



José Ángel Capitán Gómez

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Summary of CV

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

José A. Capitán graduated in Physics in July, 2000 (special award, 'Premio extraordinario', Complutense University of Madrid). After working (i) in the private company GMV S.A. as a software developer in projects funded by the European Space Agency, (ii) as a high school teacher of mathematics in the period 2002-2007 (civil servant, 'Cuerpo de Profesores de Enseñanza Secundaria'), and (iii) as a part-time professor in the Department of Mathematics, Carlos III University of Madrid (2004-2006), he begun his PhD in February, 2007 at the aforementioned department, under the supervision of José A. Cuesta. In December, 2010, he got his PhD with special award ('Premio extraordinario de Doctorado', Carlos III university of Madrid) and 'Doctor Europeus' mention. During his PhD he worked on stochastic processes applied to the mathematical modeling of eco-evolutionary systems following a multidisciplinary approach.

In 2011 he joined Alex Arenas' lab at Universitat Rovira i Virgili (Tarragona) as a post-doctoral researcher, working in complex networks applied to ecology and linguistics (efficient navigation on semantic networks, extraction of semantic classifications in linguistic corpus), using empirical data to tackle multidisciplinary modeling approaches. From January, 2012, to December, 2014, he has worked as a post-doctoral researcher in the Spanish Council for Scientific Research (CSIC) thanks to a 'Juan de la Cierva' fellowship granted in December, 2011. In these three years he collaborated with Susanna Manrubia in analyzing the spatial distribution of global linguistic diversity. During his post-doctoral stage, he has published works that relate linguistic and biological diversity, with important implications in the management and sustainability of biological and cultural diversity. His publications have appeared in high-impact multidisciplinary journals like Physical Review Letters, Proceedings of the Royal Society B, PLoS ONE, Physical Review E and Journal of Theoretical Biology. He has a remarkable productivity at the post-doctoral stage, having contributed a total of 22 publications (13 of them within the last 5 years). Currently, he has three manuscripts under review. It is also remarkable the overall number of citations after 5 years of finishing his PhD: his publications have been cited 260 times (176 citations within the last 5 years). Additional details can be found at Google citations, as well as at Researcher ID (D-8669-2012) and ORCID (0000-0002-6245-0088) web pages. He has also presented 28 communications in conferences (3 invited) and 5 seminars (3 of which were invited). Of the total, 18 communications were presented within the last 5 years. This year he obtained a Fulbright grant to stay three months in 2017 at the University of Chicago, to join the lab coordinated by Stefano Allesina.

His scientific contributions belong to different fields, proving he is a skillful investigator able to conduct multidisciplinary research. Since his PhD and during his post-doctoral stage, he carries out an intense research activity studying complex networked systems, with applications to ecological, evolutionary and social systems. Although the studied topics are diverse, they share



a common spirit: the application of stochastic processes, complex network theory, non-linear dynamics, computer simulation, big-data analysis and statistics to mathematically describe natural systems under a complex-systems theoretical perspective.



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.

José A. Capitán has a remarkable productivity at the post-doctoral stage, having contributed a total of 25 publications (24 of which are JCR articles, and 23 are classified in the first quartile of their area). Currently, he has three manuscripts under review. It is also remarkable the overall number of citations after 5 years of finishing his PhD: his publications have been cited 334 times (Google citations). Additional details can be found at Researcher ID (D-8669-2012) and ORCID (0000-0002-6245-0088) web pages. He has also presented 39 communications in conferences and seminars, 6 of which were invited. His H-index is equal to 12 (Google citations).



José Ángel Capitán Gómez

Surname(s): **Capitán Gómez**
Name: **José Ángel**
ORCID: **0000-0002-6245-0088**
Personal web page: **<http://www.researcherid.com/rid/D-8669-2012>**

Current professional situation

Employing entity: Universidad Politécnica de Madrid **Type of entity:** University
Department: Building Engineering School (Escuela Técnica Superior de Edificación)
Professional category: Lecturer (Profesor Ayudante Doctor) **Educational Management (Yes/No):** Yes
City employing entity: Madrid, Community of Madrid, Spain
Phone: (34) 913367594
Start date: 24/09/2015
Type of contract: Temporary employment contract **Dedication regime:** Full time
Primary (UNESCO code): 120808 - Stochastic processes; 120903 - Data analysis; 240400 - Biomathematics
Performed tasks: Teaching duties (statistics, algebra, calculus, programming) for graduate students in engineering. Research activities in applied mathematics.
Identify key words: Biology and other natural sciences; Stochastic procedures; Physics - Statistical mechanics; Physics - Complex systems; Biodiversity characterisation; Ecology
Field of management activity: Public Research Body

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidad de Alcalá	Lecturer (Profesor Ayudante Doctor)	14/09/2015
2	Centro de Estudios Avanzados de Blanes	Postdoctoral researcher	01/01/2015
3	Centro Nacional de Biotecnología	'Juan de la Cierva' postdoctoral researcher	10/06/2014
4	Centro de Astrobiología	'Juan de la Cierva' postdoctoral researcher	01/01/2012
5	Universitat Rovira i Virgili	Postdoctoral researcher	01/02/2011
6	Universidad Carlos III de Madrid	Graduate researcher (Personal Investigador de Apoyo)	01/02/2007
7	Consejería de Educación	Mathematics High School teacher	01/09/2002
8	Universidad Carlos III de Madrid	Part-time professor (Profesor Asociado)	16/02/2004
9	Colegio los Angeles, S. Coop.	High School teacher	01/09/2001
10	Grupo de Mecánica del Vuelo	Software developer	22/11/2000



- 1** **Employing entity:** Universidad de Alcalá **Type of entity:** University
Department: Department of Physics and Mathematics, Faculty of Sciences
Professional category: Lecturer (Profesor Ayudante Doctor) **Educational Management (Yes/No):** Yes
Start-End date: 14/09/2015 - 23/09/2015 **Duration:** 10 days
Type of contract: Temporary employment contract
Dedication regime: Full time
Applicability in teaching and/or research: Teaching duties in statistics (practical courses)
- 2** **Employing entity:** Centro de Estudios Avanzados de Blanes **Type of entity:** State agency
Professional category: Postdoctoral researcher **Educational Management (Yes/No):** No
Phone: (+34) 972 336101
Start-End date: 01/01/2015 - 13/09/2015 **Duration:** 8 months - 13 days
Type of contract: Temporary employment contract
Dedication regime: Full time
Applicability in teaching and/or research: Stochastic processes applied to characterize the spatial distribution of species across continental scales. Development of site-occupancy stochastic models in biodiversity. Application to macro-ecological data.
- 3** **Employing entity:** Centro Nacional de Biotecnología **Type of entity:** State agency
Professional category: 'Juan de la Cierva' postdoctoral researcher **Educational Management (Yes/No):** No
Start-End date: 10/06/2014 - 31/12/2014 **Duration:** 5 months - 21 days
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Applicability in teaching and/or research: Mathematical modeling of complex evolutionary systems arising in biological and social sciences.
- 4** **Employing entity:** Centro de Astrobiología **Type of entity:** State agency
Professional category: 'Juan de la Cierva' postdoctoral researcher **Educational Management (Yes/No):** No
Start-End date: 01/01/2012 - 09/06/2014 **Duration:** 2 years - 6 months - 9 days
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Applicability in teaching and/or research: Mathematical modeling of complex evolutionary systems arising in biological and social sciences. Conferral decision at 'Resolución de 5 de diciembre de 2011, Secretaría de Estado de Investigación del Ministerio de Ciencia e Innovación'.
- 5** **Employing entity:** Universitat Rovira i Virgili **Type of entity:** University
Professional category: Postdoctoral researcher **Educational Management (Yes/No):** No
Start-End date: 01/02/2011 - 31/12/2011 **Duration:** 11 months
Type of contract: Temporary employment contract
Applicability in teaching and/or research: Mathematical description of networked systems in ecological and social sciences. Topological structure of ecological networks. Semantic navigation on networked structures.
- 6** **Employing entity:** Universidad Carlos III de Madrid **Type of entity:** University
Professional category: Graduate researcher (Personal Investigador de Apoyo) **Educational Management (Yes/No):** No
Start-End date: 01/02/2007 - 31/01/2011 **Duration:** 4 years
Type of contract: Grant-assisted student (pre or post-doctoral, others)



Applicability in teaching and/or research: PhD studies: Application of complex systems theory (complex networks, stochastic processes, nonlinear dynamics) to mathematical modeling of ecological and evolutionary phenomena. Conferral decision at BOCM 7040/2006, 16/12/2006.

- 7** **Employing entity:** Consejería de Educación
Professional category: Mathematics High School teacher
Start-End date: 01/09/2002 - 31/01/2007
Type of contract: Civil servant
Applicability in teaching and/or research: Teaching activity of mathematics in high-school education (Enseñanza Secundaria y Bachillerato). On a voluntary leave of absence started on 01/02/2007.
- Type of entity:** Regional public body
Educational Management (Yes/No): Yes
Duration: 4 years - 4 months
- 8** **Employing entity:** Universidad Carlos III de Madrid
Professional category: Part-time professor (Profesor Asociado)
Start-End date: 16/02/2004 - 30/09/2006
Type of contract: Temporary employment contract
Applicability in teaching and/or research: Teaching activity of mathematics in under-graduate engineering courses (overall number of hours taught: 384)
- Type of entity:** University
Educational Management (Yes/No): Yes
Duration: 2 years - 7 months - 14 days
- 9** **Employing entity:** Colegio los Angeles, S. Coop.
Professional category: High School teacher
Start-End date: 01/09/2001 - 31/08/2002
Type of contract: Temporary employment contract
Applicability in teaching and/or research: Teaching activity of mathematics in high-school education (Enseñanza Secundaria)
- Type of entity:** Business
Educational Management (Yes/No): Yes
Duration: 1 year
- 10** **Employing entity:** Grupo de Mecánica del Vuelo
Professional category: Software developer
Start-End date: 22/11/2000 - 31/08/2001
Type of contract: Temporary employment contract
Performed tasks: Involved in the European Space Agency project entitled 'Earth Living planet'
- Type of entity:** Business
Duration: 8 months - 8 days



Education

University education

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

- 1 University degree:** Higher degree
Name of qualification: Certificate Advanced Studies
Degree awarding entity: Universidad Carlos III de Madrid **Type of entity:** University
Date of qualification: 14/06/2006
- 2 University degree:** Certificate
Name of qualification: Certificate of Pedagogical Aptitude
Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University
Date of qualification: 06/07/2001
- 3 University degree:** Higher degree
Name of qualification: Degree in Theoretical Physics (Licenciado en Física, Especialidad Física Fundamental)
Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University
Date of qualification: 28/07/2000
Average mark: Outstanding
Prize: Special award for degree
- 4 University degree:** Certificate
Name of qualification: First Certificate in English
Degree awarding entity: University of Cambridge **Type of entity:** University
Date of qualification: 01/12/1998
Average mark: Good

Doctorates

Doctorate programme: Ph.D. in Mathematics (Programa Oficial de Doctorado en Ingeniería Matemática)
Degree awarding entity: Universidad Carlos III de Madrid **Type of entity:** University
Date of degree: 22/12/2010
DEA awarding entity: Universidad Carlos III de Madrid
Date DEA was awarded: 14/06/2006
European doctorate: Yes **Date of certificate:** 22/12/2010
Thesis title: Self-organization in biology: From quasi-species to ecosystems
Thesis director: José A. Cuesta
Obtained qualification: Summa cum laude (Sobresaliente cum laude por unanimidad)
Recognition of quality: Yes

**Special doctorate award:** Yes**Date of award:** 18/11/2011**Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)**

- 1** **Type of training:** Course
Training title: Time series analyses
Awarding entity: Instituto de Ciencias de la Educación **Type of entity:** University Research Institute
End date: 01/02/2017 **Duration in hours:** 8 hours
- 2** **Type of training:** Course
Training title: Statistics in experimental research
Awarding entity: Instituto de Ciencias de la Educación **Type of entity:** University Research Institute
End date: 02/06/2016 **Duration in hours:** 16 hours
- 3** **Type of training:** Course
Training title: Computational molecular evolution
Awarding entity: Technical University of Denmark - Coursera **Type of entity:** University
End date: 01/09/2013 **Duration in hours:** 6 hours
- 4** **Type of training:** Course
Training title: Summer school "Mathematics and society: Cooperation, social networks and complexity"
Awarding entity: Universidad Complutense de Madrid **Type of entity:** University
End date: 18/07/2008 **Duration in hours:** 25 hours
- 5** **Type of training:** Course
Training title: Summer school "A primer in ecological networks: data and theory"
Awarding entity: University of Parma **Type of entity:** University
End date: 20/06/2008 **Duration in hours:** 15 hours
- 6** **Type of training:** Course
Training title: Summer school "SIMUMAT summer school on Complex Systems and Statistics"
Awarding entity: Universidad Autónoma de Madrid **Type of entity:** University
End date: 13/07/2007 **Duration in hours:** 25 hours
- 7** **Type of training:** Course
Training title: Elementary number theory
Awarding entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
End date: 17/06/2004 **Duration in hours:** 120 hours
- 8** **Type of training:** Course
Training title: Introduction to scientific calculus with MatLab
Awarding entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
End date: 23/09/2003 **Duration in hours:** 120 hours



- 9** **Type of training:** Course
Training title: El Escorial Summer School "Salir de la Tierra para conocer nuestros orígenes"
Awarding entity: FUNDACION GENERAL DE LA UNIVERSIDAD COMPLUTENSE DE MADRID
End date: 30/07/1999 **Duration in hours:** 30 hours
- 10** **Type of training:** Course
Training title: Lectures on Physics
Awarding entity: FUNDACION COLEGIO LIBRE DE EMERITOS UNIVERSITARIOS
End date: 30/09/1995 **Duration in hours:** 15 hours
- 11** **Type of training:** Course
Training title: Check point English language course
Awarding entity: EMBAJADA DEL REINO UNIDO (BRITISH COUNCIL)
End date: 29/08/1995 **Duration in hours:** 75 hours
- 12** **Type of training:** Course
Training title: Certificate in general English studies
Awarding entity: EMBAJADA DEL REINO UNIDO (BRITISH COUNCIL)
End date: 29/07/1994 **Duration in hours:** 75 hours

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

- 1** **Title of course/seminar:** Gamification in Moodle
Goals of the course/seminar: Teaching techniques applicable to college education
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
Duration in hours: 3 hours
Start-End date: 14/02/2017 - 14/02/2017
- 2** **Title of course/seminar:** Initial formation for teachers in distance education
Goals of the course/seminar: Teaching techniques applicable to distance education
Organising entity: Centro Regional de Innovacion y Formacion 'Las Acacias' **Type of entity:** Consejería de Educación, Comunidad de Madrid
Duration in hours: 100 hours
Start-End date: 04/10/2002 - 30/05/2003
- 3** **Title of course/seminar:** Teaching seminar: Elaboration of didactic materials for inter-culturality
Goals of the course/seminar: Teaching seminar assistance
Organising entity: Centro de Formacion del Profesorado de Getafe **Type of entity:** Public body
Duration in hours: 33 hours
Start-End date: 07/10/2002 - 05/03/2003
- 4** **Title of course/seminar:** Training for beginning teachers
Goals of the course/seminar: Teaching skills for beginning teachers
Organising entity: Centro de Formación del Profesorado de Getafe
Duration in hours: 20 hours
Start-End date: 20/01/2003 - 28/01/2003



- 5 Title of course/seminar:** Diversity in the classroom: talented students in mathematics
Goals of the course/seminar: Applying new teaching techniques to improve high-talented student skills in mathematics
Organising entity: Centro Regional de Innovacion y Formacion 'Las Acacias' **Type of entity:** Consejería de Educación, Comunidad de Madrid
Duration in hours: 40 hours
Start-End date: 11/02/2002 - 15/04/2002
- 6 Title of course/seminar:** Applying the LOSGE system to High School teaching
Goals of the course/seminar: Legal regulations (LOGSE) and applications to High School teaching
Organising entity: ANPE-Madrid and Consejeria de Educacion **Type of entity:** Public
Duration in hours: 105 hours
Start-End date: 05/11/2001 - 29/01/2002
- 7 Title of course/seminar:** Managing discipline in High School levels
Goals of the course/seminar: Teaching skills for an efficient management of classroom activities
Organising entity: Ministerio de Educación, Política Social y Deporte **Type of entity:** State agency
Duration in hours: 30 hours
Start-End date: 11/01/2002 - 19/01/2002
- 8 Title of course/seminar:** Advanced Microsoft Office for High School teaching
Goals of the course/seminar: Application of Office tools to teaching
Organising entity: Ministerio de Educación, Política Social y Deporte **Type of entity:** State agency
Duration in hours: 30 hours
Start-End date: 26/12/2001 - 29/12/2001

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	C1	C1	C1	C1	C1
Spanish	C2	C2	C2	C2	C2

Teaching experience

General teaching experience

- 1 Type of teaching:** Official teaching
Name of the course: Machine learning
Professional category: Lecturer (Profesor Ayudante Doctor)
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Core
Assessment type: Survey
University degree: Graduado o Graduada en Biotecnología
Course given: Second
Start date: 02/2019 **End date:** 07/2019

**End date:** 07/2019**Type of hours/ ECTS credits:** Hours**Hours/ECTS credits:** 24**Entity:** Universidad Politécnica de Madrid**Type of entity:** University**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Agrónomos**Department:** Applied Mathematics**Assessment type:** Survey**Subject language:** Spanish**2** **Type of teaching:** Official teaching**Name of the course:** Mathematics I (Linear Algebra)**Professional category:** Lecturer (Profesor Ayudante Doctor)**Type of programme:** Engineering**Type of teaching:** In person theory**Type of subject:** Core**Assessment type:** Survey**University degree:** Graduado o Graduada en Ingeniería de la Edificación**Course given:** First**Start date:** 09/2018**End date:** 02/2019**End date:** 02/2019**Type of hours/ ECTS credits:** Hours**Hours/ECTS credits:** 128**Entity:** Universidad Politécnica de Madrid**Type of entity:** University**Faculty, institute or centre:** Escuela Técnica Superior de Edificación**Department:** Applied Mathematics**Assessment type:** Survey**Mark obtained:** 4.7**Top mark possible:** 5**Subject language:** Spanish**3** **Type of teaching:** Official teaching**Name of the course:** Mathematics I (Linear Algebra)**Professional category:** Lecturer (Profesor Ayudante Doctor)**Type of programme:** Engineering**Type of teaching:** In person theory**Type of subject:** Core**Assessment type:** Survey**University degree:** Graduado o Graduada en Ingeniería de la Edificación**Course given:** First**Start date:** 09/2017**End date:** 02/2018**End date:** 02/2018**Type of hours/ ECTS credits:** Hours**Hours/ECTS credits:** 64**Entity:** Universidad Politécnica de Madrid**Type of entity:** University**Faculty, institute or centre:** Escuela Técnica Superior de Edificación**Department:** Applied Mathematics**Assessment type:** Survey**Mark obtained:** 4.68**Top mark possible:** 5**Subject language:** Spanish**4** **Type of teaching:** Official teaching**Name of the course:** Statistics**Professional category:** Lecturer (Profesor Ayudante Doctor)**Type of programme:** Engineering**Type of teaching:** In person theory**Type of subject:** Core**Assessment type:** Survey**University degree:** Graduado o Graduada en Ingeniería de la Edificación



Course given: Second
Start date: 09/2017
End date: 02/2018
Hours/ECTS credits: 64
Entity: Universidad Politécnica de Madrid
Faculty, institute or centre: Escuela Técnica Superior de Edificación
Department: Applied Mathematics
Assessment type: Survey
Mark obtained: 4.25
Subject language: Spanish

End date: 02/2018
Type of hours/ ECTS credits: Hours
Type of entity: University
Top mark possible: 5

5 Type of teaching: Official teaching
Name of the course: Mathematics I (Linear Algebra)
Professional category: Lecturer (Profesor Ayudante Doctor)
Type of programme: Engineering
Type of subject: Core
Assessment type: Survey
University degree: Graduado o Graduada en Ingeniería de la Edificación
Course given: First
Start date: 09/2016
End date: 02/2017
Hours/ECTS credits: 32
Entity: Universidad Politécnica de Madrid
Faculty, institute or centre: Escuela Técnica Superior de Edificación
Department: Applied Mathematics
Assessment type: Survey
Mark obtained: 4.44
Subject language: Spanish

Type of teaching: In person theory
Type of hours/ ECTS credits: Hours

Type of entity: University

6 Type of teaching: Official teaching
Name of the course: Programming and mathematical modeling
Professional category: Lecturer (Profesor Ayudante Doctor)
Type of programme: Engineering
Type of subject: Core
Assessment type: Survey
University degree: Graduado o Graduada en Ingeniería Forestal
Course given: Second
Start date: 09/2016
End date: 02/2017
Hours/ECTS credits: 97
Entity: Universidad Politécnica de Madrid
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros de Montes
Department: Applied Mathematics
Assessment type: Survey
Mark obtained: 5.1
Subject language: Spanish

Type of teaching: In person theory

End date: 02/2017
Type of hours/ ECTS credits: Hours

Type of entity: University

Top mark possible: 6

7 Type of teaching: Official teaching
Name of the course: Introductory research activities
Professional category: Lecturer (Profesor Ayudante Doctor)
Type of programme: Engineering

Type of teaching: In person theory



Type of subject: Core
Assessment type: Survey
University degree: PhD program in mathematical engineering, statistics and operation research
Course given: Second
Start date: 23/01/2017
End date: 01/2017
Hours/ECTS credits: 24
Entity: Universidad Politécnica de Madrid
Faculty, institute or centre: Escuela Técnica Superior de Ingenieros Agrónomos
Department: Applied Mathematics
Assessment type: Survey
Subject language: Spanish

End date: 27/01/2017
Type of hours/ ECTS credits: Hours

Type of entity: University

8 **Type of teaching:** Official teaching
Name of the course: Mathematics I (Calculus, Differential Equations)
Professional category: Lecturer (Profesor Ayudante Doctor)
Type of programme: Engineering
Type of subject: Core
Assessment type: Survey
University degree: Graduado o Graduada en Ingeniería de la Edificación
Course given: First
Start date: 09/2015
End date: 02/2016
Hours/ECTS credits: 64
Entity: Universidad Politécnica de Madrid
Faculty, institute or centre: Escuela Técnica Superior de Edificación
Department: Applied Mathematics
Assessment type: Survey
Mark obtained: 4.59
Subject language: Spanish

Type of teaching: In person theory

End date: 02/2016
Type of hours/ ECTS credits: Hours

Type of entity: University

Top mark possible: 5

9 **Type of teaching:** Official teaching
Name of the course: Statistics
Professional category: Lecturer (Profesor Ayudante Doctor)
Type of programme: Engineering
Type of subject: Core
Assessment type: Survey
University degree: Graduado o Graduada en Ingeniería de la Edificación
Course given: Second
Start date: 09/2015
End date: 02/2016
Hours/ECTS credits: 64
Entity: Universidad Politécnica de Madrid
Faculty, institute or centre: Escuela Técnica Superior de Edificación
Department: Applied Mathematics
Assessment type: Survey
Mark obtained: 4.03
Subject language: Spanish

Type of teaching: In person theory

End date: 02/2016
Type of hours/ ECTS credits: Hours

Type of entity: University

Top mark possible: 5



10 **Type of teaching:** Official teaching
Name of the course: Linear Algebra II - Calculus II (Practice)
Professional category: Collaborator
Type of programme: Engineering **Type of teaching:** Practical work (classroom-problems)
Type of subject: Core
Assessment type: Survey
University degree: Ingeniero Industrial
Course given: First
Start date: 02/2008 **End date:** 09/2008
End date: 09/2008 **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: Mathematics
Assessment type: Survey
Mark obtained: 3.91 **Top mark possible:** 5
Subject language: Spanish

11 **Type of teaching:** Official teaching
Name of the course: Calculus II (Multivariate differential and integral calculus)
Professional category: Part-time professor
Type of programme: Engineering **Type of teaching:** In person theory
Type of subject: Core
Assessment type: Survey
University degree: Ingeniero Técnico Industrial Especialidad Mecánica
Course given: First
Start date: 02/2006 **End date:** 09/2006
End date: 09/2006 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 39
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Mathematics
Assessment type: Survey
Mark obtained: 3.45 **Top mark possible:** 5
Subject language: Spanish

12 **Type of teaching:** Official teaching
Name of the course: Linear Algebra II - Calculus II (Practice)
Professional category: Part-time professor
Type of programme: Engineering **Type of teaching:** Practical work (classroom-problems)
Type of subject: Core
Assessment type: Survey
University degree: Ingeniero Industrial
Course given: First
Start date: 02/2006 **End date:** 09/2006
End date: 09/2006 **Type of hours/ ECTS credits:** Hours
Hours/ECTS credits: 40
Entity: Universidad Carlos III de Madrid **Type of entity:** University
Faculty, institute or centre: Escuela Politécnica Superior
Department: Mathematics
Assessment type: Survey



Mark obtained: 4.04
Subject language: Spanish

Top mark possible: 5

13 **Type of teaching:** Official teaching
Name of the course: Numerical Analysis
Professional category: Part-time professor
Type of programme: Engineering
Type of subject: Obligatory
Assessment type: Survey
University degree: Ingeniero de Telecomunicación
Course given: Third
Start date: 02/2006
End date: 09/2006
Hours/ECTS credits: 8
Entity: Universidad Carlos III de Madrid
Faculty, institute or centre: Escuela Politécnica Superior
Department: Mathematics
Assessment type: Survey
Mark obtained: 3.07
Subject language: Spanish

Type of teaching: Practical work (classroom-problems)

End date: 09/2006

Type of hours/ ECTS credits: Hours

Type of entity: University

Top mark possible: 5

14 **Type of teaching:** Official teaching
Name of the course: Extension of Mathematics (Complex analysis and differential equations)
Professional category: Part-time professor
Type of programme: Engineering
Type of subject: Obligatory
Assessment type: Survey
University degree: Ingeniero de Telecomunicación
Course given: Second
Start date: 09/2005
End date: 02/2006
Hours/ECTS credits: 65
Entity: Universidad Carlos III de Madrid
Faculty, institute or centre: Escuela Politécnica Superior
Department: Mathematics
Assessment type: Survey
Mark obtained: 4.38
Subject language: Spanish

Type of teaching: In person theory

End date: 02/2006

Type of hours/ ECTS credits: Hours

Type of entity: University

Top mark possible: 5

15 **Type of teaching:** Official teaching
Name of the course: Numerical Analysis in Engineering
Professional category: Part-time professor
Type of programme: Engineering
Type of subject: Obligatory
Assessment type: Survey
University degree: Ingeniero Industrial
Course given: Fourth
Start date: 09/2005
End date: 02/2006
Hours/ECTS credits: 28
Entity: Universidad Carlos III de Madrid

Type of teaching: Laboratory work

End date: 02/2006

Type of hours/ ECTS credits: Hours

Type of entity: University



Faculty, institute or centre: Escuela Politécnica Superior
Department: Mathematics
Assessment type: Survey
Mark obtained: 2.80
Subject language: Spanish

Top mark possible: 5

16 **Type of teaching:** Official teaching

Name of the course: Mathematics III (Multivariate differential calculus and numerical analysis)

Professional category: Part-time professor

Type of programme: Engineering

Type of teaching: In person theory

Type of subject: Core

Assessment type: Survey

University degree: Ingeniero Técnico en Informática de Gestión

Course given: First

Start date: 02/2005

End date: 09/2005

End date: 09/2005

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 39

Entity: Universidad Carlos III de Madrid

Type of entity: University

Faculty, institute or centre: Escuela Politécnica Superior

Department: Mathematics

Assessment type: Survey

Mark obtained: 4.35

Top mark possible: 5

Subject language: Spanish

17 **Type of teaching:** Official teaching

Name of the course: Extension of Mathematics (Complex analysis and differential equations)

Professional category: Part-time professor

Type of programme: Engineering

Type of teaching: In person theory

Type of subject: Obligatory

Assessment type: Survey

University degree: Ingeniero de Telecomunicación

Course given: Second

Start date: 09/2004

End date: 02/2005

End date: 02/2005

Type of hours/ ECTS credits: Hours

Hours/ECTS credits: 39

Entity: Universidad Carlos III de Madrid

Type of entity: University

Faculty, institute or centre: Escuela Politécnica Superior

Department: Mathematics

Assessment type: Survey

Mark obtained: 4.13

Top mark possible: 5

Subject language: Spanish

18 **Type of teaching:** Official teaching

Name of the course: Numerical Analysis in Engineering

Professional category: Part-time professor

Type of programme: Engineering

Type of teaching: In person theory

Type of subject: Obligatory

Assessment type: Survey

University degree: Ingeniero Industrial

Course given: Fourth

Start date: 09/2004

End date: 02/2005

**End date:** 02/2005**Hours/ECTS credits:** 49**Entity:** Universidad Carlos III de Madrid**Faculty, institute or centre:** Escuela Politécnica Superior**Department:** Mathematics**Assessment type:** Survey**Mark obtained:** 4.25**Subject language:** Spanish**Type of hours/ ECTS credits:** Hours**Type of entity:** University**Top mark possible:** 5**19 Type of teaching:** Official teaching**Name of the course:** Mathematics III (Multivariate differential calculus and numerical analysis)**Professional category:** Part-time professor**Type of programme:** Engineering**Type of subject:** Core**Assessment type:** Survey**University degree:** Ingeniero Técnico en Informática de Gestión**Course given:** First**Start date:** 02/2004**End date:** 09/2004**Hours/ECTS credits:** 39**Entity:** Universidad Carlos III de Madrid**Faculty, institute or centre:** Escuela Politécnica Superior**Department:** Mathematics**Assessment type:** Survey**Mark obtained:** 3.10**Subject language:** Spanish**Type of teaching:** In person theory**End date:** 09/2004**Type of hours/ ECTS credits:** Hours**Type of entity:** University**Top mark possible:** 5**20 Type of teaching:** Official teaching**Name of the course:** Numerical Analysis**Professional category:** Part-time professor**Type of programme:** Engineering**Type of subject:** Obligatory**Assessment type:** Survey**University degree:** Ingeniero de Telecomunicación**Course given:** Third**Start date:** 02/2004**End date:** 09/2004**Hours/ECTS credits:** 28**Entity:** Universidad Carlos III de Madrid**Faculty, institute or centre:** Escuela Politécnica Superior**Department:** Mathematics**Assessment type:** Survey**Mark obtained:** 3.47**Subject language:** Spanish**Type of teaching:** In person theory**End date:** 09/2004**Type of hours/ ECTS credits:** Hours**Type of entity:** University**Top mark possible:** 5



Student tutorials

- 1 Name of the programme:** Teacher training
Entity: Universidad Complutense de Madrid, Facultad de Ciencias Matemáticas
Type of entity: University
Number of recognized hours/ECTS credits: 5
Number of tutored students: 1
- 2 Name of the programme:** Teacher training
Entity: Universidad Complutense de Madrid, Instituto de Ciencias de la Educación
Type of entity: University
Number of recognized hours/ECTS credits: 5
Number of tutored students: 1

Participation in innovative teaching projects

- 1 Project title:** Ex4maths as a personal learning environment in mathematics, statistics and computer programming
Type of participation: Principal investigator
Dedication regime: Part time
Name of the main researcher: Ana Luzon
Number of participants: 5
Amount awarded: 3.300 €
Funding entity: Universidad Politécnica de Madrid
Type of entity: University
Participating entity/entities:
Universidad Autónoma de Madrid
Type of entity: University
Universidad Complutense de Madrid
Type of entity: University
Type of call: Competitive
Geographical area: University
Start-End date: 01/01/2018 - 30/11/2018
Duration: 11 months
- 2 Project title:** Generating self-grading exercises
Type of participation: Team member
Dedication regime: Part time
Name of the main researcher: Ana Luzon
Number of participants: 5
Amount awarded: 3.300 €
Funding entity: Universidad Politécnica de Madrid
Type of entity: University
Participating entity/entities:
Universidad Autónoma de Madrid
Type of entity: University
Universidad Complutense de Madrid
Type of entity: University
Type of call: Competitive
Geographical area: University
Start-End date: 28/02/2017 - 31/10/2017
Duration: 8 months



- 3** **Project title:** Convivir es vivir: Modalidad II en el IES Altair
Type of participation: Team member
Dedication regime: Part time
Name of the main researcher: Carlos Ferrera
Number of participants: 10
Funding entity: Consejería de Educación, Comunidad de Madrid **Type of entity:** Regional public body
Type of call: Competitive
Geographical area: Regional
Start-End date: 30/11/2005 - 09/05/2006
- 4** **Project title:** +Culturas+=+Riqueza
Type of participation: Team member
Dedication regime: Part time
Name of the main researcher: Juan C. Girón
Number of participants: 20
Amount awarded: 1.500 €
Funding entity: Consejería de Educación, Comunidad de Madrid **Type of entity:** Regional public body
Type of call: Competitive
Geographical area: Regional
Start-End date: 12/03/2003 - 05/06/2003

Awards received for innovation in the field teaching

Name of the prize: Award for Teaching Innovation in High School Centres (Winner)
Awarding entity: Universidad Carlos III de Madrid **Type of entity:** University
Proposed by: IES Altair (Project entitled 'A teaching innovation project for acknowledging cultural diversity')
Conferral date: 07/06/2004

Most relevant contributions of your teaching CV

- 1** **Description:** 920 hours of teaching in Undergraduate Courses, with very positive evaluations (surveys)
Organising entity: Several entities: Universidad Carlos III de Madrid, Universidad Politécnica de Madrid **Type of entity:** University
End date: 07/2019
- 2** **Description:** Ex4maths exercise database for the 'Linear Algebra' Course (Degree on Forestry Engineering, UPM), 56 exercises
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
End date: 02/2019
- 3** **Description:** Outstanding teaching evaluation (Docencia program)
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
End date: 20/12/2018
- 4** **Description:** Talk at the Workshop 'Trends in teaching innovation at UPM'
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
End date: 13/09/2018



- 5** **Description:** Ex4maths exercise database for the 'Statistics' Course (Degree on Forestry Engineering, UPM), 137 exercises
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
End date: 09/2018
- 6** **Description:** On-line teaching materials (solved problems) for the 'Linear Algebra' Course (Degree on Building Engineering, UPM), 73 pages
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
End date: 02/2018
- 7** **Description:** On-line teaching materials for the 'Statistics' Course (Degree on Building Engineering, UPM), 65 pages
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
End date: 02/2018
- 8** **Description:** Ex4maths exercise database for the 'Mathematical modeling and programming' Course (Degree on Forestry Engineering, UPM), 142 exercises
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
End date: 02/2017
- 9** **Description:** On-line teaching materials (solved problems) for the 'Calculus' Course (Degree on Building Engineering, UPM), 41 pages
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
End date: 02/2016
- 10** **Description:** 65 months of teaching in High School Courses in Mathematics (53 months as a civil servant, Cuerpo de Profesores de Enseñanza Secundaria)
Organising entity: Consejería de Educación **Type of entity:** Public body
End date: 31/01/2007
- 11** **Description:** Outstanding teaching evaluation (subject taught: Extension of Mathematics)
Organising entity: Universidad Carlos III de Madrid **Type of entity:** University
End date: 21/04/2005
- 12** **Description:** Attendance to 11 courses for teaching skills improvement (541 hours overall)
Organising entity: Several entities: UPM, UCM, Comunidad de Madrid, y Ministerio de Educación, Cultura y Deporte
- 13** **Description:** Collaborator in the PhD Program in 'Mathematical Engineering, Statistics and Operation Research'
Organising entity: Universidad Complutense de Madrid **Type of entity:** University



Scientific and technological experience

Research and development groups/teams

- 1** **Name of the group:** Complex systems group
Aims of the group: Theoretical and computational analysis of complex systems (networks, non-linear dynamics, stochastic processes, and statistics)
Name of principal investigator: Rosa M. Benito
Type of collaboration: Co-authorship of publications
Affiliation entity: Universidad Politécnica de Madrid **Type of entity:** University
Start date: 29/10/2018
- 2** **Name of the group:** Expanding frontiers in ecological theory through microbial systems
Aims of the group: Theoretical approaches in ecology based on microbial communities
Name of principal investigator: Emilio O. Casamayor
Type of collaboration: Co-authorship of publications
Affiliation entity: Centro de Estudios Avanzados de Blanes **Type of entity:** State agency
Start date: 01/09/2014 **Duration:** 1 year - 1 month - 27 days
- 3** **Name of the group:** Statistical and non-linear physics
Name of principal investigator: Juan Manuel Rodríguez Parrondo
Affiliation entity: REAL SOCIEDAD ESPAÑOLA DE FÍSICA
Start date: 20/10/2010 **Duration:** 4 years - 2 months - 17 days
- 4** **Name of the group:** Physics of cooperation and conflict
Aims of the group: Understanding the promotion of cooperation in social systems
Name of principal investigator: Peter Richmond
Type of collaboration: Co-authorship of projects and their development
Affiliation entity: Trinity College **Type of entity:** University
Start date: 01/09/2008 **Duration:** 3 years

Scientific or technological activities

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

- 1** **Name of the project:** Connection empirical microbial ecology with theories for biodiversity organization in space and time
Geographical area: National
Degree of contribution: Researcher
Entity where project took place: Consejo Superior de Investigaciones Científicas **Type of entity:** State agency
City of entity: Blanes, Catalonia, Spain
Name principal investigator (PI, Co-PI...): Emilio Ortega Casamayor; David Alonso
Nº of researchers: 7
Funding entity or bodies:



Ministerio de economía y competitividad

Type of entity: Public research body

Code according to the funding entity: CGL2015-69043-P

Start-End date: 01/01/2016 - 31/12/2017

Total amount: 146.000 €

Dedication regime: Full time

- 2 Name of the project:** Development of theoretical community models for biodiversity and species distributions. A generalized site-occupancy approach

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: Consejo Superior de Investigaciones Científicas

Type of entity: State agency

City of entity: Blanes, Catalonia, Spain

Name principal investigator (PI, Co-PI....): David Alonso

Nº of researchers: 3

Funding entity or bodies:

Ministerio de economía y competitividad

Type of entity: Public research body

Code according to the funding entity: CGL2012-39964

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

Total amount: 105.000 €

Dedication regime: Full time

- 3 Name of the project:** Microbial ecology and the earth system: Collaborating for insight and success with the new generation of sequencing tools

Geographical area: European Union

Degree of contribution: Researcher

Entity where project took place: University of Newcastle

Type of entity: University

City of entity: Newcastle upon Tyne, United Kingdom

Name principal investigator (PI, Co-PI....): Tom Curtis

Nº of researchers: 176

Funding entity or bodies:

European Science Foundation

Type of entity: Foundation

City funding entity: Strasbourg, France

Name of the programme: COST Action

Code according to the funding entity: ES1103

Start-End date: 28/10/2011 - 27/10/2015

Total amount: 430.000 €

Dedication regime: Part time

Applicant's contribution: The action is subdivided into 5 working groups (WG). The applicant participates in the WG4, 'Expanding frontiers in ecological theory through microbial systems'.

- 4 Name of the project:** Dynamical evolutionary processes: Viruses, ecosystems and social behavior

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: Universidad Carlos III de Madrid

Type of entity: University

Name principal investigator (PI, Co-PI....): José A. Cuesta

Nº of researchers: 6

Funding entity or bodies:



Ministerio de Ciencia e Innovación

Type of entity: Public research body

City funding entity: Madrid, Community of Madrid, Spain

Code according to the funding entity: FIS2011-22449

Start-End date: 01/01/2012 - 30/06/2015

Total amount: 33.000 €

Dedication regime: Part time

5 Name of the project: Evolution of heterogeneous populations. Mechanisms for diversity generation and environmental effects on adaptation

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: Consejo Superior de Investigaciones Científicas

Type of entity: State agency

City of entity: Torrejón de Ardoz, Community of Madrid, Spain

Name principal investigator (PI, Co-PI....): Susanna Manrubia

Nº of researchers: 9

Funding entity or bodies:

Ministerio de Ciencia e Innovación

Type of entity: Public research body

City funding entity: Madrid, Community of Madrid, Spain

Code according to the funding entity: FIS2011-27569

Start-End date: 01/01/2012 - 30/06/2015

Total amount: 220.220 €

Dedication regime: Part time

6 Name of the project: Modeling and simulating complex systems (MODELICO-CM)

Geographical area: Regional

Degree of contribution: Researcher

Entity where project took place: Consejo Superior de Investigaciones Científicas

Type of entity: State agency

Name principal investigator (PI, Co-PI....): Enrique Lomba

Nº of researchers: 40

Funding entity or bodies:

Comunidad de Madrid

Type of entity: Public research body

City funding entity: Madrid, Community of Madrid, Spain

Code according to the funding entity: S2009/ESP-1691

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

Participating entity/entities: Centro de Astrobiología; Instituto de Ciencia de Materiales de Madrid ; Instituto de Química Física Rocasolano; Universidad Autónoma de Madrid; Universidad Carlos III de Madrid; Universidad Complutense de Madrid; Universidad Nacional de Educación a Distancia; Universidad Politécnica de Madrid

Total amount: 816.500 €

Dedication regime: Full time

7 Name of the project: Modeling, simulating and analyzing complex systems (MOSAICO)

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: Universidad Carlos III de Madrid

Type of entity: University

Name principal investigator (PI, Co-PI....): Ángel Sánchez

Nº of researchers: 32

**Funding entity or bodies:**

Ministerio de Educación y Ciencia

Type of entity: Public Research Body**City funding entity:** Madrid, Community of Madrid, Spain**Name of the programme:** Consolider programme**Code according to the funding entity:** FIS2006-01485**Start-End date:** 01/01/2006 - 30/06/2012**Participating entity/entities:** Universidad Carlos III de Madrid; Universidad Complutense de Madrid; Universidad Politécnica de Madrid; Universidad Pontificia Comillas**Total amount:** 474.320 €**Dedication regime:** Full time

8 Name of the project: Experiments, models and simulation of complex systems in physical, economic, social and biological phenomena

Geographical area: Regional**Degree of contribution:** Researcher**Entity where project took place:** Universidad Carlos III de Madrid **Type of entity:** University**Name principal investigator (PI, Co-PI...):** Esteban Moro**Nº of researchers:** 7**Funding entity or bodies:**

Universidad Carlos III de Madrid

Type of entity: University**City funding entity:** Getafe, Community of Madrid, Spain

Comunidad de Madrid

Type of entity: Public research body**City funding entity:** Madrid, Community of Madrid, Spain**Code according to the funding entity:** CCG10-UC3M/ESP-5555**Start-End date:** 01/01/2011 - 31/12/2011**Total amount:** 3.100 €**Dedication regime:** Part time

9 Name of the project: Physics of cooperation and conflict

Geographical area: European Union**Degree of contribution:** Researcher**Entity where project took place:** Trinity College **Type of entity:** University**City of entity:** Ireland**Name principal investigator (PI, Co-PI...):** Peter Richmond**Nº of researchers:** 71**Funding entity or bodies:**

European Science Foundation

Type of entity: Foundation**City funding entity:** Strasbourg, France**Name of the programme:** COST Action**Code according to the funding entity:** MP0801**Start-End date:** 01/09/2008 - 31/08/2011**Total amount:** 500.000 €**Dedication regime:** Part time

10 Name of the project: Dynamics and collective phenomena in socio-economic systems

Geographical area: National**Degree of contribution:** Researcher**Type of entity:** University



Entity where project took place: Universidad Carlos III de Madrid

Name principal investigator (PI, Co-PI....): Ángel Sánchez

Nº of researchers: 7

Funding entity or bodies:

Ministerio de Ciencia e Innovación

Type of entity: Public research body

City funding entity: Madrid, Community of Madrid, Spain

Name of the programme: Programa de Acciones Complementarias

Start-End date: 01/10/2008 - 31/12/2009

Total amount: 12.000 €

Dedication regime: Part time

11 Name of the project: Modeling and simulating heterogeneous systems in condensed matter (MOSSNOHO)

Geographical area: Regional

Degree of contribution: Researcher

Entity where project took place: Universidad Autónoma de Madrid

Type of entity: University

Name principal investigator (PI, Co-PI....): Guillermo Navascués

Nº of researchers: 30

Funding entity or bodies:

Comunidad de Madrid

Type of entity: Public research body

City funding entity: Madrid, Community of Madrid, Spain

Code according to the funding entity: S-0505/ESP/0299

Start-End date: 01/01/2006 - 31/12/2009

Total amount: 542.900 €

Dedication regime: Full time

12 Name of the project: Collective phenomena and complexity in surfaces at sub-micrometric and nanometric scales

Geographical area: Regional

Degree of contribution: Researcher

Entity where project took place: Universidad Carlos III de Madrid

Type of entity: University

Name principal investigator (PI, Co-PI....): Rodolfo Cuerno

Nº of researchers: 6

Funding entity or bodies:

Universidad Carlos III de Madrid

Type of entity: University

City funding entity: Getafe, Community of Madrid, Spain

Comunidad de Madrid

Type of entity: Public research body

City funding entity: Madrid, Community of Madrid, Spain

Code according to the funding entity: CCG06-UC3M/ESP-0668

Start-End date: 01/01/2007 - 29/02/2008

Total amount: 3.150 €

Dedication regime: Part time

13 Name of the project: Multidisciplinary study of complex systems in materials science, biology and social sciences

Geographical area: Regional

Degree of contribution: Researcher

Type of entity: University



Entity where project took place: Universidad Carlos III de Madrid

Name principal investigator (PI, Co-PI....): Ángel Sánchez

Nº of researchers: 10

Funding entity or bodies:

Universidad Carlos III de Madrid

Type of entity: University

City funding entity: Getafe, Community of Madrid, Spain

Comunidad de Madrid

Type of entity: Public research body

City funding entity: Madrid, Community of Madrid, Spain

Code according to the funding entity: UC3M-FI-05-007

Start-End date: 01/01/2006 - 31/12/2006

Total amount: 8.500 €

Dedication regime: Part time

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

Name of the project: SMOS End-to-End Performance Simulator (SEPS)

Geographical area: European Union

Degree of contribution: Researcher

Entity where project took place: Grupo de Mecánica del Vuelo

Type of entity: Business

Nº of researchers: 6

Participating entity/entities: EADS CASA; Grupo de Mecánica del Vuelo; Universitat Politècnica de Catalunya

Funding entity or bodies:

European Space Agency

City funding entity: Noordwijk, Holland

Code according to the funding entity: ESTEC contract number 14907/00/NL/SF

Start date: 01/12/2000

Duration: 1 year - 4 months

Scientific and technological activities

Scientific production

H index: 10

Date of application: 17/04/2016

Publications, scientific and technical documents

- 1** Vicente J. Ontiveros; José A. Capitán; Rohan; Emilio O. Casamayor; David. Colonization and extinction rates estimated from temporal dynamics of ecological communities: The island R package. *Methods in Ecology and Evolution*. In press, Wiley online library, 2019.

Type of production: Scientific paper

Position of signature: 2

Total no. authors: 5

Impact source: ISI

Impact index in year of publication: 6.363

Position of publication: 9

Relevant results: Accepted on March 4, 2019. The impact factor provided is the last one available (2017).

Relevant publication: Yes

Format: Journal

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

Corresponding author: No

Category: Ecology

Journal in the top 25%: Yes

No. of journals in the cat.: 160

- 2** Sara Cuenda; Maximiliano Fernandez; Javier Galeano; Jose A. Capitan. A minimal agent-based model reproduces the overall topology of interbank networks. *Journal of Artificial Societies and Social Simulation*. European Social Simulation Association, 2018. Available on-line at: <<https://10.18564/jasss.3562>>.

Type of production: Scientific paper

Position of signature: 4

Corresponding author: No

Impact source: ISI

Impact index in year of publication: 0.992

Position of publication: 46

Source of citations: WOS

Source of citations: Google scholar

Relevant publication: Yes

Format: Journal

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

Category: Social Sciences Edition - SOCIAL SCIENCES, INTERDISCIPLINARY

Journal in the top 25%: No

No. of journals in the cat.: 96

Citations: 0

Citations: 1

- 3** Carlos A. Serván; José A. Capitán; Jacopo; Kent E. Morrison; Stefano. Coexistence of many species in random ecosystems. *Nature Ecology and Evolution*. 2 - 8, pp. 1237 - 1242. Nature Publishing Group, 2018. Available on-line at: <<https://doi.org/10.1038/s41559-018-0603-6>>.

Type of production: Scientific paper

Position of signature: 2

Total no. authors: 5

Source of citations: WOS

Format: Journal

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

Corresponding author: No

Citations: 2

**Source of citations:** Google scholar**Citations:** 2**Relevant results:** Equal contribution with the first author (as explicitly mentioned in the paper). A News & Views piece by Shaopen Wang in Nature Ecology and Evolution accompany the paper. This work was highlighted in Nature Physics by Federico Levi. This paper was also mentioned in an article in Quanta Magazine. The journal was launched in 2017, so the impact factor is not available yet.**Reviews in journals:** 2**Relevant publication:** Yes

- 4** Jose A. Capitan; Sara Cuenda; David Alonso. Stochastic competitive exclusion leads to a cascade of species extinctions. Journal of Theoretical Biology. 419, pp. 137 - 151. Elsevier, 2017. Available on-line at: <<https://doi.org/10.1016/j.jtbi.2017.02.007>>.

Type of production: Scientific paper**Position of signature:** 1**Format:** Journal**Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee**Corresponding author:** Yes**Impact source:** ISI**Category:** Science Edition - MATHEMATICAL & COMPUTATIONAL BIOLOGY**Impact index in year of publication:** 2.260**Journal in the top 25%:** Yes**Position of publication:** 10**No. of journals in the cat.:** 52**Source of citations:** WOS**Citations:** 0**Source of citations:** Google scholar**Citations:** 2**Relevant publication:** Yes

- 5** Jose A. Capitan; Sara Cuenda; David Alonso. How similar can co-occurring species be in the presence of competition and ecological drift?. Journal of the Royal Society Interface. 12 - 110, pp. 20150604. 2015. Available on-line at: <<http://dx.doi.org/10.1098/rspb.2014.2947>>.

Type of production: Scientific paper**Position of signature:** 1**Format:** Journal**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee**Corresponding author:** Yes**Impact source:** ISI**Category:** Science Edition - MULTIDISCIPLINARY SCIENCES**Impact index in year of publication:** 3.92**Journal in the top 25%:** Yes**Position of publication:** 7**No. of journals in the cat.:** 57**Source of citations:** WOS**Citations:** 2**Source of citations:** Google scholar**Citations:** 10**Relevant publication:** Yes

- 6** Jose A. Capitan; Jacob B. Axelsen; Susanna Manrubia. New patterns in human biogeography revealed by networks of contacts between linguistic groups. Proceedings of the Royal Society B. 282, pp. 20142947. 2015. Available on-line at: <<http://dx.doi.org/10.1098/rspb.2014.2947>>.

Type of production: Scientific paper**Position of signature:** 1**Format:** Journal**Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee**Impact source:** ISI**Category:** Science Edition - ECOLOGY**Impact index in year of publication:** 5.292**Journal in the top 25%:** Yes**Position of publication:** 16**No. of journals in the cat.:** 141

**Source of citations:** WOS**Citations:** 4**Source of citations:** Google scholar**Citations:** 6**Reviews in journals:** 4**Relevant publication:** Yes

- 7** Jose A. Capitan; Alex Arenas; Roger Guimera. Degree of intervality of food webs: From body-size data to models. *Journal of Theoretical Biology*. 334, pp. 35 - 44. 2013. Available on-line at: <<http://dx.doi.org/10.1016/j.jtbi.2013.06.004>>.

Type of production: Scientific paper**Format:** Journal**Position of signature:** 1**Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee**Impact source:** ISI**Category:** Science Edition - MATHEMATICAL & COMPUTATIONAL BIOLOGY**Impact index in year of publication:** 2.303**Journal in the top 25%:** Yes**Position of publication:** 10**No. of journals in the cat.:** 52**Source of citations:** WOS**Citations:** 8**Source of citations:** Google scholar**Citations:** 19**Relevant publication:** Yes

- 8** Jose A. Capitan; Javier Borge-Holthoefer; Sergio Gomez; Juan Martinez-Romo; Lourdes Araujo; Jose A. Cuesta; Alex Arenas. Local-based semantic navigation on a networked representation of information. *Plos One*. 7 - 8, pp. e43694. 2012. Available on-line at: <<http://dx.doi.org/10.1371/journal.pone.0043694>>.

Type of production: Scientific paper**Format:** Journal**Position of signature:** 1**Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee**Impact source:** ISI**Category:** Science Edition - MULTIDISCIPLINARY SCIENCES**Impact index in year of publication:** 3.730**Journal in the top 25%:** Yes**Position of publication:** 7**No. of journals in the cat.:** 56**Source of citations:** WOS**Citations:** 11**Source of citations:** Google scholar**Citations:** 18**Relevant publication:** Yes

- 9** Jose A. Capitan; Jose A. Cuesta; Jordi Bascompte. Species assembly in model ecosystems, II: Results of the assembly process. *Journal of Theoretical Biology*. 269 - 1, pp. 344 - 355. 2011. Available on-line at: <<http://dx.doi.org/10.1016/j.jtbi.2010.10.031>>.

Type of production: Scientific paper**Format:** Journal**Position of signature:** 1**Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee**Impact source:** ISI**Category:** Science Edition - MATHEMATICAL & COMPUTATIONAL BIOLOGY**Impact index in year of publication:** 2.208**Journal in the top 25%:** Yes**Position of publication:** 11**No. of journals in the cat.:** 47**Source of citations:** WOS**Citations:** 7



Source of citations: Google scholar

Citations: 14

Reviews in journals: 4

Relevant publication: Yes

- 10** Jose A. Cuesta; Jacobo Aguirre; Jose A. Capitan; Susanna C. Manrubia. Struggle for space: Viral extinction through competition for cells. *Physical Review Letters*. 106 - 2, pp. 028104. 2011. Available on-line at: <<http://dx.doi.org/10.1103/PhysRevLett.106.028104>>.

Type of production: Scientific paper

Format: Journal

Position of signature: 3

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

Impact source: ISI

Category: Science Edition - PHYSICS, MULTIDISCIPLINARY

Impact index in year of publication: 7.370

Journal in the top 25%: Yes

Position of publication: 5

No. of journals in the cat.: 84

Source of citations: WOS

Citations: 12

Source of citations: Google scholar

Citations: 17

Relevant publication: Yes

- 11** Jose A. Capitan; Gustav W. Delius. Scale-invariant model of marine population dynamics. *Physical Review E*. 81 - 6, pp. 061901. 2010. Available on-line at: <<http://dx.doi.org/10.1103/PhysRevE.81.061901>>.

Type of production: Scientific paper

Format: Journal

Position of signature: 1

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

Impact source: ISI

Category: Science Edition - PHYSICS, MATHEMATICAL

Impact index in year of publication: 2.352

Journal in the top 25%: Yes

Position of publication: 4

No. of journals in the cat.: 54

Source of citations: WOS

Citations: 139

Source of citations: Google scholar

Citations: 22

Relevant publication: Yes

- 12** Jose A. Capitan; Jose A. Cuesta; Jordi Bascompte. Statistical mechanics of ecosystem assembly. *Physical Review Letters*. 103 - 16, pp. 168101. 2009. Available on-line at: <<http://dx.doi.org/10.1103/PhysRevLett.103.168101>>.

Type of production: Scientific paper

Format: Journal

Position of signature: 1

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

Impact source: ISI

Category: Science Edition - PHYSICS, MULTIDISCIPLINARY

Impact index in year of publication: 7.328

Journal in the top 25%: Yes

Position of publication: 6

No. of journals in the cat.: 71

Source of citations: WOS

Citations: 14

Source of citations: Google scholar

Citations: 24

Relevant publication: Yes

- 13** Jose A. Capitan; Susanna Manrubia. Demography-based adaptive network model reproduces the spatial organization of human linguistic groups. *Physical Review E*. 92, pp. 062811. 2015.
Type of production: Scientific paper
Position of signature: 1
Total no. authors: 2
Impact source: ISI
Impact index in year of publication: 2.326
Position of publication: 6
Source of citations: WOS
Source of citations: Google Scholar
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Corresponding author: Yes
Category: Science Edition - PHYSICS, MATHEMATICAL
Journal in the top 25%: Yes
No. of journals in the cat.: 55
Citations: 1
Citations: 2
- 14** Jose A. Capitan; Jacobo Aguirre; Susanna Manrubia. Dynamical community structure of populations evolving on genotype networks. *Chaos, solitons and fractals*. 72, pp. 99 - 106. 2015.
Type of production: Scientific paper
Position of signature: 1
Corresponding author: No
Impact source: ISI
Impact index in year of publication: 1.503
Position of publication: 27
Source of citations: WOS
Source of citations: Google scholar
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Category: Science Edition - MATHEMATICS, INTERDISCIPLINARY APPLICATIONS
Journal in the top 25%: No
No. of journals in the cat.: 95
Citations: 2
Citations: 3
- 15** Veronica I. Marconi; Alejandro B. Kolton; Jose A. Capitan; Jose A. Cuesta; Alejandro Perez-Junquera; Maria Velez; J. I. Martin; Juan M. R. Parrondo. Crossed-ratchet effects and domain wall geometrical pinning. *Physical Review B*. 83 - 21, pp. 214403. 2011. Available on-line at: <<http://dx.doi.org/10.1103/PhysRevB.83.214403>>.
Type of production: Scientific paper
Position of signature: 3
Impact source: ISI
Impact index in year of publication: 3.691
Position of publication: 13
Source of citations: WOS
Source of citations: Google scholar
Format: Journal
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee
Category: Science Edition - PHYSICS, CONDENSED MATTER
Journal in the top 25%: Yes
No. of journals in the cat.: 69
Citations: 7
Citations: 6
- 16** Juan Martinez-Romo; Lourdes Araujo; Javier Borge-Holthoefer; Alex Arenas; Jose A. Capitan; Jose A. Cuesta. Disentangling categorical relationships through a graph of co-occurrences. *Physical Review E*. 84 - 4, pp. 046108. 2011. Available on-line at: <<http://dx.doi.org/10.1103/PhysRevE.84.046108>>.
Type of production: Scientific paper
Position of signature: 5
Impact source: ISI
Format: Journal
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee

**Impact index in year of publication:** 2.255**Position of publication:** 6**Source of citations:** WOS**Source of citations:** Google scholar**Category:** Science Edition - PHYSICS, MATHEMATICAL**Journal in the top 25%:** Yes**No. of journals in the cat.:** 55**Citations:** 12**Citations:** 15

- 17** Jose A. Capitan; Jose A. Cuesta; Susanna C. Manrubia; Jacobo Aguirre. Severe hindrance of viral infection propagation in spatially extended hosts. Plos One. 6 - 8, pp. e23358. 2011. Available on-line at: <<http://dx.doi.org/10.1371/journal.pone.0023358>>.

Type of production: Scientific paper**Position of signature:** 1**Format:** Journal**Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee**Impact source:** ISI**Impact index in year of publication:** 4.092**Position of publication:** 12**Source of citations:** WOS**Source of citations:** Google scholar**Category:** Science Edition - BIOLOGY**Journal in the top 25%:** Yes**No. of journals in the cat.:** 85**Citations:** 5**Citations:** 8

- 18** Jose A. Capitan; Jose A. Cuesta. Species assembly in model ecosystems, I: Analysis of the population model and the invasion dynamics. Journal of Theoretical Biology. 269 - 1, pp. 330 - 343. 2011. Available on-line at: <<http://dx.doi.org/10.1016/j.jtbi.2010.09.032>>.

Type of production: Scientific paper**Position of signature:** 1**Format:** Journal**Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee**Impact source:** ISI**Impact index in year of publication:** 2.208**Position of publication:** 11**Source of citations:** WOS**Source of citations:** Google scholar**Category:** Science Edition - MATHEMATICAL & COMPUTATIONAL BIOLOGY**Journal in the top 25%:** Yes**No. of journals in the cat.:** 47**Citations:** 11**Citations:** 15

- 19** Jose A. Capitan; Jose A. Cuesta. Catastrophic regime shifts in model ecological communities are true phase transitions. Journal of Statistical Mechanics-Theory and Experiment. 10, pp. P10003. 2010. Available on-line at: <<http://dx.doi.org/10.1088/1742-5468/2010/10/P10003>>.

Type of production: Scientific paper**Position of signature:** 1**Format:** Journal**Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee**Impact source:** ISI**Impact index in year of publication:** 1.822**Position of publication:** 22**Source of citations:** WOS**Source of citations:** Google scholar**Category:** Science Edition - MECHANICS**Journal in the top 25%:** Yes**No. of journals in the cat.:** 133**Citations:** 3**Citations:** 5

- 20** Noe G. Almarza; Jose A. Capitan; Jose A. Cuesta; Enrique Lomba. Phase diagram of a two-dimensional lattice gas model of a ramp system. *Journal of Chemical Physics*. 131 - 12, pp. 124506. 2009. Available on-line at: <<http://dx.doi.org/10.1063/1.3223999>>.
- Type of production:** Scientific paper
Position of signature: 2
- Impact source:** ISI
- Impact index in year of publication:** 3.093
Position of publication: 6
- Source of citations:** WOS
Source of citations: Google scholar
- Format:** Journal
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee
Category: Science Edition - PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Journal in the top 25%: Yes
No. of journals in the cat.: 33
Citations: 24
Citations: 32
- 21** Yuri Martinez-Raton; Jose A. Capitan; Jose A. Cuesta. Fundamental-measure density functional for mixtures of parallel hard cylinders. *Physical Review E*. 77 - 5, pp. 051205. 2008. Available on-line at: <<http://dx.doi.org/10.1103/PhysRevE.77.051205>>.
- Type of production:** Scientific paper
Position of signature: 2
- Impact source:** ISI
- Impact index in year of publication:** 2.508
Position of publication: 6
- Source of citations:** WOS
Source of citations: Google scholar
- Format:** Journal
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee
Category: Science Edition - PHYSICS, MATHEMATICAL
Journal in the top 25%: Yes
No. of journals in the cat.: 46
Citations: 24
Citations: 29
- 22** Jose A. Capitan; Yuri Martinez-Raton; Jose A. Cuesta. Phase behavior of parallel hard cylinders. *Journal of Chemical Physics*. 128 - 19, pp. 194901. 2008. Available on-line at: <<http://dx.doi.org/10.1063/1.2920481>>.
- Type of production:** Scientific paper
Position of signature: 1
- Impact source:** ISI
- Impact index in year of publication:** 3.149
Position of publication: 5
- Source of citations:** WOS
Source of citations: Google scholar
Reviews in journals: 1
- Format:** Journal
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee
Category: Science Edition - PHYSICS, ATOMIC, MOLECULAR & CHEMICAL
Journal in the top 25%: Yes
No. of journals in the cat.: 31
Citations: 24
Citations: 27
- 23** Jose A. Capitan; Jose A. Cuesta. Fundamental-measure density functional for the fluid of aligned hard hexagons: Further insights in fundamental measure theory. *Physical Review E*. 76 - 1, pp. 011403. 2007. Available on-line at: <<http://dx.doi.org/10.1103/PhysRevE.76.011403>>.
- Type of production:** Scientific paper
Position of signature: 1
- Format:** Journal

**Impact source:** ISI**Impact index in year of publication:** 2.483**Position of publication:** 4**Source of citations:** WOS**Source of citations:** Google scholar**Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee**Category:** Science Edition - PHYSICS, MATHEMATICAL**Journal in the top 25%:** Yes**No. of journals in the cat.:** 43**Citations:** 6**Citations:** 8

- 24** Jose L. Alonso; Jose A. Capitan; Luis A. Fernandez; Francisco Guinea; Victor Martin-Mayor. Monte Carlo determination of the phase diagram of the double-exchange model. *Physical Review B*. 64 - 5, pp. 054408. 2001. Available on-line at: <<http://dx.doi.org/10.1103/PhysRevB.64.054408>>.

Type of production: Scientific paper**Position of signature:** 2**Impact source:** ISI**Impact index in year of publication:** 3.070**Position of publication:** 4**Source of citations:** WOS**Source of citations:** Google scholar**Format:** Journal**Degree of contribution:** Author or co-author of article in journal without external admissions assessment committee**Category:** Science Edition - PHYSICS, ATOMIC, MOLECULAR & CHEMICAL**Journal in the top 25%:** Yes**No. of journals in the cat.:** 33**Citations:** 34**Citations:** 45

- 25** Jose A. Capitan; Susanna Manrubia. The ecology of human linguistic groups. *Frontiers in Ecology, Evolution and Complexity*. pp. 255 - 264. Mexico(Mexico): Universidad Autónoma de México and Copit arXives, 2014. Available on-line at: <<http://scifunam.fisica.unam.mx/mir/copit/TS0012EN/TS0012EN.html>>. ISBN 978-1-938128-05-9

Type of production: Book chapter**Position of signature:** 1**Source of citations:** Google scholar**Format:** Book**Degree of contribution:** Author or co-author of chapter in book**Citations:** 0

- 26** Jose A. Capitan. Self-organization in Biology: From quasi-species to ecosystems. Leganes, Community of Madrid(Spain): Universidad Carlos III de Madrid, e-Archivo, 2010.

Handle: <http://hdl.handle.net/10016/10294>**Type of production:** PhD Thesis**Degree of contribution:** Author or co-author of entire book**Source of citations:** Google scholar**Format:** Book**Citations:** 0

Works submitted to national or international conferences

- 1** **Title of the work:** Coexistence of many species in large ecosystems: The problem of the random zoo
Name of the conference: XXXIV Mediterranean Scientific Meetings 'Josep Miquel Vidal' on 'Physics and Ecology: Challenges at the frontier'
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Mahón, Menorca, Balearic Islands, Spain



Date of event: 11/10/2018
End date: 13/07/2017
Organising entity: INSTITUT MENORQUI D'ESTUDIS
Jose A. Capitan.

- 2** **Title of the work:** Stochastic birth-death processes and differential Galois theory
Name of the conference: International conference on algebraic methods in dynamical systems AMDS2018
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - invited/keynote talk
City of event: Madrid, Community of Madrid, Spain
Date of event: 19/06/2018
End date: 13/07/2017
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
Jose A. Capitan; Juan J. Morales-Ruiz.
- 3** **Title of the work:** Unveiling environmental thresholds for local community assembly rules along a regional salinity gradient
Name of the conference: XV Meeting of the National Network for Extremophile Organisms
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Matalascañas, Huelva, Andalusia, Spain
Date of event: 23/05/2018
End date: 13/07/2017
Organising entity: National Network for Extremophile Organisms
Xavier Triado-Margarit; Jose A. Capitan; Rudiger Ortiz-Alvarez; Vicente Jimenez-Ontiveros; Menéndez-Serra Mateu; David Alonso; Emilio O. Casamayor.
- 4** **Title of the work:** Bridging the gap between empirical microbial ecology and theories of biodiversity organization in space and time
Name of the conference: FEMS microbiology congress
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - poster
City of event: Valencia, Valencian Community, Spain
Date of event: 09/07/2017
End date: 13/07/2017
Organising entity: Federation of European Microbiological Societies
Emilio O. Casamayor; David Alonso; Jose A. Capitan; Xavier Triado-Margarit; Caliz Joan; Rudiger Ortiz-Alvarez; Vicente Jimenez-Ontiveros.
- 5** **Title of the work:** Testing competition through macro-ecological data
Name of the conference: 100th Ecological Society of America Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Baltimore, United States of America
Date of event: 10/08/2015
End date: 15/08/2015
Organising entity: Ecological Society of America **Type of entity:** Associations and Groups
Jose A. Capitan; Vicente Jimenez; Alejandro Ordoñez; David Alonso.



- 6** **Title of the work:** Colonization-extinction signatures in microbial communities
Name of the conference: COST Action ES1103, Working Group 4: Expanding frontiers in ecological theory through microbial systems
Type of event: Workshop **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Amsterdam, Holland
Date of event: 10/11/2014
End date: 12/11/2014
Organising entity: University of Amsterdam **Type of entity:** University
Emilio O. Casamayor; Jose A. Capitan; Vicente Jimenez; David Alonso.
- 7** **Title of the work:** Networks of contacting linguistic domains
Name of the conference: Interacting populations on social, economic and ecological networks. Special Session on 10th AIMS Conference on Dynamical Systems, Differential Equations and Applications
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Madrid, Community of Madrid, Spain
Date of event: 10/07/2014
End date: 11/07/2014
Organising entity: Instituto de Ciencias Matemáticas **Type of entity:** State agency
Jose A. Capitan; Jacob B. Axelsen; Susanna Manrubia.
- 8** **Title of the work:** Genotype networks of model proteins
Name of the conference: IV Meeting of the Spanish Society for Evolutionary Biology
Type of event: Conference **Geographical area:** European Union
Type of participation: 'Participatory - poster
City of event: Barcelona, Catalonia, Spain
Date of event: 27/11/2013
End date: 29/11/2013
Organising entity: Sociedad Española de Biología Evolutiva
Jose A. Capitan; Susanna Manrubia.
- 9** **Title of the work:** Networks of neighboring linguistic groups
Name of the conference: European Conference on Complex Systems ECCS'13
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Barcelona, Catalonia, Spain
Date of event: 16/09/2013
End date: 20/09/2013
Organising entity: The Complex Systems Society **Type of entity:** Associations and Groups
Jose A. Capitan; Jacob B. Axelsen; Susanna Manrubia.
- 10** **Title of the work:** Spatial constraints in the distribution of linguistic diversity
Name of the conference: XXXIII Dynamics Days Europe
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: Madrid, Community of Madrid, Spain
Date of event: 03/06/2013
End date: 07/06/2013
Type of entity: University



Organising entity: Universidad Politécnica de Madrid
Jose A. Capitan; Jacob B. Axelsen; Susanna Manrubia.

- 11 Title of the work:** Role of space in the distribution of linguistic diversity
Name of the conference: 5th MODELICO Workshop
Type of event: Workshop **Geographical area:** Regional
Type of participation: Participatory - oral communication
City of event: Madrid, Community of Madrid, Spain
Date of event: 05/11/2012
Organising entity: Universidad Politécnica de Madrid **Type of entity:** University
Jose A. Capitan; Jacob B. Axelsen; Susanna Manrubia.
- 12 Title of the work:** Stochasticity and competitive exclusion in ecological communities
Name of the conference: XVIII Conference on Statistical Physics FisEs'12
Type of event: Conference **Geographical area:** National
Type of participation: Participatory - poster
City of event: Palma de Mallorca, Balearic Islands, Spain
Date of event: 18/10/2012
End date: 20/10/2012
Organising entity: Instituto de Física Interdisciplinar y Sistemas Complejos **Type of entity:** State agency
Jose A. Capitan; Sara Cuenda; David Alonso.
- 13 Title of the work:** The stochastic nature of the competitive exclusion principle
Name of the conference: 97th Ecological Society of America Annual Meeting
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Portland (OR), United States of America
Date of event: 05/08/2012
End date: 10/08/2012
Organising entity: Ecological Society of America **Type of entity:** Associations and Groups
Jose A. Capitan; Sara Cuenda; David Alonso.
- 14 Title of the work:** Semantic disambiguation through a graph of co-occurrences
Name of the conference: NoLineal 2012
Type of event: Conference **Geographical area:** National
Type of participation: Participatory - oral communication
City of event: Zaragoza, Aragon, Spain
Date of event: 02/06/2012
End date: 04/06/2012
Organising entity: Universidad de Zaragoza **Type of entity:** University
Jose A. Capitan; Juan Martinez-Romo; Lourdes Araujo; Javier Borge-Holthoefer; Alex Arenas; Jose A. Cuesta.
- 15 Title of the work:** Catastrophic regime shifts in model ecosystems as true phase transitions
Name of the conference: Workshop on Critical Transitions in Complex Systems
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication
City of event: London, United Kingdom



Date of event: 19/03/2012

End date: 23/03/2012

Organising entity: Imperial College

Type of entity: University

City organizing entity: London, United Kingdom

Jose A. Capitan.

- 16** **Title of the work:** Struggle for space: A new mechanism to viral extinction
Name of the conference: European Conference on Complex Systems ECCS'11
Type of event: Conference **Geographical area:** European Union
Type of participation: 'Participatory - poster
City of event: Viena, Austria
Date of event: 12/09/2011
End date: 16/09/2011
Organising entity: The Complex Systems Society **Type of entity:** Associations and Groups
Jacobo Aguirre; Susanna C. Manrubia; Jose A. Cuesta; Jose A. Capitan.
- 17** **Title of the work:** Scale invariance in marine population dynamics
Name of the conference: XVII Conference on Statistical Physics FisEs'11
Type of event: Conference **Geographical area:** National
Type of participation: 'Participatory - poster
City of event: Barcelona, Catalonia, Spain
Date of event: 02/06/2011
End date: 04/06/2011
Organising entity: Universitat de Barcelona **Type of entity:** University
Jose A. Capitan; Gustav W. Delius.
- 18** **Title of the work:** Struggle for space: Viral extinction through competition for cells
Name of the conference: XI National Conference on Virology
Type of event: Conference **Geographical area:** National
Type of participation: Participatory - oral communication
City of event: Granada, Andalusia, Spain
Date of event: 29/05/2011
End date: 01/06/2011
Organising entity: Sociedad Española de Virología **Type of entity:** Associations and Groups
Jose A. Capitan; Jacobo Aguirre; Jose A. Cuesta; Susanna C. Manrubia.
- 19** **Title of the work:** Mathematical modeling of robust ecological communities
Name of the conference: Workshop of Young Researchers in Mathematics
Type of event: Workshop **Geographical area:** Non EU International
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Madrid, Community of Madrid, Spain
Date of event: 22/09/2010
End date: 24/09/2010
Organising entity: Universidad Complutense de Madrid **Type of entity:** University
Jose A. Capitan; Jose A. Cuesta; Jordi Bascompte.
- 20** **Title of the work:** A scale-invariant model of marine population dynamics
Name of the conference: Conference on Computational and Mathematical Population Dynamics
Type of event: Workshop **Geographical area:** European Union



Type of participation: Participatory - oral communication

City of event: Bordeaux, France

Date of event: 31/05/2010

End date: 04/06/2010

Organising entity: Universite de Bordeaux

Jose A. Capitan; Gustav W. Delius.

Type of entity: University

- 21** **Title of the work:** A percolation theory for viral extinctions
Name of the conference: 150 years after Darwin: From Molecular Evolution to Language
Type of event: Conference **Geographical area:** Non EU International
Type of participation: 'Participatory - poster
City of event: Palma de Mallorca, Balearic Islands, Spain
Date of event: 23/11/2009
End date: 27/11/2009
Organising entity: Instituto de Física Interdisciplinar y Sistemas Complejos **Type of entity:** State agency
Jose A. Capitan; Jacobo Aguirre; Jose A. Cuesta; Susanna C. Manrubia.
- 22** **Title of the work:** A percolation theory for viral extinctions
Name of the conference: XVI Conference on Statistical Physics FisEs'09
Type of event: Conference **Geographical area:** National
Type of participation: 'Participatory - poster
City of event: Huelva, Andalusia, Spain
Date of event: 10/09/2009
End date: 12/09/2009
Organising entity: Universidad de Huelva **Type of entity:** University
Jose A. Capitan; Jacobo Aguirre; Jose A. Cuesta; Susanna C. Manrubia.
- 23** **Title of the work:** Quasi-ecosystems and catastrophic extinctions
Name of the conference: XVI Conference on Statistical Physics FisEs'09
Type of event: Conference **Geographical area:** National
Type of participation: Participatory - oral communication
City of event: Huelva, Andalusia, Spain
Date of event: 10/09/2009
End date: 12/09/2009
Organising entity: Universidad de Huelva **Type of entity:** University
Jose A. Capitan; Jose A. Cuesta; Jordi Bascompte.
- 24** **Title of the work:** Quasi-ecosystems and catastrophic extinctions
Name of the conference: 3rd MOSSNOHO Workshop
Type of event: Workshop **Geographical area:** Regional
Type of participation: Participatory - oral communication
City of event: Madrid, Community of Madrid, Spain
Date of event: 16/06/2009
Organising entity: Universidad Complutense de Madrid **Type of entity:** University
Jose A. Capitan; Jose A. Cuesta.
- 25** **Title of the work:** Ecosystem assembly described as a Markov chain
Name of the conference: Stochastic Models in Physics, Biology and Social Sciences
Type of event: Workshop **Geographical area:** National



Type of participation: Participatory - invited/keynote talk **Reasons for participation:** Upon invitation

City of event: Carmona, Andalusia, Spain

Date of event: 12/02/2009

End date: 14/02/2009

Organising entity: Universidad de Sevilla

Jose A. Capitan; Jose A. Cuesta; Jordi Bascompte.

Type of entity: University

26 Title of the work: An exactly solvable model for theoretical ecosystem assembly

Name of the conference: British Ecological Society Annual Meeting

Type of event: Conference

Geographical area: European Union

Type of participation: Participatory - oral communication

City of event: London, United Kingdom

Date of event: 03/09/2008

End date: 05/09/2008

Organising entity: British Ecological Society

Jose A. Capitan; Jose A. Cuesta.

Type of entity: Associations and Groups

27 Title of the work: Fundamental Measure functional for mixtures of parallel hard cylinders

Name of the conference: 2nd MOSSNOHO Workshop

Type of event: Workshop

Geographical area: Regional

Type of participation: Participatory - oral communication

City of event: Leganes, Community of Madrid, Spain

Date of event: 30/05/2008

Organising entity: Universidad Carlos III de Madrid

Jose A. Capitan; Yuri Martinez-Raton; Jose A. Cuesta.

Type of entity: University

28 Title of the work: Evolutionary dynamics of ecosystems

Name of the conference: XV Conference on Statistical Physics FisEs'08

Type of event: Conference

Geographical area: National

Type of participation: Participatory - poster

City of event: Salamanca, Castile and León, Spain

Date of event: 27/03/2008

End date: 29/03/2008

Organising entity: Universidad de Salamanca

Jose A. Capitan; Jose A. Cuesta.

Type of entity: University

29 Title of the work: Fundamental Measure functional for mixtures of parallel hard cylinders

Name of the conference: XV Conference on Statistical Physics FisEs'08

Type of event: Conference

Geographical area: National

Type of participation: Participatory - poster

City of event: Salamanca, Castile and León, Spain

Date of event: 27/03/2008

End date: 29/03/2008

Organising entity: Universidad de Salamanca

Jose A. Capitan; Yuri Martinez-Raton; Jose A. Cuesta.

Type of entity: University

30 Title of the work: Evolutionary dynamics of ecosystems

Name of the conference: 5rd GISC Workshop

Type of event: Workshop

Geographical area: Regional

Type of participation: Participatory - oral communication



City of event: Madrid, Community of Madrid, Spain

Date of event: 13/02/2008

Organising entity: Universidad Pontificia Comillas **Type of entity:** University
Jose A. Capitan; Jose A. Cuesta; Jordi Bascompte.

31 Title of the work: Fundamental Measure Theory revisited: The model of parallel hard hexagons

Name of the conference: XIV Conference on Statistical Physics FisEs'06

Type of event: Conference

Geographical area: National

Type of participation: 'Participatory - poster

City of event: Granada, Andalusia, Spain

Date of event: 14/09/2006

End date: 16/09/2006

Organising entity: Universidad Carlos III de Madrid **Type of entity:** University
Jose A. Capitan; Jose A. Cuesta.

32 Title of the work: Why have we calculated a functional for parallel hard hexagons?

Name of the conference: 3rd GISC Workshop

Type of event: Workshop

Geographical area: Regional

Type of participation: Participatory - oral communication

City of event: Alcala de Henares, Community of Madrid, Spain

Date of event: 25/01/2006

Organising entity: Universidad Carlos III de Madrid **Type of entity:** University
Jose A. Capitan; Jose A. Cuesta.

Works submitted to national or international seminars, workshops and/or courses

1 Title of the work: Coexistence of many species in random ecological communities

Name of the event: Seminar at the Department of Applied Mathematics, Building Engineering School

Type of event: Seminar

Reasons for participation: Upon invitation

Geographical area: Regional

City of event: Madrid, Community of Madrid, Spain

Date of event: 25/01/2018

Organising entity: Universidad Politécnica de Madrid **Type of entity:** University

2 Title of the work: Stochastic models in biological systems

Name of the event: Mathematics of complexity and its applications. Ph.D. Program on Mathematical Engineering, Statistics and Operations Research

Type of event: Seminar

Reasons for participation: Speaker

Geographical area: Regional

City of event: Madrid, Community of Madrid, Spain

Date of event: 26/01/2017

Organising entity: Universidad Politécnica de Madrid **Type of entity:** University

3 Title of the work: Time-varying networks describing global linguistic diversity

Name of the event: Seminar at the Department of Applied Physics, Agronomic Engineering School

Type of event: Seminar



Reasons for participation: Upon invitation

Geographical area: Regional

City of event: Madrid, Community of Madrid, Spain

Date of event: 18/05/2016

Organising entity: Universidad Politécnica de Madrid

Type of entity: University

4 Title of the work: Networks of contacts between linguistic groups are quasi-interval

Name of the event: Seminar at the Department of Ecological Modeling

Type of event: Seminar

Reasons for participation: Upon invitation

Geographical area: European Union

City of event: Leipzig, Germany

Date of event: 28/04/2015

Organising entity: Helmholtz Centre for Environmental Research

Type of entity: R&D Centre

5 Title of the work: Topological properties of genotype networks of model proteins

Name of the event: Group seminar (Department of Molecular Evolution)

Type of event: Seminar

Reasons for participation: Speaker

Geographical area: Regional

City of event: Torrejon de Ardoz, Community of Madrid, Spain

Date of event: 08/04/2013

Organising entity: Centro de Astrobiología

Type of entity: State agency

6 Title of the work: Mathematical modeling of robust ecological communities

Name of the event: Inter-group seminar series of the Department of Mathematics

Type of event: Seminar

Reasons for participation: Speaker

Geographical area: Regional

City of event: Leganes, Community of Madrid, Spain

Date of event: 12/11/2010

Organising entity: Universidad Carlos III de Madrid

Type of entity: University

7 Title of the work: Statistical mechanics of ecosystem assembly

Name of the event: Theoretical ecology group weekly seminar (Department of Biology)

Type of event: Seminar

Reasons for participation: Speaker

Geographical area: European Union

City of event: York, United Kingdom

Date of event: 13/10/2009

Organising entity: University of York

Type of entity: University



R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

Committee title: Fulbright Program for American researcher awardee selection

Primary (UNESCO code): 220000 - Physics

Secondary (UNESCO code): 240000 - Life Science

Affiliation entity: Fulbright Commission

Type of entity: Foundation

Start-End date: 15/01/2018 - 15/01/2018

Organization of R&D activities

- 1 **Title of the activity:** International conference on challenges in mathematical architecture CCMA2019
Type of activity: International Conference **Geographical area:** European Union
Convening entity: Universidad Politécnica de Madrid **Type of entity:** University
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Organiser
Start-End date: 11/07/2019 - 13/07/2019
- 2 **Title of the activity:** MatFor17: mathematics applied to forestry engineering
Type of activity: Research and outreach activities of the Department of Applied Mathematics **Geographical area:** National
Convening entity: Universidad Politécnica de Madrid **Type of entity:** University
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Organiser
Start-End date: 14/12/2017 - 15/12/2017
- 3 **Title of the activity:** Mathematics and Society: Cooperation, Social Networks and Complexity
Type of activity: International summer school **Geographical area:** European Union
Convening entity: Universidad Carlos III de Madrid **Type of entity:** University
City convening entity: San Lorenzo de El Escorial, Community of Madrid, Spain
Type of participation: Secretary
Start-End date: 15/07/2008 - 18/07/2008
- 4 **Title of the activity:** Understanding the eco-evolutionary assembly of species-rich communities: The role of stochastic community models
Type of activity: Special session of the conference Mathematical Models in Ecology and Evolution **Geographical area:** European Union
Convening entity: Centre for Interdisciplinary Research in Biology **Type of entity:** R&D Centre
City convening entity: París, Île de France, France
Type of participation: Organiser
Start date: 08/07/2015
- 5 **Title of the activity:** Complex Networks in Ecology II
Type of activity: Satellite symposium of the NetSci 2015 International Conference on Complex Networks **Geographical area:** European Union
Convening entity: Universidad de Zaragoza **Type of entity:** University



City convening entity: Zaragoza, Aragon, Spain
Type of participation: Organiser
Start date: 01/06/2015

6 Title of the activity: How do complex networks improve our knowledge of Biology?
Type of activity: Special Session of the AIMS 2014 **Geographical area:** European Union International Conference
Convening entity: Instituto de Ciencias Matemáticas **Type of entity:** State agency
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Organiser
Start date: 09/07/2014

7 Title of the activity: Complex Networks in Ecology
Type of activity: Satellite symposium of the NetSci **Geographical area:** Non EU International 2014 International Conference on Complex Networks
Convening entity: University of Berkeley **Type of entity:** University
City convening entity: Berkeley (CA), United States of America
Type of participation: Organiser
Start date: 03/06/2014

Evaluation and revision of R&D projects and articles

1 Performed tasks: Reviewer of the JCR journal 'BMC Evolutionary Biology'
Entity where activity was carried out: BioMed Central
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 1

2 Performed tasks: Reviewer of the JCR journal 'Ecography'
Entity where activity was carried out: Lund University
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 1

3 Performed tasks: Reviewer of the JCR journal 'Ecological Complexity'
Entity where activity was carried out: Elsevier
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 1

4 Performed tasks: Reviewer of the JCR journal 'Ecological Modelling'
Entity where activity was carried out: Elsevier
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 4

5 Performed tasks: Reviewer of the JCR journal 'Ecology Letters'
Entity where activity was carried out: French National Centre for Scientific Research
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 1

6 Performed tasks: Reviewer of the JCR journal 'European Physical Journal B'
Entity where activity was carried out: European Physical Society
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 2



- 7** **Performed tasks:** Reviewer of the JCR journal 'Europhysics Letters'
Entity where activity was carried out: European Physical Society
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 2
- 8** **Performed tasks:** Reviewer of the JCR journal 'Journal of Theoretical Biology'
Entity where activity was carried out: Elsevier
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 3
- 9** **Performed tasks:** Reviewer of the JCR journal 'Journal of the Royal Society Interface'
Entity where activity was carried out: Royal Society of London
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 5
- 10** **Performed tasks:** Reviewer of the JCR journal 'PLoS Computational Biology'
Entity where activity was carried out: Public Library of Science
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 3
- 11** **Performed tasks:** Reviewer of the JCR journal 'PLoS ONE'
Entity where activity was carried out: Public Library of Science
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 3
- 12** **Performed tasks:** Reviewer of the JCR journal 'Physica A'
Entity where activity was carried out: Elsevier
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 1
- 13** **Performed tasks:** Reviewer of the JCR journal 'Physical Review E'
Entity where activity was carried out: American Physical Society
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 31
- 14** **Performed tasks:** Reviewer of the JCR journal 'Physical Review Letters'
Entity where activity was carried out: American Physical Society
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 8
- 15** **Performed tasks:** Reviewer of the JCR journal 'Proceedings of the Royal Society B'
Entity where activity was carried out: Royal Society of London
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 1
- 16** **Performed tasks:** Reviewer of the JCR journal 'Quaternary International'
Entity where activity was carried out: Elsevier
Type of activity: Review of articles in scientific or technological journals **Frequency of the activity:** 1



- 17** **Performed tasks:** Reviewer of the JCR journal 'Scientific Reports'
Entity where activity was carried out: Nature Publishing Group
Type of activity: Review of articles in scientific or technological journals
Frequency of the activity: 1

Other achievements

Stays in public or private R&D centres

- 1** **Entity:** University of Chicago **Type of entity:** R&D Centre
Faculty, institute or centre: Department of Ecology and Evolution
City of entity: Chicago, United States of America
Start-End date: 18/03/2018 - 19/04/2018 **Duration:** 1 month - 1 day
Funding entity: Universidad Politécnica de Madrid **Type of entity:** University
Goals of the stay: Guest
Provable tasks: Collaboration with Prof. Stefano Allesina. Stability of evolutionary systems with intra-specific variability.
- 2** **Entity:** Centro de Estudios Avanzados de Blanes **Type of entity:** State agency
City of entity: Blanes, Catalonia, Spain
Start-End date: 12/03/2018 - 16/03/2018 **Duration:** 5 days
Goals of the stay: Guest
Provable tasks: Collaboration with Dr. David Alonso and Dr. Emilio O. Casamayor. Bridging theory and data in the description of microbial communities.
- 3** **Entity:** Centro de Estudios Avanzados de Blanes **Type of entity:** State agency
City of entity: Blanes, Catalonia, Spain
Start-End date: 27/07/2017 - 02/08/2017 **Duration:** 7 days
Goals of the stay: Guest
Provable tasks: Collaboration with Dr. David Alonso and Dr. Emilio O. Casamayor. Bridging theory and data in the description of microbial communities.
- 4** **Entity:** University of Chicago **Type of entity:** R&D Centre
Faculty, institute or centre: Department of Ecology and Evolution
City of entity: Chicago, United States of America
Start-End date: 01/04/2017 - 30/06/2017 **Duration:** 3 months
Funding entity: Fulbright Association and Spanish R&D Ministry
Goals of the stay: Guest
Provable tasks: Fulbright grant awardee. Collaboration with Prof. Stefano Allesina. Study of mathematical conditions for species coexistence.
- 5** **Entity:** Centro de Estudios Avanzados de Blanes **Type of entity:** State agency
City of entity: Blanes, Catalonia, Spain
Start-End date: 02/02/2017 - 10/02/2017 **Duration:** 8 days
Goals of the stay: Guest
Provable tasks: Collaboration with Dr. David Alonso and Dr. Emilio O. Casamayor. Bridging theory and data in the description of microbial communities.



- 6** **Entity:** Helmholtz Centre for Environmental Research **Type of entity:** Innovation and Technology Centres
Faculty, institute or centre: Department of Ecological Modelling
City of entity: Leipzig, Germany
Start-End date: 05/12/2016 - 09/12/2016 **Duration:** 5 days
Funding entity: Helmholtz Centre for Environmental Research
Goals of the stay: Guest
Provable tasks: Collaboration with Dr. Thorsten Wiegand and Prof. Andreas Huth. Spatial models in ecological communities.
- 7** **Entity:** Centro de Estudios Avanzados de Blanes **Type of entity:** State agency
City of entity: Blanes, Catalonia, Spain
Start-End date: 04/07/2016 - 08/07/2016 **Duration:** 5 days
Goals of the stay: Guest
Provable tasks: Collaboration with Dr. David Alonso and Dr. Emilio O. Casamayor. Bridging theory and data in the description of microbial communities.
- 8** **Entity:** Helmholtz Centre for Environmental Research **Type of entity:** Innovation and Technology Centres
Faculty, institute or centre: Department of Ecological Modelling
City of entity: Leipzig, Germany
Start-End date: 26/04/2015 - 30/04/2015 **Duration:** 5 days
Funding entity: Helmholtz Centre for Environmental Research
Goals of the stay: Guest
Provable tasks: Collaboration with Dr. Thorsten Wiegand. Spatial models in ecological communities.
- 9** **Entity:** University of York **Type of entity:** University
Faculty, institute or centre: Biology
City of entity: York, United Kingdom
Start-End date: 04/06/2010 - 04/07/2010 **Duration:** 1 month
Funding entity: Universidad Carlos III de Madrid **Type of entity:** University
Name of programme: Programa propio (Universidad Carlos III)
Goals of the stay: Doctorate
Provable tasks: Mathematical modeling of marine ecosystem dynamics. Supervised by Prof. Richard Law and Dr. Gustav W. Delius.
- 10** **Entity:** University of York **Type of entity:** University
Faculty, institute or centre: Biology
City of entity: York, United Kingdom
Start-End date: 20/09/2009 - 20/11/2009 **Duration:** 2 months
Funding entity: European Science Foundation **Type of entity:** Foundation
City funding entity: Strassbourg, France
Name of programme: COST Action MP0801, Short Term Scientific Mission 05270
Goals of the stay: Doctorate
Provable tasks: Mathematical modeling of marine ecosystem dynamics. Supervised by Prof. Richard Law and Dr. Gustav W. Delius.



Obtained grants and scholarships

- 1** **Name of the grant:** Fulbright Visiting Scholar Program
City awarding entity:
Aims: Long-term visits
Awarding entity: Ministerio de Ciencia e Innovación - Fulbright Commission
Amount of the grant: 11.281 €
Conferral date: 01/04/2017 **Duration:** 3 months
End date: 30/06/2017
Entity where activity was carried out: University of Chicago
Faculty, institute or centre: Department of Ecology and Evolution
- 2** **Name of the grant:** Juan de la Cierva post-doctoral grant
Aims: Post-doctoral
Awarding entity: Ministerio de Ciencia e Innovación **Type of entity:** Public Research Body
Conferral date: 05/12/2011 **Duration:** 3 years
End date: 31/12/2014
Entity where activity was carried out: Consejo Superior de Investigaciones Científicas
- 3** **Name of the grant:** Pre-doctoral research assistant (Personal investigador de apoyo). Conferral decision at BOCM 7040/2006
Aims: Pre-doctoral
Awarding entity: Consejería de Educación **Type of entity:** Public research body
Conferral date: 19/12/2006 **Duration:** 4 years
End date: 31/01/2011
Entity where activity was carried out: Universidad Carlos III de Madrid

Scientific societies and professional associations

Name of the society: Spanish Royal Society of Physics (Real Sociedad Española de Física)
Affiliation entity: REAL SOCIEDAD ESPAÑOLA DE FISICA
City affiliation entity: Madrid, Community of Madrid, Spain
Start-End date: 20/10/2010 - 07/01/2015

Co-operation networks

Name of the network: Thematic network on 'Socio-Econo-Physics'
Participating entity/entities: Universidad Autónoma de Madrid; Universidad Carlos III de Madrid; Universidad de Burgos; Universidad de Zaragoza; Universidad de las Islas Baleares; Universitat Rovira i Virgili; Universitat de Barcelona
Type of entity: University; University; University; University; University; University; University; University
Start date: 01/10/2008 **Duration:** 1 year - 3 months



Prizes, mentions and distinctions

- 1** **Description:** Outstanding contribution in reviewing (Applied Mathematics and Computation)
Awarding entity: Elsevier
Conferral date: 03/2018
- 2** **Description:** Outstanding contribution in reviewing
Awarding entity: Public Library of Science
Conferral date: 25/02/2016
- 3** **Description:** Outstanding contribution in reviewing (Journal of Theoretical Biology)
Awarding entity: Elsevier
Conferral date: 09/2015
- 4** **Description:** Ph.D. special award (Premio extraordinario de Doctorado)
Awarding entity: Universidad Carlos III de Madrid **Type of entity:** University
Conferral date: 01/11/2011
- 5** **Description:** Degree special award (Premio extraordinario de Licenciatura)
Awarding entity: Universidad Complutense de Madrid **Type of entity:** University
Conferral date: 01/06/2001
- 6** **Description:** 'Promoción Físicos-60' award
Awarding entity: Facultad de Ciencias Físicas **Type of entity:** University Centres and Structures and Associated Bodies
Conferral date: 15/11/1998

Other distinctions (professional or business career)

- 1** **Description:** Civil servant (high-school teacher of mathematics, 'Cuerpo de Profesores de Enseñanza Secundaria')
Geographical area: Regional
Awarding entity: Consejería de Educación **Type of entity:** Public body
City awarding entity: Madrid, Community of Madrid, Spain
Conferral date: 01/09/2002
- 2** **Description:** Software developer
Geographical area: Regional
Awarding entity: Grupo de Mecánica del Vuelo **Type of entity:** Business
City awarding entity: Madrid, Community of Madrid, Spain
Conferral date: 22/10/2001



Obtained accreditations/recognitions

- 1** **Description:** Lecturer accreditation (Acreditación de Ayudante Doctor)
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** National Body
City accrediting entity: Madrid, Spain
Date of recognition: 14/11/2018
- 2** **Description:** Private University Professor accreditation (Acreditación de Contratado Doctor)
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** National Body
City accrediting entity: Madrid, Spain
Date of recognition: 14/11/2018
- 3** **Description:** Senior Lecturer accreditation (Acreditación de Contratado Doctor)
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** National Body
City accrediting entity: Madrid, Spain
Date of recognition: 14/11/2018
- 4** **Description:** Tenure-track accreditation (Acreditación de Profesor Titular de Universidad)
Accrediting entity: Agencia Nacional de Evaluación de la Calidad y Acreditación **Type of entity:** Agencia Nacional de la Calidad y Acreditación
Date of recognition: 14/03/2016
- 5** **Description:** Lecturer accreditation (Acreditación de Ayudante Doctor)
Accrediting entity: Agencia de Calidad y Acreditación Prospectiva **Type of entity:** Public regional body
City accrediting entity: Madrid, Community of Madrid, Spain
Date of recognition: 10/06/2011
- 6** **Description:** Private University Professor accreditation (Acreditación de Profesor de Universidad Privada)
Accrediting entity: Agencia de Calidad y Acreditación Prospectiva **Type of entity:** Public regional body
City accrediting entity: Madrid, Community of Madrid, Spain
Date of recognition: 10/06/2011
- 7** **Description:** Senior Lecturer accreditation (Acreditación de Contratado Doctor)
Accrediting entity: Agencia de Calidad y Acreditación Prospectiva **Type of entity:** Public regional body
City accrediting entity: Madrid, Community of Madrid, Spain
Date of recognition: 10/06/2011