
End date: 11/11/2016
City organizing entity: CALDAS, LAS, Principality of Asturias, Spain
AMOR MARTÍN, ADRIÁN; MARTÍNEZ FERNÁNDEZ, I.; GARCIA-CASTILLO, L.E.

40 **Title of the work:** Higher Order Finite Element Method Simulator for Antenna Analysis
Name of the conference: 2016 IEEE Conference on Antenna Measurements and Applications Focus on Antenna Systems (CAMA)
Geographical area: Non EU International
Type of participation: Participatory - oral communication
City of event: Syracuse (NY), United States of America
Date of event: 23/10/2016
End date: 27/10/2016
Organising entity: IEEE
City organizing entity: Syracuse (NY), United States of America
GARCÍA DOÑORO, D.; AMOR MARTÍN, ADRIÁN; GARCIA-CASTILLO, L.E.; Salazar Palma, Magdalena; TAPAN K. SARKAR. pp. 1 - 4. IEEE.THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC,

41 **Title of the work:** Higher order finite element method solver for the analysis of microwave devices in planar technology
Name of the conference: 46th European Microwave Conference (EuMC 2016)
Geographical area: European Union

Type of participation: Participatory - oral communication
City of event: London, United Kingdom
Date of event: 04/10/2016
End date: 06/10/2016
Organising entity: European Microwave Association
City organizing entity: London, United Kingdom
GARCÍA DOÑORO, D.; SIO WENG TING; AMOR MARTÍN, ADRIÁN; GARCIA-CASTILLO, L.E.; Salazar Palma, Magdalena. "2016 46th European Microwave Conference, 4&-6 October 2016, London, UK: book of abstracts". pp. 473 - 476. IEEE.THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC, ISBN 978-2-87487-043-9
DOI: https://doi.org/10.1109/EuMC.2016.7824382

42 **Title of the work:** Posidonia: a tool for HPC and remote scientific simulations
Name of the conference: International Workshop on Finite Elements for Microwave Engineering (FEM Workshop 2016)
Geographical area: Non EU International
Type of participation: Participatory - others
City of event: Florence, Italy
Date of event: 16/05/2016
End date: 18/05/2016
Organising entity: Universidad de Florencia
City organizing entity: Florence, Italy
AMOR MARTÍN, ADRIÁN; MARTÍNEZ FERNÁNDEZ, I.; GARCIA-CASTILLO, L.E.

43 **Title of the work:** Second-Order Nédélec Curl-Conforming Prism for Finite Element Computations
Name of the conference: International Workshop on Finite Elements for Microwave Engineering (FEM Workshop 2016)
Geographical area: Non EU International
Type of participation: Participatory - oral communication
City of event: Florence, Italy
Date of event: 16/05/2016
End date: 18/05/2016
Organising entity: Universidad de Florencia
City organizing entity: Florence, Italy
AMOR MARTÍN, ADRIÁN; GARCIA-CASTILLO, L.E.

44 **Title of the work:** Implementation of the Second-Order Nédélec Curl-Conforming Prismatic Element for Computational Electromagnetics
Name of the conference: XXX Simposium Nacional de la Unión Científica Internacional de Radio (URSI 2015)
Geographical area: National
Type of participation: Participatory - oral communication
City of event: PAMPLONA, Spain
Date of event: 02/09/2015
End date: 04/09/2015
Organising entity: URSI
City organizing entity: Spain
AMOR MARTÍN, ADRIÁN; GARCÍA DOÑORO, D.; GARCIA-CASTILLO, L.E.

45 **Title of the work:** State estimation using an Extended Kalman Filter with privacy protected observed inputs
Name of the conference: IEEE Workshop on Information Forensics and Security (WIFS'14)
Geographical area: Non EU International

Type of participation: Participatory - oral communication
City of event: ATLANTA, United States of America
Date of event: 03/12/2014
End date: 05/12/2014
Organising entity: IEEE
City organizing entity: ATLANTA, United States of America
GONZALEZ, F. J.; AMOR MARTÍN, ADRIÁN; JORGE CASAMAYON ANTON.

46 **Title of the work:** Plataforma Web de simulación remota en un cluster de computación científica
Name of the conference: XXVIII Simposium Nacional de la Unión Científica Internacional de Radio
Geographical area: National
Type of participation: Participatory - oral communication
City of event: Santiago de Compostela, Spain
Date of event: 11/09/2013
End date: 13/09/2013
Organising entity: URSI
City organizing entity: Spain
CRISTINA GARCIA MUÑOZ; AMOR MARTÍN, ADRIÁN; MARTÍNEZ FERNÁNDEZ, I.; GARCIA-CASTILLO, L.E.

47 **Title of the work:** Herramienta para la simulación remota en clusters de computación científica
Name of the conference: XXVII Simposium Nacional de la Unión Científica Internacional de Radio
Geographical area: National
Type of participation: Participatory - oral communication
City of event: ELCHE, Spain
Date of event: 12/09/2012
End date: 14/09/2012
Organising entity: URSI
City organizing entity: ELCHE, Spain
AMOR MARTÍN, ADRIÁN; MARTÍNEZ FERNÁNDEZ, I.; GARCIA-CASTILLO, L.E.; GARCÍA DOÑORO, D.

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

1 **Committee title:** Coordinador del Grupo de Trabajo Jóvenes Ingenieros del COIT
Affiliation entity: Colegio Oficial Asociación Española Ingenieros de Telecomunicación **Type of entity:** Associations and Groups
City affiliation entity: Madrid, Community of Madrid, Spain
Start date: 23/10/2020

2 **Committee title:** PAR P2816 Recommended Practice for Computational Electromagnetics Applied to Modeling and Simulation of Antennas
Affiliation entity: IEEE

Organization of R&D activities

1 **Title of the activity:** Programa de mentorización del COIT, "ment-it". 5a edición.
Type of activity: Programa de mentorización **Geographical area:** National
Convening entity: Colegio Oficial de Ingenieros de Telecomunicación **Type of entity:** Associations and Groups
City convening entity: Madrid, Community of Madrid, Spain
Start-End date: 29/10/2024 - 01/06/2025

2 **Title of the activity:** Programa de mentorización del COIT, "ment-it". 4a edición.
Type of activity: Programa de mentorización **Geographical area:** National
Convening entity: Colegio Oficial de Ingenieros de Telecomunicación **Type of entity:** Associations and Groups
City convening entity: Madrid, Community of Madrid, Spain
Start-End date: 24/10/2023 - 01/06/2024

3 **Title of the activity:** Programa de mentorización del COIT, "ment-it". 3a edición.
Type of activity: Programa de mentorización **Geographical area:** National
Convening entity: Colegio Oficial de Ingenieros de Telecomunicación **Type of entity:** Associations and Groups
City convening entity: Madrid, Community of Madrid, Spain
Start-End date: 10/11/2022 - 01/06/2023

4 **Title of the activity:** Programa de mentorización del COIT, "ment-it". 2a edición.
Type of activity: Programa de mentorización **Geographical area:** National
Convening entity: Colegio Oficial de Ingenieros de Telecomunicación **Type of entity:** Associations and Groups
City convening entity: Madrid, Community of Madrid, Spain
Start-End date: 10/11/2021 - 01/06/2022

5 **Title of the activity:** El mejor trabajo del mundo
Type of activity: Webinar **Geographical area:** National
Convening entity: Colegio Oficial de Ingenieros de Telecomunicación **Type of entity:** Associations and Groups
City convening entity: Madrid, Community of Madrid, Spain
Start-End date: 16/12/2021 - 16/12/2021

6 **Title of the activity:** Investigación más allá de la Universidad (ii)
Type of activity: Mesa redonda **Geographical area:** National
Convening entity: Colegio Oficial de Ingenieros de Telecomunicación **Type of entity:** Associations and Groups
City convening entity: Madrid, Community of Madrid, Spain
Start-End date: 30/11/2021 - 30/11/2021

7 **Title of the activity:** Programa de mentorización del COIT, "ment-it". 1a edición.
Type of activity: Programa de mentorización **Geographical area:** National
Convening entity: Colegio Oficial de Ingenieros de Telecomunicación **Type of entity:** Associations and Groups
City convening entity: Madrid, Community of Madrid, Spain
Start-End date: 01/03/2021 - 01/06/2021

8 **Title of the activity:** Investigación más allá de la Universidad
Type of activity: Mesa redonda
Convening entity: Universidade de Vigo **Type of entity:** Public Research Body
City convening entity: Vigo
Start-End date: 22/09/2021 - 22/09/2020

9 **Title of the activity:** El doctorado y sus expectativas laborales
Type of activity: Mesa redonda **Geographical area:** National
Convening entity: Universidad de Málaga **Type of entity:** University
City convening entity: Málaga, Andalusia, Spain
Type of participation: Organiser
Nº assistants: 200
Start-End date: 02/09/2020 - 02/09/2020

10 **Title of the activity:** Help desk and coordination of the group of volunteers in European Microwave Week
Type of activity: International Conference and Exhibition **Geographical area:** European Union
Convening entity: European Microwave Association **Type of entity:** Associations and Groups
City convening entity: Madrid, Community of Madrid, Spain
Start-End date: 23/09/2018 - 30/09/2018

Other achievements

Stays in public or private R&D centres

1 **Entity:** Saarland University **Type of entity:** University
Faculty, institute or centre: Lehrstuhl für Theoretische Elektrotechnik
City of entity: Saarbrücken, Saarland, Germany
Start-End date: 01/01/2019 - 31/12/2020 **Duration:** 2 years
Funding entity: Saarland University **Type of entity:** University
City funding entity: Saarbrücken, Saarland, Germany
Goals of the stay: Post-doctoral
Provable tasks: Research and teaching activities
Acquired skills developed: Curl-conforming basis functions, absorbing boundary conditions, domain decomposition methods
Narrative explanation: Collaboration in 8 papers to be published

2 **Entity:** The Ohio State University
Faculty, institute or centre: ElectroScience Laboratory
City of entity: Columbus, United States of America
Start-End date: 24/08/2017 - 19/12/2017 **Duration:** 3 months - 25 days
Funding entity: Universidad Carlos III de Madrid **Type of entity:** University
Name of programme: Funded by UC3M
Goals of the stay: Doctorate
Provable tasks: Research stay at ElectroScience Laboratory hosted by Prof. Jin-Fa Lee
Acquired skills developed: Maturity as researcher, domain decomposition methods
Narrative explanation: Paper with Prof. Jin-Fa Lee (Study of accuracy...)

3 **Entity:** The Ohio State University **Type of entity:** University
Faculty, institute or centre: ElectroScience Laboratory
City of entity: Columbus, United States of America
Start-End date: 20/09/2016 - 19/12/2016 **Duration:** 2 months - 29 days
Funding entity: Ministerio de Economía y Hacienda **Type of entity:** FPU
Goals of the stay: Doctorate
Provable tasks: Research stay at ElectroScience Laboratory hosted by Prof. Jin-Fa Lee
Acquired skills developed: Maturity as researcher, introduction of Domain Decomposition Methods
Narrative explanation: Collaboration in paper with Prof. Jin-Fa Lee (Study of Accuracy...)

4 **Entity:** University of Macau **Type of entity:** University
Faculty, institute or centre: Computational Electromagnetics Laboratory
City of entity: University of Macau, Macao
Start-End date: 15/06/2015 - 30/07/2015 **Duration:** 1 month - 15 days
Goals of the stay: Doctorate
Provable tasks: Research stay at University of Macau
Acquired skills developed: Implementation of FEM code and triangular prism element
Narrative explanation: Collaboration in MOTL paper, 2016

Periods of research activity and knowledge transfer

Certifying entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** Agency
City certifying entity: Madrid, Spain
Date of recognition: 2023