



Miguel Angel Rubio Alvarez

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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.

I started my doctorate studies at the end of 1981 under the supervision of Prof. Manuel G. Velarde. In the pre-doctoral period I carried out experimental research stays at CEA (Saclay, France, 6 months in total; supervised by Dr. Pierre Bergé and Dr. Monique Dubois) and at the Istituto Nazionale di Ottica (Florence, Italy, 16 months in total; supervised by Prof. F.Tito Arecchi and Dr. Sergio Ciliberto). I obtained a PhD in Physics in 1985 from UNED and a permanent position as Adjoint Professor at UNED in 1988. At that time my research focused on nonlinear dynamics in different physical systems (Rayleigh-Bénard and Bénard-Marangoni convection, Helmholtz oscillator, etc.) and I published several scientific articles with wide repercussion. Notably, two in Phys Rev. Lett., with 181 and 166 citations (Publons index). From November 1988 to January 1990, I enjoyed a research stay at Prof. Jerry P. Gollub's lab (Haverford College, USA), funded by a senior fellowship from the Scientific Office of NATO, during which I worked on the structure of fluid interfaces in porous media imbibition as model systems for surface growth with quenched noise, also with wide repercussion (Phys. Rev. Lett., with 278 citations).

Overall, I have published 68 articles in highly recognized scientific journals such as Phys. Rev. Lett. (7), Phys. Rev. E (9), Appl. Phys. Lett. (3), J. of Rheology (3), J. Colloid Interf. Sci. (3), Adv. Coll. Interf. Sci (1), Current Opinion in Coll. Interf. Sci. (1), etc., which have obtained 1746 citations according to Publons index (2498 according to Google Scholar).

At the beginning of 1990 I started the activities of the Complex Systems Laboratory at UNED. Since then my interests have focused on experimental Soft Matter Physics (colloids, polymers, interfaces, etc.). In 1996 I obtained a position as University Professor at UNED, working in the Applied Physics area. Between 1996 and 2009 my research focused on magnetic colloids, collaborating with GG Fuller (U. Stanford, USA) and A.A. García (U. Arizona State, USA). We obtained relevant results on the aggregation kinetics of superparamagnetic particles in suspension under stationary and rotating magnetic fields and on the use of magnetic particles in the microfluidics of drops standing on superhydrophobic surfaces. In July 2009 I was appointed Vice-Rector for Teaching Staff of the UNED and, in September 2010, First Vice-Rector, positions that slowed down my research activity during the four years in office (until July 15, 2013). Subsequently, I started a new line of research focused on the mechanical properties of Langmuir monolayers, where we have achieved significant improvements in the magnetic needle interfacial shear rheometer, using magnetic microwire probes and magnetic tweezers to control their movement. The results are impressive gains in the instrument's resolution (a 1000 factor) and in the stability of the sample-probe system, that lead to a granted european patent whose licensing is being negotiated with Biolin Scientific. Furthermore, we have extended with great success the flow field-based data analysis techniques to the case of rotational rheometers with different probes. At present my main research interests are: i) the development of new interfacial rheology techniques, both shear and dilatational, and ii) the interfacial rheology of monomolecular films of soft matter systems (fatty acids, insoluble polymers, proteins, lipids of biomedical interest, biofilms, etc.).



General quality indicators of scientific research

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

Sexenios de investigación: 6 (todos los posibles). Último concedido: 2012-2017.

Tesis dirigidas en los últimos 10 años: 2 (una de ellas pendiente de defensa) de un total de 8. Cuatro de ellas obtuvieron Premio Extraordinario de Doctorado. Entre julio del 2009 y julio del 2013 fui Vicerrector de Profesorado y Vicerrector 1º y decidí no dirigir Tesis Doctorales durante dicho periodo.

Número total de artículos publicados en revistas: 67; 47 (70%) en el primer cuartil (Q1).

Factor h: 22 (Google Scholar); 19 (Publons)

Número de citas totales: 2.480 (Google Scholar); 1.740 (Publons).

Número medio de citas por artículo: 37,0 (Google Scholar); 25,97 (Publons)

Promedio de citas por año en los últimos 5 años: 115 (Google Scholar); 77 (Publons).

Miguel Angel Rubio Alvarez

Surname(s): **Rubio Alvarez**
Name: **Miguel Angel**
DNI: **02496020Z**
ORCID: **0000-0002-4210-0443**
ScopusID: **57200105177**
ResearcherID: **A-4093-2008**
Date of birth: **09/11/1956**
Gender: **Male**
Nationality: **Spain**
Country of birth: **Spain**
Aut. region/reg. of birth: **Community of Madrid**
Contact province: **Madrid**
City of birth: **Madrid**
Contact address: **Departamento de Física Fundamental, Fac. Ciencias, UNED**
Rest of contact address: **Senda del Rey 9**
Postcode: **28040**
Contact country: **Spain**
Contact aut. region/reg.: **Community of Madrid**
Contact city: **Madrid**
Land line phone: **(+34) 913987129**
Fax: **(+34) 913986697**
Email: **mar@fisfun.uned.es**
Mobile phone: **(+34) 607115291**

Current professional situation

Employing entity: Universidad Nacional de Educación a Distancia

Department: Física Fundamental, Facultad de Ciencias

Professional category: Catedrático de Universidad **Educational Management (Yes/No):** Yes

City employing entity: Madrid, Community of Madrid, Spain

Phone: 913987129

Fax: 913986697

Email: mar@fisfun.uned.es

Start date: 08/04/1996

Type of contract: Civil servant

Dedication regime: Full time

Primary (UNESCO code): 220404 - Fluid mechanics

Secondary (UNESCO code): 220401 - Colloids

Tertiary (UNESCO code): 220507 - Measurement of mechanical properties

Identify key words: Monolayers; Rheology; Colloids; Polymers; Complex fluids

Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidad Nacional de Educación a Distancia	Vicerrector Primero	15/09/2010

	Employing entity	Professional category	Start date
2	Universidad Nacional de Educación a Distancia	Vicerrector de Profesorado	15/07/2009
3	Universidad Nacional de Educación a Distancia	Director del Departamento de Física Fundamental	01/02/2016
4	Universidad Nacional de Educación a Distancia	Director del Departamento de Física Fundamental	1997
5	Universidad Nacional de Educación a Distancia	Profesor Titular de Universidad	01/08/1988
6	Universidad Politécnica de Madrid	Profesor Titular de Universidad	05/05/1987
7	Universidad Nacional de Educación a Distancia	Profesor Titular contratado	01/10/1985
8	Universidad Politécnica de Madrid	Profesor Colaborador OM21-10-82	18/11/1984
9	Universidad Politécnica de Madrid	Profesor Encargado de Curso nivel B2	01/02/1983
10	Universidad Nacional de Educación a Distancia	Profesor Ayudante	01/10/1979

- Employing entity:** Universidad Nacional de Educación a Distancia
Professional category: Vicerrector Primero
Start-End date: 15/09/2010 - 14/07/2013
Duration: 2 years - 10 months
Type of entity: University
- Employing entity:** Universidad Nacional de Educación a Distancia
Professional category: Vicerrector de Profesorado
Start-End date: 15/07/2009 - 14/07/2013
Duration: 4 years
Type of entity: University
- Employing entity:** Universidad Nacional de Educación a Distancia
Professional category: Director del Departamento de Física Fundamental
Start date: 01/02/2016
Type of entity: University
- Employing entity:** Universidad Nacional de Educación a Distancia
Professional category: Director del Departamento de Física Fundamental
Start date: 1997
Duration: 1 year - 6 months
Type of entity: University
- Employing entity:** Universidad Nacional de Educación a Distancia
Department: Física Fundamental, Facultad de Ciencias
Professional category: Profesor Titular de Universidad
Start date: 01/08/1988
Type of contract: Civil servant
Educational Management (Yes/No): Yes
Type of entity: University
- Employing entity:** Universidad Politécnica de Madrid
Department: E.T.S. Arquitectura
Professional category: Profesor Titular de Universidad
Start date: 05/05/1987
Type of contract: Civil servant
Educational Management (Yes/No): Yes
Type of entity: University



- 7** **Employing entity:** Universidad Nacional de Educación a Distancia
Department: Física Fundamental, Ciencias
Professional category: Profesor Titular contratado
Start date: 01/10/1985
Type of contract: Contrato Administrativo
Type of entity: University
Educational Management (Yes/No): Yes
- 8** **Employing entity:** Universidad Politécnica de Madrid
Department: Física, E.T.S. Arquitectura
Professional category: Profesor Colaborador OM21-10-82
Start date: 18/11/1984
Type of contract: Contrato administrativo
Type of entity: University
Educational Management (Yes/No): Yes
- 9** **Employing entity:** Universidad Politécnica de Madrid
Department: Física, E.T.S. Arquitectura
Professional category: Profesor Encargado de Curso nivel B2
Start date: 01/02/1983
Type of contract: Contrato Administrativo
Type of entity: University
Educational Management (Yes/No): Yes
- 10** **Employing entity:** Universidad Nacional de Educación a Distancia
Department: Física Fundamental, Facultad de Ciencias
Professional category: Profesor Ayudante
Start date: 01/10/1979
Type of contract: Contrato Administrativo
Type of entity: University
Educational Management (Yes/No): Yes
Duration: 1 year



Education

University education

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

University degree: Higher degree

Name of qualification: Licenciado en Ciencias Físicas, con Grado

Degree awarding entity: Universidad Complutense de Madrid **Type of entity:** University

Date of qualification: 01/09/1979

Doctorates

Doctorate programme: Doctor en Ciencias Físicas

Degree awarding entity: Universidad Nacional de Educación a Distancia **Type of entity:** University

Date of degree: 17/07/1985

Thesis title: Contribución al estudio de la transición a la turbulencia en sistemas hidrodinámicos y analógicos

Thesis director: Manuel García Velarde

Obtained qualification: Apto "cum laude"

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
Italian		C2	C1	C1	A1
French		C2	C1	C1	B1
English		C2	C1	C1	C1

Teaching experience

General teaching experience

- Type of teaching:** Official teaching

Name of the course: Técnicas Experimentales I

University degree: Graduado o Graduada en Física

Start date: 01/10/2013 **End date:** 2016

Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University

Faculty, institute or centre: Facultad de Ciencias

City of entity: Madrid, Spain



- 2** **Type of teaching:** Official teaching
Name of the course: Física General
Type of programme: Bachelor's degree **Type of teaching:** Virtual
Type of subject: Core
University degree: Licenciado en Ciencias Físicas
Course given: 1º **Frequency of the activity:** 21
Start date: 01/10/1990 **End date:** 30/09/2011
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencias
Department: Física Fundamental
- 3** **Type of teaching:** Official teaching
Name of the course: Estructura y Propiedades de Fluidos Complejos
Type of programme: Doctorate **Type of teaching:** Virtual
Type of subject: Doctorate
University degree: Doctor en Ciencias Físicas; Programa Interuniversitario Física de Sistemas Complejos
Frequency of the activity: 8
End date: 2009
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental
- 4** **Type of teaching:** Official teaching
Name of the course: Física de Medios Continuos: Formalismo general y aplicaciones
Type of programme: Doctorate **Type of teaching:** Virtual
Type of subject: Doctorate
University degree: Doctor en Ciencias Físicas; Programa Interuniversitario Física de Sistemas Complejos
Frequency of the activity: 8
End date: 2009
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental
- 5** **Type of teaching:** Official teaching
Name of the course: Laboratorios docentes del Departamento de Física Fundamental
Type of programme: Bachelor's degree **Type of teaching:** Laboratory work
Type of subject: Core
University degree: Licenciado en Ciencias Físicas
Course given: 1º, 2º y 3º **Frequency of the activity:** 21
End date: 2009
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental
- 6** **Type of teaching:** Official teaching
Name of the course: Fenómenos de crecimiento en superficies
Type of programme: Doctorate **Type of teaching:** Virtual
Type of subject: Doctorate
University degree: Doctor en Ciencias Físicas; Programa Interuniversitario Física de Sistemas Complejos
Frequency of the activity: 1
End date: 2001
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental



- 7** **Type of teaching:** Official teaching
Name of the course: Viscoelasticidad de Polímeros
Type of programme: Doctorate **Type of teaching:** Virtual
Type of subject: Doctorate
University degree: Doctor en Ciencias Físicas; Programa Interuniversitario Física de Sistemas Complejos
Frequency of the activity: 1
End date: 2001
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental
- 8** **Type of teaching:** Official teaching
Name of the course: Fenómenos de crecimiento en superficies
Type of programme: Doctorate **Type of teaching:** Virtual
Type of subject: Doctorate
University degree: Doctor en Ciencias Físicas; Programa Física de Sistemas Complejos
Frequency of the activity: 6
End date: 2000
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental
- 9** **Type of teaching:** Official teaching
Name of the course: Viscoelasticidad de Polímeros
Type of programme: Doctorate **Type of teaching:** Virtual
Type of subject: Doctorate
University degree: Doctor en Ciencias Físicas; Programa Física de Sistemas Complejos
Frequency of the activity: 6
End date: 2000
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental
- 10** **Type of teaching:** Official teaching
Name of the course: Mecánica Estadística de Polímeros Propiedades hidrodinámicas y ópticas de cristales líquidos
Type of programme: Doctorate **Type of teaching:** In person theory
Type of subject: Doctorate
University degree: Doctor en Ciencias Físicas, Programa Fenómenos no-lineales en Física
Frequency of the activity: 2
End date: 1994
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental
- 11** **Type of teaching:** Official teaching
Name of the course: Propiedades hidrodinámicas y ópticas de cristales líquidos
Type of programme: Doctorate **Type of teaching:** In person theory
Type of subject: Doctorate
University degree: Doctor en Ciencias Físicas; Programa Fenómenos no-lineales en Física
Frequency of the activity: 2
End date: 1994
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental



- 12** **Type of teaching:** Official teaching
Name of the course: Mecánica y Ondas
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Licenciado en Ciencias Físicas
Course given: 2º
End date: 1991
Entity: Universidad Nacional de Educación a Distancia
Department: Física Fundamental
Type of teaching: Virtual
Frequency of the activity: 3
Type of entity: University
- 13** **Type of teaching:** Official teaching
Name of the course: Física
Type of programme: Engineering
Type of subject: Obligatory
University degree: Arquitecto
Course given: 2º
End date: 1988
Entity: Universidad Politécnica de Madrid
Department: Física
Type of teaching: In person theory
Frequency of the activity: 4
Type of entity: University
- 14** **Type of teaching:** Official teaching
Name of the course: Física
Type of programme: Engineering
Type of subject: Obligatory
University degree: Arquitecto
Course given: 2º
End date: 1988
Entity: Universidad Politécnica de Madrid
Department: Física
Type of teaching: In person theory
Frequency of the activity: 4
Type of entity: University
- 15** **Type of teaching:** Official teaching
Name of the course: Óptica
Type of programme: Bachelor's degree
Type of subject: Obligatory
University degree: Licenciado en Ciencias Físicas
Course given: 3º
End date: 1980
Entity: Universidad Nacional de Educación a Distancia
Department: Física Fundamental
Type of teaching: Virtual
Frequency of the activity: 1
Type of entity: University
- 16** **Name of the course:** Sistemas Dinámicos
University degree: Graduado o Graduada en Física
Start date: 01/10/2014
Entity: Universidad Nacional de Educación a Distancia
Faculty, institute or centre: Facultad de Ciencias
Type of entity: University
- 17** **Name of the course:** Óptica II
University degree: Graduado o Graduada en Física
Start date: 01/10/2014
Entity: Universidad Nacional de Educación a Distancia
Faculty, institute or centre: Facultad de Ciencias
Type of entity: University



- 18** **Name of the course:** Teoría de Circuitos y Electrónica
University degree: Graduado o Graduada en Física
Start date: 01/10/2013
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencias
- 19** **Name of the course:** Técnicas Experimentales II
University degree: Graduado o Graduada en Física
Start date: 01/10/2013
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Faculty, institute or centre: Facultad de Ciencias
- 20** **Type of teaching:** Official teaching
Name of the course: Electrónica
Type of programme: Master's degree **Type of teaching:** Virtual
Type of subject: Obligatory
University degree: Máster en Física de Sistemas Complejos
Frequency of the activity: 2
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental
- 21** **Type of teaching:** Official teaching
Name of the course: Electrónica
Type of programme: Master's degree **Type of teaching:** Virtual
Type of subject: Obligatory
University degree: Máster en Física de Sistemas Complejos
Frequency of the activity: 2
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental
- 22** **Type of teaching:** Official teaching
Name of the course: Electrónica
Type of programme: Master's degree **Type of teaching:** Virtual
Type of subject: Optional
University degree: Máster en Física Médica
Frequency of the activity: 2
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Department: Física Fundamental

Experience supervising doctoral thesis and/or final year projects

- 1** **Project title:** Reología interfacial de cizalla de monocapas de Langmuir
Co-director of thesis: Juan Manuel Pastor Ruiz
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Student: Javier Tajuelo Rodríguez
Obtained qualification: Sobresaliente "cum Laude"
Date of reading: 15/12/2017
Date of recognition: 15/12/2017
Quality recognition: Yes



- 2** **Project title:** Estudio experimental sobre fluidos magnetoreológicos mediante video-microscopía y análisis de imágenes: Dinámica, estructura y aplicaciones en microfluídica
Type of project: Doctoral thesis
Co-director of thesis: Sonia Melle Hernández
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Student: Pablo Domínguez García
Obtained qualification: Sobresaliente Cum Laude; Premio Extraordinario de Doctorado de la Facultad de Ciencias
Date of reading: 13/07/2007
European doctorate: 2008
Date of award: 2008
- 3** **Project title:** Dinámica de fractura de sólidos frágiles: Comparación de modelos discretos con la teoría del continuo
Type of project: Doctoral thesis
Co-director of thesis: Josep Español Garrigós
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Student: María Teresa Martín Blas
Obtained qualification: Sobresaliente Cum Laude
Date of reading: 14/07/2005
European doctorate: 2006
Date of award: 2006
- 4** **Project title:** Estudio de la dinámica de suspensiones magneto-reológicas sometidas a campos externos mediante el uso de técnicas ópticas: Procesos de agregación, formación de estructuras y su evolución espacio-tempo
Type of project: Doctoral thesis
Co-director of thesis: Gerald G. Fuller
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Student: Sonia Melle Hernández
Obtained qualification: Sobresaliente Cum Laude; Premio Extraordinario de Doctorado de la Facultad de Ciencias
Date of reading: 04/03/2002
- 5** **Project title:** Sistemas reométricos de muy baja fricción: Desarrollo y aplicaciones
Type of project: Doctoral thesis
Co-director of thesis: Ignacio Zúñiga López
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Student: Isabel Echeverría Albaladejo
Obtained qualification: Sobresaliente Cum Laude; Premio Extraordinario de Doctorado de la Facultad de Ciencias
Date of reading: 27/09/1998
- 6** **Project title:** Estudio experimental de fenómenos de crecimiento por electrodeposición galvanostática a baja corriente: rugosidad e inestabilidades morfológicas
Type of project: Doctoral thesis
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Student: Juan Manuel Pastor Ruiz
Obtained qualification: Sobresaliente Cum Laude; Premio Extraordinario de Doctorado de la Facultad de Ciencias
Date of reading: 18/12/1997



- 7** **Project title:** Estudio experimental de la dinámica espacio-temporal de un sistema con fricción decreciente con la velocidad: dinámica stick-slip y modelos de sismicidad.
Type of project: Doctoral thesis
Entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Student: Javier Galeano Prieto
Obtained qualification: Sobresaliente Cum Laude
Date of reading: 14/07/1997

Educational or pedagogical publications, books, articles, etc.

- 1** Miguel Ángel Rubio Álvarez. pp. 1 - 45. 2016.
Name of the materials: Técnicas Experimentales II (Filtrado de señales analógicas y discretas)
Date of drafting: 2015
Format: Notes
- 2** Miguel Ángel Rubio Álvarez. pp. 1 - 105. 2015.
Name of the materials: Problemas resueltos de Sistemas Dinámicos
Date of drafting: 2014
Format: Notes
- 3** Miguel Ángel Rubio Álvarez. pp. 1 - 140. 2012.
Name of the materials: Teoría de Circuitos y Electrónica (Amplificadores a transistores y operacionales)
Date of drafting: 2011
Format: Notes
- 4** Miguel Ángel Rubio Álvarez. pp. 1 - 157. 2009.
Name of the materials: Electrónica (Amplificadores a transistores y amplificadores operacionales)
Target group profile: Estudiantes de la asignatura
Date of drafting: 2009
Format: Notes
- 5** Miguel Ángel Rubio Álvarez. pp. 1 - 160. 1994.
Name of the materials: Física de Medios Continuos: Formalismo general
Target group profile: Estudiantes de la asignatura
Date of drafting: 1994
Format: Notes
- 6** Miguel Ángel Rubio Álvarez; Javier de la Rubia Sánchez; Víctor Fairén Lelay; Pep Español Garrigós. 1991.
Name of the materials: Problemas de Física General
Target group profile: Estudiantes de la asignatura
Date of drafting: 1991
Format: Notes

Participation in innovative teaching projects

- 1** **Project title:** Laboratorios remotos como herramienta de evaluación en asignaturas de Técnicas Experimentales del grado en Física
Type of participation: Co-ordinator
Time of working relationship: For an undetermined time
Funding entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Start-End date: 01/10/2016 - 30/09/2017
- 2** **Project title:** Mejora del curso virtual de la asignatura Física General de primer curso de la Licenciatura en Ciencias Físicas
Type of participation: Co-ordinator
Time of working relationship: For a limited time
Name of the main researcher: Miguel Ángel Rubio Álvarez
Number of participants: 6
Amount awarded: 1.800 €
Funding entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Type of call: Non-competitive
Geographical area: Universidad
Start-End date: 01/10/2008 - 30/09/2009 **Duration:** 1 year
- 3** **Project title:** Mejora del curso virtual de la asignatura Física General de primer curso de la Licenciatura en Ciencias Físicas
Type of participation: Co-ordinator
Time of working relationship: For a limited time
Name of the main researcher: Miguel Ángel Rubio Álvarez
Number of participants: 6
Amount awarded: 1.800 €
Funding entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Type of call: Non-competitive
Geographical area: Universidad
Start-End date: 01/10/2007 - 30/09/2008 **Duration:** 1 year
- 4** **Project title:** Creación de un laboratorio remoto de Tercer Ciclo: Instalación de un servidor de prácticas remotas a través de Internet. (AFC2002-0449-LD)
Type of participation: Co-ordinator
Time of working relationship: For a limited time
Name of the main researcher: Miguel Ángel Rubio Álvarez
Number of participants: 6
Amount awarded: 37.120 €
Funding entity: Ministerio de Educación Cultura y Deporte **Type of entity:** Ministerio
Type of call: Competitive
Geographical area: National
Start-End date: 01/10/2002 - 30/09/2003 **Duration:** 1 year

Scientific and technological experience

Research and development groups/teams

Name of the group: Grupo de Investigación en Materia blanda y fluidos

Name of principal investigator: Miguel Ángel Rubio Álvarez

Number of members in the group: 6

Standardised code: GIMBF

Type of collaboration: Co-authorship of projects and their development

Affiliation entity: Universidad Nacional de Educación a Distancia

Type of entity: University

Number of directed thesis: 10

Number of directed postdoc: 4

Start date: 2007

Scientific or technological activities

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

- 1** **Name of the project:** Estructura y Dinámica Multiescala en Materia Blanda
Entity where project took place: Universidad Nacional de Educación a Distancia
Type of entity: University
City of entity: Madrid, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): José Español Garrigós; Miguel Ángel Rubio Álvarez
Nº of researchers: 6
Funding entity or bodies: Ministerio de Ciencia e Innovación. Investigación
Type of entity: Ministerio
Start-End date: 01/01/2017 - 31/12/2019
Total amount: 54.450 €
- 2** **Name of the project:** Reología interfacial y estabilidad de películas delgadas fluidas
Entity where project took place: Universidad Nacional de Educación a Distancia
Type of entity: University
City of entity: Madrid, Community of Madrid, Spain
Name principal investigator (PI, Co-PI....): Miguel Ángel Rubio Álvarez
Nº of researchers: 4
Funding entity or bodies: Ministerio de Ciencia e Innovación. Investigación
Type of entity: Ministerio
Start-End date: 01/10/2017 - 30/09/2018
Total amount: 10.000 €
- 3** **Name of the project:** Materia blanda y nanofluidos en múltiples escalas
Entity where project took place: Universidad Nacional de Educación a Distancia
Type of entity: University
Name principal investigator (PI, Co-PI....): Miguel Ángel Rubio Álvarez; Pablo Domínguez García
Nº of researchers: 5

Funding entity or bodies:

Ministerio de Economía y Competitividad

Type of entity: Organismo oficial**Start-End date:** 01/01/2014 - 31/12/2017**Total amount:** 50.000 €**4 Name of the project:** MICRO-REOLOGIA: Estructura y dinámica de sistemas coloidales confinados**Type of project:** Basic research (including archaeological digs, etc)**Geographical area:** National**Degree of contribution:** Scientific coordinator**Entity where project took place:** Universidad Nacional de Educación a Distancia**Type of entity:** University**Name principal investigator (PI, Co-PI....):** Miguel Angel Rubio Alvarez**Nº of researchers:** 3**Funding entity or bodies:**

Ministerio de Ciencia e Innovación

Type of entity: Body, others**Type of participation:** Co-ordinator**Start date:** 2009**Duration:** 3 years - 1 day**Total amount:** 78.000 €**5 Name of the project:** NACOPAN - Nano-conductive polymer composites with predefined architecture and customized dielectric and EMC properties dedicated to shielding and absorbent panels.**Entity where project took place:** Consorcio INTERFASES: UCIIM, UNED, UCM, UPM, UAH, CSIC,**Name principal investigator (PI, Co-PI....):** Javier Pozuelo de Diego (parte española)**Nº of researchers:** 20**Funding entity or bodies:**

Programa ERANET (NAN2007-31173-E)

VII Programa Marco

Start date: 2008**Duration:** 2 years - 11 months**Total amount:** 200.000 €**6 Name of the project:** NANOBRAK- Desarrollo de materiales poliméricos nanorreforzados biocompatibles para uso bio-sanitario (04-AEC0810-000056/2008)**Entity where project took place:** Euroortodoncia, Consorcio INTERFASES: UCIIM, UNED, UCM, UPM, UAH, CSIC,**Name principal investigator (PI, Co-PI....):** Alberto Cervera (Euroortodoncia) - Juan Baselga Llidó (UCIIM)**Nº of researchers:** 20**Start date:** 2008**Duration:** 1 year - 4 months - 30 days**Total amount:** 129.772 €**7 Name of the project:** NANOMULFUN - Nanotecnología para aerestructuras composite multifuncionales**Entity where project took place:** Consorcio INTERFASES: UCIIM, UNED, UCM, UPM, UAH, CSIC,**Name principal investigator (PI, Co-PI....):** José Sánchez Gómez (Airbus) - Juan Balsega Llidó (UCIIM)**Nº of researchers:** 20**Funding entity or bodies:**

CDTI

Programa PROFIT-2008 (Subprograma aeroespacial SAE)

Start date: 2008**Duration:** 2 years - 4 months - 30 days**Total amount:** 230.000 €



- 8** **Name of the project:** Estructura y dinámica de fluidos complejos: Problemas de volumen y de interfase.
Entity where project took place: UNED, UCM,
Name principal investigator (PI, Co-PI....): Miguel Angel Rubio Alvarez
Nº of researchers: 4
Funding entity or bodies:
M.E.C. (Ref. FIS2006-12281-C02-02)
Start date: 2007 **Duration:** 2 years - 10 months - 30 days
Total amount: 64.000 €
- 9** **Name of the project:** Estructura y dinámica de fluidos complejos: fluidos magnetoreológicos y fluidos poliméricos
Type of project: Basic research (including archaeological digs, etc) **Geographical area:** National
Degree of contribution: Coordinator of total project, network or consortium
Entity where project took place: Universidad Nacional de Educación a Distancia **Type of entity:** University
Name principal investigator (PI, Co-PI....): Miguel Angel Rubio Alvarez
Nº of researchers: 3
Funding entity or bodies:
MINISTERIO DE EDUCACION Y CIENCIA
City funding entity: Spain
Type of participation: Co-ordinator
Start date: 2005 **Duration:** 1 year
Total amount: 10.710 €
- 10** **Name of the project:** Materiales nanoestructurados de base polimérica: Fenómenos de interfase en relación con sus propiedades y aplicaciones avanzadas
Entity where project took place: UCIIM, UPM, UCM, UAH, ICTP, ICMM, UNED,
Name principal investigator (PI, Co-PI....): J. Baselga (coordinador general); M.A. Rubio (coordinador UNED)
Nº of researchers: 32
Start date: 2005 **Duration:** 3 years - 11 months
Total amount: 640.000 €
- 11** **Name of the project:** Comportamiento dinámico de sistemas físicos complejos: fluidos magneto-reológicos, fluidos poliméricos y convección en sistemas débilmente confinados
Name principal investigator (PI, Co-PI....): Miguel Angel Rubio Alvarez
Nº of researchers: 4
Funding entity or bodies:
Dirección General de Investigación (MCYT)
Start date: 2002 **Duration:** 3 years - 4 months - 28 days
Total amount: 56.807 €
- 12** **Name of the project:** Comportamiento dinámico de sistemas físicos no-lineales: fluidos magneto-reológicos, fluidos poliméricos y convección en cavidades inclinadas
Name principal investigator (PI, Co-PI....): Miguel Angel Rubio Alvarez
Nº of researchers: 4
Funding entity or bodies:
DGESIC (MECD)
Start date: 2001 **Duration:** 10 months - 29 days



Total amount: 13.253 €

13 Name of the project: Infraestructura de investigación de la

Name principal investigator (PI, Co-PI....): Miguel Angel Rubio Alvarez

Nº of researchers: 5

Funding entity or bodies:

Dirección General de Investigación de la Comunidad Autónoma de Madrid

Start date: 2000

Duration: 1 year - 5 months - 30 days

Total amount: 83.735 €

14 Name of the project: Dinámica de suspensiones coloidales y fenómenos interfaciales

Name principal investigator (PI, Co-PI....): Ignacio Zúñiga

Nº of researchers: 5

Funding entity or bodies:

DGICYT - MEC

Start date: 1999

Duration: 2 years - 10 months - 30 days

Total amount: 0 €

15 Name of the project: Dinámica espacio-temporal de sistemas convectivos, coloides magnéticos, depósitos electroquímicos y modelos de fricción

Name principal investigator (PI, Co-PI....): Miguel Angel Rubio Alvarez

Nº of researchers: 4

Funding entity or bodies:

DGICYT (MECD)

Start date: 1997

Duration: 2 years - 10 months - 29 days

Total amount: 57.000 €

16 Name of the project: Estudio de la dinámica del crecimiento electroquímico: caracterización de la estabilidad de un proceso de depósito por electrodeposición

Entity where project took place: Centre de Recherche Paul Pascal, C.N.R.S. (Burdeos, Francia),

Name principal investigator (PI, Co-PI....): Miguel Angel Rubio Alvarez

Nº of researchers: 10

Funding entity or bodies:

Acción Integrada Hispano-Francesa

Ministerio de Educación Cultura y Deporte

Start date: 1997

Duration: 10 months - 29 days

Total amount: 4.000 €

17 Name of the project: Fenómenos de fricción en fronteras sólido-líquido y reología de disoluciones poliméricas

Name principal investigator (PI, Co-PI....): Ignacio Zúñiga López

Nº of researchers: 5

Funding entity or bodies:

DGICYT - MEC

Start date: 1995

Duration: 2 years - 10 months - 30 days

Total amount: 0 €



- 18** **Name of the project:** Chaos and Complexity
Entity where project took place: Institute for Scientific Interchange (Torino, Italia), Laboratoire Physique, Ecole Normale Supérieure (Lyon, Francia), Depto. Física y Matemática Aplicada Univ. Navarra (Pamplona), Istituto Nazionale
City of entity: Turín, Piemonte, Italy
Name principal investigator (PI, Co-PI....): Miguel Angel Rubio Alvarez (de la parte Española)
Nº of researchers: 30
Funding entity or bodies:
C.E.E. Tercer programa marco. Programa "Human Capital and Mobility"
Start date: 1994 **Duration:** 2 years - 11 months
Total amount: 150.000 €
- 19** **Name of the project:** Dinámica compleja en interfases: Inestabilidades en crecimiento superficial por electrodeposición y fenómenos stick-slip por fricción entre sólidos
Name principal investigator (PI, Co-PI....): Miguel Angel Rubio Alvarez
Nº of researchers: 5
Start date: 1994 **Duration:** 2 years - 11 months
Total amount: 51.000 €
- 20** **Name of the project:** Estudio microscópico-macroscópico de la condición de contorno del deslizamiento térmico y su efecto en el crecimiento cristalino
Name principal investigator (PI, Co-PI....): Ignacio Zúñiga López
Nº of researchers: 4
Funding entity or bodies:
DGICYT - MEC
Start date: 1994 **Duration:** 10 months - 30 days
Total amount: 0 €
- 21** **Name of the project:** Inestabilidades hidrodinámicas en flujos convectivos y forzados: Inestabilidades en flujos en rotación
Entity where project took place: Institute de Mecanique des Fluides (Marsella, Francia),
Name principal investigator (PI, Co-PI....): P. Bontoux y Emilia Crespo del Arco
Nº of researchers: 6
Funding entity or bodies:
MEC (Acción Integrada Hispano-Francesa)
Start date: 1994 **Duration:** 1 year - 10 months - 30 days
Total amount: 0 €
- 22** **Name of the project:** Diseño y construcción de un aparato para la realización de medidas reológicas en compuestos y disoluciones poliméricas
Name principal investigator (PI, Co-PI....): Ignacio Zúñiga López
Nº of researchers: 4
Start date: 1991 **Duration:** 2 years - 10 months - 30 days
Total amount: 0 €
- 23** **Name of the project:** Reología de polímeros en disoluciones diluidas: Efectos de la concentración, volumen excluido y de la interacción hidrodinámica en flujos de cizalla
Name principal investigator (PI, Co-PI....): Miguel Angel Rubio Alvarez



Nº of researchers: 4

Funding entity or bodies:

Dirección General de Investigación Científica y Técnica (MEC)

Start date: 1991

Duration: 2 years - 10 months - 30 days

Total amount: 50.000 €

24 Name of the project: Visualización y análisis de corrientes en dispositivos de asistencia mecánica circulatoria (ventrículos artificiales)

Name principal investigator (PI, Co-PI....): José Carlos Antoranz Callejo

Nº of researchers: 6

Funding entity or bodies:

DGICYT - MEC

Start date: 1989

Duration: 10 months - 29 days

Total amount: 0 €

25 Name of the project: Desarrollo de un sistema de asistencia mecánica circulatoria por ventrículo artificial neumático

Entity where project took place: Pabellón de Medicina y Cirugía Experimental, Hospital Gregorio Marañón,

Name principal investigator (PI, Co-PI....): Pedro García Barreno

Nº of researchers: 10

Funding entity or bodies:

CEDETI

Start date: 1987

Duration: 1 year - 11 months

Total amount: 0 €

26 Name of the project: Nonlinear dynamics in lasers and fluids

Entity where project took place: Istituto Nazionale di Ottica (Firenze, Italia),

Name principal investigator (PI, Co-PI....): F. T. Arecchi y M. Velarde

Nº of researchers: 8

Funding entity or bodies:

N.A.T.O

Start date: 1985

Duration: 2 years - 10 months - 29 days

Total amount: 0 €

27 Name of the project: Inestabilidades hidrodinámicas y turbulencia de origen térmico, electrotérmico e interfacial en líquidos isotrópicos y cristales líquidos

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

Nº of researchers: 8

Funding entity or bodies:

CAICYT - MEC

Start date: 1984

Duration: 2 years - 10 months - 30 days

Total amount: 0 €

28 Name of the project: Deterministic and stochastic approaches to instabilities and cooperative phenomena in fluid layers and nonlinear reaction-diffusion systems

Entity where project took place: Universidad de Stuttgart, Universidad de Bremen,

Name principal investigator (PI, Co-PI....): H. Haken; L. Arnold; Manuel G. Velarde

Nº of researchers: 20

**Funding entity or bodies:**

Fundación Volkswagen

Start date: 1982**Duration:** 4 years - 10 months - 30 days**Total amount:** 0 €

- 29 Name of the project:** Hidrodinámica y otros fenómenos de transporte e interfase en líquidos anisótropos (cristales líquidos)

Name principal investigator (PI, Co-PI....): Manuel G. Velarde**Nº of researchers:** 8**Funding entity or bodies:**

CAICYT - MEC

Start date: 1981**Duration:** 2 years - 10 months - 29 days**Total amount:** 0 €**R&D non-competitive contracts, agreements or projects with public or private entities**

- 1 Name of the project:** Desarrollo de materiales compuestos nanorreforzados con propiedades mecánicas y eléctricas avanzadas

Type of project: Industrial research**Degree of contribution:** Scientific coordinator**Name principal investigator (PI, Co-PI....):** Juan Baselga Llidó (UCIIM)**Nº of researchers:** 20**Participating entity/entities:** ICMC-CSIC; ICTP-CSIC; INTERFASES (UCIIM; Universidad de Alcalá; UCM; Universidad Nacional de Educación a Distancia; Universidad Politécnica de Madrid**Funding entity or bodies:**

Airbus España

Type of entity: Business**Start date:** 2007**Duration:** 5 months - 29 days**Total amount:** 24.890 €

- 2 Name of the project:** Desarrollo de nanocomposites con propiedades mecánicas avanzadas (Referencia: RP0607386)

Type of project: Industrial research**Degree of contribution:** Scientific coordinator**Name principal investigator (PI, Co-PI....):** Juan Balsega Llidó (coordinador general); Miguel Angel Rubio (coordinador grupo UNED)**Nº of researchers:** 20**Participating entity/entities:** Instituto de Ciencia y Tecnología de Polímeros (C.S.I.C.); Universidad Carlos III de Madrid; Universidad Complutense de Madrid; Universidad Nacional de Educación a Distancia; Universidad Politécnica de Madrid**Funding entity or bodies:**

Airbus S.A.S.

Type of entity: Business**Start date:** 2006**Duration:** 1 year**Total amount:** 42.690 €

Results

Industrial and intellectual property

- 1 Title registered industrial property:** Magnetic needle interfacial shear rheometer and system and method for actuating same
Inventors/authors/obtainers: Miguel Ángel Rubio Álvarez; Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz
Entity holder of rights: Universidad Nacional de Educación a Distancia
Nº of application: 16829899.0 - 1001 / 3330695
Date of register: 19/07/2016
Conferral date: 09/09/2020
- 2 Title registered industrial property:** Reómetro interfacial de cizalla por aguja magnética y sistema y método de accionamiento del mismo
Inventors/authors/obtainers: Miguel Ángel Rubio Álvarez; Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz
Entity holder of rights: Universidad Nacional de Educación a Distancia, Universida Politécnica de Madrid
Nº of application: P201531113
Country of inscription: Spain, Community of Madrid
Date of register: 28/07/2015
Conferral date: 01/12/2017
Spanish patent: Yes
PCT patent: Yes
- 3 Title registered industrial property:** Procedimiento de calibración para sondas magnéticas de reómetros interfaciales de cizalla por aguja magnética
Inventors/authors/obtainers: Miguel Ángel Rubio Álvarez; Javier Tajuelo Rodríguez; Fernando Martínez Pedrero; Ramón González Rubio; Francisco Ortega Gómez; Juan Manuel Pastor Ruiz
Entity holder of rights: Universidad Nacional de Educación a Distancia, Universidad Complutense, Universidad Politécnica de Madrid
Nº of application: P201431106
Country of inscription: Spain, Community of Madrid
Date of register: 23/07/2014
Conferral date: 26/05/2015
Spanish patent: Yes
PCT patent: Yes
- 4 Title registered industrial property:** Ventrículo artificial BIOMED 2.3
Entity holder of rights: BIOMED S.A.
Date of register: 1988



Scientific and technological activities

Scientific production

- 1** **H index:** 19
Date of application: 08/12/2020
Fuente de Índice H: WOS
- 2** **H index:** 22
Date of application: 08/12/2020
Fuente de Índice H: GOOGLE SCHOLAR
- 3** **H index:** 19
Date of application: 08/12/2020
Fuente de Índice H: SCOPUS

Publications, scientific and technical documents

- 1** Pablo Domínguez García; Manuel Pancorbo; Francisco Ortega; Miguel Ángel Rubio Álvarez. JColloids: Image analysis for video-microscopy studies of colloidal suspensions. Computer Physics Communications. 231, pp. 243 - 244. Elsevier, 01/10/2018.
DOI: 10.1016/j.cpc.2018.04.033
Type of production: Scientific paper **Format:** Journal
Relevant publication: Yes
- 2** Pablo Sánchez Puga; Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Miguel Ángel Rubio Álvarez. Flow field-based data analysis in interfacial shear rheometry. Advances in Colloid and Interface Science. Elsevier, 30/11/2020. Available on-line at: <<https://doi.org/10.1016/j.cis.2020.102332>>.
DOI: 10.1016/j.cis.2020.102332
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes
- 3** Óscar Toledano; Miguel Ángel Rubio Álvarez; Óscar Gálvez. Energetics and structures of the tilted phases of fatty acid Langmuir monolayers. Phys. Chem. Chem. Phys. 22, pp. 12092 - 12103. Royal Society of Chemistry, 18/05/2020.
DOI: 10.1039/D0CP01361G
Type of production: Scientific paper **Format:** Journal
- 4** Pablo Sánchez-Puga; Javier Tajuelo; Juan Manuel Pastor; Miguel Ángel Rubio Álvarez. BiconeDrag—A data processing application for the oscillating conical bob interfacial shear rheometer. Computer Physics Communications. 239, pp. 184 - 196. Elsevier, 12/02/2019.
Type of production: Scientific paper **Format:** Journal
- 5** Pablo Sánchez-Puga; Javier Tajuelo; Juan Manuel Pastor; Miguel Ángel Rubio. Dynamic Measurements with the Bicone Interfacial Shear Rheometer: Numerical Bench-Marking of Flow Field-Based Data Processing. Colloids and Interfaces. 2 - 4, pp. 69 - 87. MDPI, 07/12/2018.
Type of production: Scientific paper **Format:** Journal

- 6** Eduardo Guzmán; Javier Tajuelo; Juan Manuel Pastor Ruiz; Miguel Ángel Rubio Álvarez; Francisco Ortega; Ramón González Rubio. Shear rheology of fluid interfaces: Closing the gap between macro- and micro-rheology. *Current Opinion in Colloid & Interface Science*. 37, pp. 33 - 48. Elsevier, 01/09/2018.
DOI: 10.1016/j.cocis.2018.05.004
Type of production: Scientific paper **Format:** Journal
- 7** Fernando Martínez Pedrero; Javier Tajuelo Rodríguez; Pablo Sánchez Puga; Raquel Chuliá Jordán; Francisco Ortega; Miguel Ángel Rubio Álvarez; Ramón González Rubio. Linear shear rheology of aging γ -casein films adsorbing at the air/water interface. *Journal of Colloid and Interface Science*. 511, pp. 12 - 20. Elsevier, 01/02/2018.
DOI: 10.1016/j.jcis.2017.09.092
Type of production: Scientific paper **Format:** Journal
- 8** Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Miguel Ángel Rubio Álvarez. Flow field based data processing for the oscillating conical bob interfacial shear rheometer. *Journal of Rheology*. 62 - 1, pp. 295 - 312. The Society of Rheology, 04/12/2017.
DOI: 10.1122/1.5012764
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 9** Javier Tajuelo; Eduardo Guzmán; Francisco Ortega; Ramón González Rubio; Miguel Ángel Rubio Álvarez. Phase diagram of fatty acid Langmuir monolayers from rheological measurements. *Langmuir*. 33, pp. 4280 - 4290. American Chemical Society, 31/03/2017.
DOI: DOI: 10.1021/acs.langmuir.7b00613
Type of production: Scientific paper **Format:** Journal
- 10** Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Miguel Ángel Rubio Álvarez. A new interfacial stress rheometer based on a mobile magnetic trap. *Journal of Rheology*. American Institute of Physics, 15/11/2016.
DOI: <http://dx.doi.org/10.1122/1.4958668>
Type of production: Scientific paper **Format:** Journal
- 11** Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Fernando Martínez Pedrero; Manuel Vázquez Villalabeitia; Francisco Ortega; Ramón González Rubio; Miguel Ángel Rubio Álvarez. Magnetic microwire probes for the magnetic rod interfacial stress rheometer. *Langmuir*. 31 - 4, pp. 1410 - 1420. American Chemical Society, 21/01/2015.
DOI: DOI: 10.1021/la5038316
Type of production: Scientific paper **Format:** Journal
- 12** Pablo Domínguez García; Miguel Ángel Rubio Álvarez. Single and multi-particle passive microrheology of low-density fluids using sedimented microspheres. *Applied Physics Letters*. 102 - 7, pp. 074101 - 4. 2013.
DOI: <http://dx.doi.org/10.1063/1.4792742> View Table of Contents: <http://apl.aip.org/resource/1/APPLAB/>
Type of production: Scientific paper **Format:** Journal
- 13** L.J. Bonales; Fernando Martínez-Pedrero; Miguel Ángel Rubio Álvarez; Ramón González Rubio; Francisco Ortega. Phase Behavior of Dense Colloidal Binary Monolayers. *Langmuir*. 28 - 48, pp. 16555 - 16566. American Chemical Society, 04/12/2012.
DOI: dx.doi.org/10.1021/la302718q
Type of production: Scientific paper **Format:** Journal
- 14** P. Dominguez-Garcia; J. M. Pastor; M. A. Rubio. Aggregation and disaggregation dynamics of sedimented and charged superparamagnetic micro-particles in water suspension. *EUROPEAN PHYSICAL JOURNAL E*. 34 - 4, 04/2011. ISSN 1292-8941
DOI: DOI 10.1140/epje/i2011-11036-5

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

- 15** A. Maestro; F. Ortega; R. G. Rubio; M. A. Rubio; J. Kraegel; R. Miller. Rheology of poly(methyl methacrylate) Langmuir monolayers: Percolation transition to a soft glasslike system. JOURNAL OF CHEMICAL PHYSICS. 134 - 10, 14/03/2011. ISSN 0021-9606

DOI: doi:10.1063/1.3560612**Type of production:** Scientific paper**Format:** Journal

- 16** P. Dominguez Garcia; M. A. Rubio. Three-dimensional morphology of field-induced chain-like aggregates of superparamagnetic microparticles. COLLOIDS AND SURFACES A-PHYSICOCHEMICAL AND ENGINEERING ASPECTS. 358 - 1-3, pp. 21 - 27. 05/04/2010. ISSN 0927-7757

DOI: doi:10.1016/j.colsurfa.2010.01.018**Type of production:** Scientific paper**Format:** Journal

- 17** P. Dominguez Garcia; M. A. Rubio. JChainsAnalyser: an ImageJ-based stand-alone application for the study of magneto-rheological fluids. COMPUTER PHYSICS COMMUNICATIONS. 180 - 10, pp. 1956 - 1960. 05/10/2009. ISSN 0010-4655

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

- 18** P. Dominguez Garcia; J. M. Pastor; Sonia Melle; Miguel A. Rubio. Electrostatic and hydrodynamics effects in a sedimented magnetorheological suspension. PHYSICAL REVIEW E. 80 - 2, 05/08/2009. ISSN 1539-3755

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

- 19** P. Dominguez Garcia; Sonia Melle; M. A. Rubio. Morphology of anisotropic chains in a magneto-rheological fluid during aggregation and disaggregation processes. JOURNAL OF COLLOID AND INTERFACE SCIENCE. 333 - 1, pp. 221 - 229. 01/05/2009. ISSN 0021-9797

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

- 20** John Schneider; Ana Egatz Gomez; Sonia Melle; S. Lindsay; P. Dominguez Garcia; M. A. Rubio; M. Marquez; Antonio A. Garcia. Motion of viscous drops on superhydrophobic surfaces due to magnetic gradients. COLLOIDS AND SURFACES A-PHYSICOCHEMICAL AND ENGINEERING ASPECTS. 323 - 1-3, pp. 19 - 27. 20/06/2008. Available on-line at: <3rd International Workshop on Bubble and Drop Interfaces>. ISSN 0927-7757

Legal deposit: MAR 25-28, 2007**Type of production:** Scientific paper**Format:** Journal

- 21** P. Dominguez Garcia; Sonia Melle; J. M. Pastor; M. A. Rubio. Scaling in the aggregation dynamics of a magnetorheological fluid. PHYSICAL REVIEW E. 76 - 5, 20/11/2007. ISSN 1539-3755

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

- 22** Ana Egatz Gomez; John Schneider; P. Aella; Dongqing Yang; P. Dominguez Garcia; Solitaire Lindsay; S. T. Picraux; Miguel A. Rubio; Sonia Melle; Manuel Marquez; Antonio A. Garcia. Silicon nanowire and polyethylene superhydrophobic surfaces for discrete magnetic microfluidics. APPLIED SURFACE SCIENCE. 254 - 1, pp. 330 - 334. 31/10/2007. Available on-line at: <13th International Conference on Solid Films and Surfaces (ICSFS 13)>. ISSN 0169-4332

Legal deposit: NOV 06-10, 2006**Type of production:** Scientific paper**Format:** Journal

- 23** Antonio A. Garcia; Ana Egatz Gomez; Solitaire A. Lindsay; P. Dominguez Garcia; Sonia Melle; Manuel Marquez; Miguel A. Rubio; S. T. Picraux; Dongqing Yang; P. Aella; Mark A. Hayes; Devens Gust; Suchera Loyprasert; Terannie Vazquez Alvarez; Joseph Wang. Magnetic movement of biological fluid droplets. JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS. 311 - 1, pp. 238 - 243. 01/05/2007. Available on-line at: <6th International Conference on the Scientific and Clinical Applications of Magnetic Carriers>. ISSN 0304-8853

Legal deposit: MAY 17-30, 2006

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

- 24** Ana Egatz Gomez; Sonia Melle; Antonio A. Garcia; S. A. Lindsay; M. Marquez; P. Dominguez Garcia; Miguel A. Rubio; S. T. Picraux; J. L. Taraci; T. Clement; D. Yang; Mark A. Hayes; Devens Gust. Discrete magnetic microfluidics (vol 89, art no 034106, 2006). APPLIED PHYSICS LETTERS. 89 - 12, 18/09/2006. ISSN 0003-6951

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

- 25** Ana Egatz Gomez; Sonia Melle; Antonio A. Garcia; S. A. Lindsay; M. Marquez; P. Dominguez Garcia; Miguel A. Rubio; S. T. Picraux; J. L. Taraci; T. Clement; D. Yang; Mark A. Hayes; Devens Gust. Discrete magnetic microfluidics. APPLIED PHYSICS LETTERS. 89 - 3, 17/07/2006. ISSN 0003-6951

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

- 26** P Dominguez Garcia; S Melle; OG Calderon; MA Rubio. Doublet dynamics of magnetizable particles under frequency modulated rotating fields. COLLOIDS AND SURFACES A-PHYSCOCHEMICAL AND ENGINEERING ASPECTS. 270, pp. 270 - 276. 01/12/2005. ISSN 0927-7757

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

- 27** T Martin; P Espanol; MA Rubio. Mechanisms for dynamic crack branching in brittle elastic solids: Strain field kinematics and reflected surface waves. PHYSICAL REVIEW E. 71 - 3, 01/03/2005. ISSN 1063-651X

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

- 28** S Melle; OG Calderon; MA Rubio; GG Fuller. Microstructure evolution in magnetorheological suspensions governed by Mason number. PHYSICAL REVIEW E. 68 - 4, 01/10/2003. ISSN 1539-3755

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

- 29** S Melle; OG Calderon; MA Rubio; GG Fuller. Chain rotational dynamics in MR suspensions. INTERNATIONAL JOURNAL OF MODERN PHYSICS B. 16 - 17-18, pp. 2293 - 2299. 20/07/2002. Available on-line at: <8th International Conference on Electro-Rheological Fluids and Magneto-Rheological Suspensions>. ISSN 0217-9792

Legal deposit: JUL 09-13, 2001**Type of production:** Scientific paper**Format:** Journal

- 30** S Melle; OG Calderon; GG Fuller; MA Rubio. Polarizable particle aggregation under rotating magnetic fields using scattering dichroism. JOURNAL OF COLLOID AND INTERFACE SCIENCE. 247 - 1, pp. 200 - 209. 01/03/2002. ISSN 0021-9797

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

- 31** S Melle; OG Calderon; MA Rubio; GG Fuller. Rotational dynamics in dipolar colloidal suspensions: video microscopy experiments and simulations results. JOURNAL OF NON-NEWTONIAN FLUID MECHANICS. 102 - 2, pp. 135 - 148. 15/02/2002. ISSN 0377-0257

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

- 32** S Melle; MA Rubio; GG Fuller. Time scaling regimes in aggregation of magnetic dipolar particles: Scattering dichroism results. PHYSICAL REVIEW LETTERS. 87 - 11, pp. art. no. - 115501. 10/09/2001. ISSN 0031-9007

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

- 33** S Melle; MA Rubio; GG Fuller. Structure and dynamics of magnetorheological fluids in rotating magnetic fields (vol E 61, pg 4111, 2000). PHYSICAL REVIEW E. 63 - 5, 10/05/2001. ISSN 1063-651X

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

- 34** S Melle; MA Rubio; GG Fuller. Orientation dynamics of magnetorheological fluids subject to rotating external fields. INTERNATIONAL JOURNAL OF MODERN PHYSICS B. 15 - 6-7, pp. 758 - 766. 20/03/2001. Available on-line at: <7th International Conference on Electro-Rheological Fluids and Magneto-Rheological Suspension>. ISSN 0217-9792



Legal deposit: JUL 09-23, 1999

Type of production: Scientific paper

Format: Journal

- 35** T Martin; P Espanol; MA Rubio; I Zuniga. Dynamic fracture in a discrete model of a brittle elastic solid. PHYSICAL REVIEW E. 61 - 6, pp. 6120 - 6131. 20/06/2000. ISSN 1063-651X

Type of production: Scientific paper

Format: Journal

- 36** J Buceta; J Pastor; MA Rubio; FJ de la Rubia. Finite resolution effects in the analysis of the scaling behavior of rough surfaces. PHYSICAL REVIEW E. 61 - 5, pp. 6015 - 6018. 20/05/2000. ISSN 1063-651X

Type of production: Scientific paper

Format: Journal

- 37** S Melle; GG Fuller; MA Rubio. Structure and dynamics of magnetorheological fluids in rotating magnetic fields. PHYSICAL REVIEW E. 61 - 4, pp. 4111 - 4117. 20/04/2000. ISSN 1539-3755

Type of production: Scientific paper

Format: Journal

- 38** J Galeano; P Espanol; MA Rubio. Experimental and theoretical results of stress relaxations in a model of earthquake dynamics. EUROPHYSICS LETTERS. 49 - 4, pp. 410 - 416. 20/02/2000. ISSN 0295-5075

Type of production: Scientific paper

Format: Journal

- 39** J Buceta; JM Pastor; MA Rubio; FJ de la Rubia. Small scale properties of the stochastic stabilized Kuramoto-Sivashinsky equation. PHYSICA D. 113 - 2-4, pp. 166 - 171. 01/03/1998. Available on-line at: <International Conference on Fluctuations, Nonlinearity and Disorder>. ISSN 0167-2789

Legal deposit: SEP 30-OCT 04, 1996

Type of production: Scientific paper

Format: Journal

- 40** J Buceta; J Pastor; MA Rubio; FJ delaRubia. The stochastic stabilized Kuramoto-Sivashinsky equation: a model for compact electrodeposition growth. PHYSICS LETTERS A. 235 - 5, pp. 464 - 468. 17/11/1997. ISSN 0375-9601

Type of production: Scientific paper

Format: Journal

- 41** P Espanol; I Zuniga; MA Rubio. Effect of boundary conditions in mode I fracture in brittle materials. PHYSICA D. 96 - 1-4, pp. 375 - 383. 15/09/1996. Available on-line at: <Workshop on Measures of Spatio-Temporal Dynamics>. ISSN 0167-2789

Legal deposit: JUN 11-13, 1995

Type of production: Scientific paper

Format: Journal

- 42** JM Pastor; MA Rubio. Instabilities in the growth of compact electrodeposits. PHYSICA D. 96 - 1-4, pp. 384 - 395. 15/09/1996. Available on-line at: <Workshop on Measures of Spatio-Temporal Dynamics>. ISSN 0167-2789

Legal deposit: JUN 11-13, 1995

Type of production: Scientific paper

Format: Journal

- 43** JM Pastor; MA Rubio. Rough growth and morphological instability of compact electrodeposits. PHYSICAL REVIEW LETTERS. 76 - 11, pp. 1848 - 1851. 11/03/1996. ISSN 0031-9007

Type of production: Scientific paper

Format: Journal

- 44** I ECHEVERRIA; MA RUBIO. HIGH-PRECISION MAGNETIC-LEVITATION DEVICE WITH ELECTROOPTICAL FEEDBACK. REVIEW OF SCIENTIFIC INSTRUMENTS. 66 - 7, pp. 3931 - 3938. 11/07/1995. ISSN 0034-6748

Type of production: Scientific paper

Format: Journal

- 45** P ESPANOL; MA RUBIO; I ZUNIGA. SCALING OF THE TIME-DEPENDENT SELF-DIFFUSION COEFFICIENT AND THE PROPAGATION OF HYDRODYNAMIC INTERACTIONS. PHYSICAL REVIEW E. 51 - 1, pp. 803 - 806. 11/01/1995. ISSN 1063-651X

Type of production: Scientific paper

Format: Journal

- 46** J GALEANO; MA RUBIO. EXPERIMENTS ON EARTHQUAKES IN A CONTINUOUS ELASTIC MEDIUM. ANNALES DE PHYSIQUE. 19 - 6, pp. 735 - 738. 11/12/1994. ISSN 0003-4169
Type of production: Scientific paper **Format:** Journal
- 47** MA RUBIO; J GALEANO. STICK-SLIP DYNAMICS IN THE RELAXATION OF STRESSES IN A CONTINUOUS ELASTIC MEDIUM. PHYSICAL REVIEW E. 50 - 2, pp. 1000 - 1004. 11/08/1994. ISSN 1063-651X
Type of production: Scientific paper **Format:** Journal
- 48** JC ANTORANZ; MA RUBIO; J DUARTE; D FERNANDEZCALEYA; MM DESCO; M CANO; P GARCIABARRENO; JM ALVAREZVALDIVIELSO; JF DELCANIZO. IMPROVEMENT OF THE HYDRODYNAMIC RESPONSE OF A VENTRICULAR ASSIST DEVICE - A FALSE AURICLE SOLUTION. ARTIFICIAL ORGANS. 16 - 3, pp. 301 - 305. 11/06/1992. ISSN 0160-564X
Type of production: Scientific paper **Format:** Journal
- 49** L CONDE; MA RUBIO; V FAIREN; E RIANDE. OSCILLATORY MEASUREMENT OF LINEAR VISCOELASTICITY - DYNAMIC MODULI REVISITED. JOURNAL OF POLYMER SCIENCE PART B-POLYMER PHYSICS. 29 - 12, pp. 1525 - 1531. 11/11/1991. ISSN 0887-6266
Type of production: Scientific paper **Format:** Journal
- 50** L CONDE; E RIANDE; MA RUBIO; V FAIREN. NONLINEAR EFFECTS IN THE VICINITY OF THE RESONANT-FREQUENCY OF VISCOELASTIC MEASUREMENTS DEVICES. JOURNAL OF NON-CRYSTALLINE SOLIDS. 131, pp. 883 - 886. 11/06/1991. Available on-line at: <INTERNATIONAL DISCUSSION MEETING ON RELAXATIONS IN COMPLEX SYSTEMS>. ISSN 0022-3093
Legal deposit: JUN 18-29, 1990
Type of production: Scientific paper **Format:** Journal
- 51** J DUARTE; D FERNANDEZCALEYA; JM ALVAREZVALDIVIELSO; C ROMERO; MM DESCO; M CANO; F RODRIGUEZ; MA RUBIO; JC ANTORANZ; JF DELCANIZO. 1ST CLINICAL IMPLANTATION OF THE BCM 3.5 VENTRICULAR ASSIST DEVICE (VAD). EUROPEAN JOURNAL OF CARDIO-THORACIC SURGERY. 5 - 1, pp. 46 - 50. 15/01/1991. ISSN 1010-7940
Type of production: Scientific paper **Format:** Journal
- 52** MA RUBIO; BJ GLUCKMAN; A DOUGHERTY; JP GOLLUB. STREAMS WITH MOVING CONTACT LINES - COMPLEX DYNAMICS DUE TO CONTACT-ANGLE HYSTERESIS. PHYSICAL REVIEW A. 43 - 2, pp. 811 - 818. 15/01/1991. ISSN 1050-2947
Type of production: Scientific paper **Format:** Journal
- 53** MA RUBIO; A DOUGHERTY; JP GOLLUB. SELF-AFFINE FRACTAL INTERFACES FROM IMMISCIBLE DISPLACEMENT IN POROUS-MEDIA - REPLY. PHYSICAL REVIEW LETTERS. 65 - 11, pp. 1389 - 1389. 10/09/1990. ISSN 0031-9007
Type of production: Scientific paper **Format:** Journal
- 54** MA RUBIO; P BIGAZZI; L ALBAVETTI; S CILIBERTO. SPATIOTEMPORAL REGIMES IN RAYLEIGH-BENARD CONVECTION IN A SMALL RECTANGULAR CELL. JOURNAL OF FLUID MECHANICS. 209, pp. 309 - 334. 10/12/1989. ISSN 0022-1120
Type of production: Scientific paper **Format:** Journal
- 55** MA RUBIO; CA EDWARDS; A DOUGHERTY; JP GOLLUB. SELF-AFFINE FRACTAL INTERFACES FROM IMMISCIBLE DISPLACEMENT IN POROUS-MEDIA. PHYSICAL REVIEW LETTERS. 63 - 16, pp. 1685 - 1688. 16/10/1989. ISSN 0031-9007
Type of production: Scientific paper **Format:** Journal

- 56** MA RUBIO; M DELATORRE; JC ANTORANZ. INTERMITTENCIES AND POWER-LAW LOW-FREQUENCY DIVERGENCIES IN A NONLINEAR OSCILLATOR. PHYSICA D. 36 - 1-2, pp. 92 - 108. 16/06/1989. ISSN 0167-2789
Type of production: Scientific paper **Format:** Journal
- 57** M DESCO; MJ CANO; J DUARTE; F RODRIGUEZ; D FERNANDEZCALEYA; M ALVAREZVALDIVIELSO; JC ANTORANZ; MA RUBIO; P GARCIBARRENO; JF DELCANIZO. BLOOD BIOCHEMISTRY VALUES OF SHEEP (OVIS-ARIES-LIGERIENSIS). COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY A-PHYSIOLOGY. 94 - 4, pp. 717 - 719. 16/03/1989. ISSN 0300-9629
Type of production: Scientific paper **Format:** Journal
- 58** JC ANTORANZ; MA RUBIO; M DELATORRE. SOFT TRANSITION BETWEEN TYPE-I AND TYPE-III INTERMITTENCIES IN A NONLINEAR MAP. PROGRESS OF THEORETICAL PHYSICS. 81 - 3, pp. 544 - 548. 16/03/1989. ISSN 0033-068X
Type of production: Scientific paper **Format:** Journal
- 59** MA RUBIO; L CONDE; E RIANDE. HIGH-PRECISION TEMPERATURE CONTROLLER BASED ON PHASE-LOCKED LOOP CIRCUITS. REVIEW OF SCIENTIFIC INSTRUMENTS. 59 - 9, pp. 2041 - 2044. 16/09/1988. ISSN 0034-6748
Type of production: Scientific paper **Format:** Journal
- 60** JC ANTORANZ; MA RUBIO. HYPERCHAOS IN A SIMPLE-MODEL FOR A LASER WITH A SATURABLE ABSORBER. JOURNAL OF THE OPTICAL SOCIETY OF AMERICA B-OPTICAL PHYSICS. 5 - 5, pp. 1070 - 1073. 16/05/1988. ISSN 0740-3224
Type of production: Scientific paper **Format:** Journal
- 61** R BADII; G BROGGI; B DERIGHETTI; M RAVANI; S CILIBERTO; A POLITI; MA RUBIO. DIMENSION INCREASE IN FILTERED CHAOTIC SIGNALS. PHYSICAL REVIEW LETTERS. 60 - 11, pp. 979 - 982. 14/03/1988. ISSN 0031-9007
Type of production: Scientific paper **Format:** Journal
- 62** S CILIBERTO; MA RUBIO. CHAOS AND ORDER IN THE TEMPERATURE-FIELD OF RAYLEIGH-BENARD CONVECTION. PHYSICA SCRIPTA. 36 - 6, pp. 920 - 926. 14/12/1987. ISSN 0281-1847
Type of production: Scientific paper **Format:** Journal
- 63** L CONDE; MA RUBIO; E RIANDE. LOW-COST DEVICE FOR PRECISE MEASUREMENTS OF DYNAMIC MODULI IN THE WEISSENBERG RHEOGONIOMETER. JOURNAL OF RHEOLOGY. 31 - 7, pp. 527 - 535. 14/10/1987. ISSN 0148-6055
Type of production: Scientific paper **Format:** Journal
- 64** S CILIBERTO; MA RUBIO. LOCAL OSCILLATIONS, TRAVELING WAVES, AND CHAOS IN RAYLEIGH-BENARD CONVECTION. PHYSICAL REVIEW LETTERS. 58 - 25, pp. 2652 - 2655. 22/06/1987. ISSN 0031-9007
Type of production: Scientific paper **Format:** Journal
- 65** FT ARECCHI; S CILIBERTO; MA RUBIO. OSCILLATIONS AND CHAOS ON THE FREE-SURFACE OF A HEATED FLUID. NUOVO CIMENTO DELLA SOCIETA ITALIANA DI FISICA D-CONDENSED MATTER ATOMIC MOLECULAR AND CHEMICAL PHYSICS FLUIDS PLASMAS BIOPHYSICS. 3 - 4, pp. 793 - 802. 22/06/1984. ISSN 0392-6737
Type of production: Scientific paper **Format:** Journal
- 66** M DUBOIS; MA RUBIO; P BERGE. EXPERIMENTAL-EVIDENCE OF INTERMITTENCIES ASSOCIATED WITH A SUBHARMONIC BIFURCATION. PHYSICAL REVIEW LETTERS. 51 - 16, pp. 1446 - 1449. 22/06/1983. ISSN 0031-9007

Type of production: Scientific paper

Format: Journal

- 67** S. Melle; O. G. Calderón; G.G. Fuller; M.A. Rubio. Chain rotational dynamics in MR suspensions. Proceedings of the VIII International Conference on Electrorheological Fluids and Magnetorheological Suspensions; editado por G. Bossis. pp. 345 - 351. (Singapore): World Scientific, 2002.

Type of production: Book chapter

Format: Book

- 68** S. Melle; O.G. Calderón; G.G. Fuller; M.A. Rubio. Microstructure evolution in MR suspensions governed by Mason number. Progress in Rheology, Theory and Applications; editado por F.J. Martínez-Boza, A. Guerrero, P. Partal, J.M. Franco y J. Muñoz. (Spain): Grupo Español de Reología, 2002. ISBN 84-607-4383-7

Type of production: Book chapter

Format: Book

- 69** S. Melle; G.G. Fuller; M.A. Rubio. Orientational Dynamics of magnetorheological Fluids in rotating magnetic Fields. Proceedings of the. VII International Meeting on Electrorheological and Magnetorheological Fluids. pp. 217 - 226. (Singapore): World Scientific, 2000.

Type of production: Book chapter

Format: Book

- 70** P. Español; M.A. Rubio; I. Zúñiga. Isotropic MD Simulations of Dynamic Brittle Fracture. Symposium on Fracture-Instability, Dynamics, Scaling, and Ductile/Brittle Behavior; Fall Meeting of the Materials Research Society. pp. 101 - 106. (United States of America): Materials Research Society, 1996.

Type of production: Book chapter

Format: Book

- 71** M.A. Rubio; J. Galeano. Experiments on Earthquakes in a Continuous Elastic System. Chaos and Complexity 93; editado por J. Trinh Thanh Van, P. Bergé, R. Conte y M. Dubois. pp. 225 - 228. (France): Editions Frontieres, 1995.

Type of production: Book chapter

Format: Book

- 72** J.F. del Cañizo; M. M. Desco; J. Duarte; J.M. Alvarez-Valdivielso; D. Fernández-Caleya; J.C. Antoranz; M.A. Rubio. Comparative in vitro testing of two B.C.M. Ventricular Assist Devices: Improvements due to the implementation of a False Auricle. In Vitro Testing of Blood Pumps; editado por E. Raul. pp. 81 - 91. (Holland): Elsevier, 1991.

Type of production: Book chapter

Format: Book

- 73** J.C. Antoranz; M.A. Rubio. Transition to Chaos in Nonlinear Oscillators. The Global Geometry of Turbulence; editado por J. Jimenez. pp. 287 - 296. (United States of America): Plenum Press, 1991.

Type of production: Book chapter

Format: Book

- 74** M.A. Rubio; A. Dougherty; J.P. Gollub. Anisotropic Scaling of Interfaces in Porous Media. Symposium on Fractal Aspects of Materials; Fall Meeting of the Materials Research Society. pp. 79 - 82. (United States of America): Materials Research Society, 1989.

Type of production: Book chapter

Format: Book

- 75** M.A. Rubio; A. Dougherty; J.P. Gollub. Characterization of Irregular Interfaces: Roughness and Self-Affine Fractals. Measures of Complexity and Chaos; editado por N. B. Abraham, A. M. Albano, A. Passamante y P. E. Rapp. pp. 461 - 464. (United States of America): Plenum Press, 1989.

Type of production: Book chapter

Format: Book

- 76** J.C. Antoranz; M.A. Rubio; J. San Martín. Hyperchaos in a model for a laser with intracavity absorber in an extremely bad cavity. Optical Bistability IV; Editado Por W. Firth. (France): Les Editions de la Physique, 1988.

Type of production: Book chapter

Format: Book

- 77** M.A. Rubio; S. Ciliberto; P. Bigazzi. Transition between Localized Oscillations and Traveling Waves in Thermal Convection. Chaos and Complexity; editado por R. Livi, S. Ruffo, S. Ciliberto y M. Buiatti. pp. 151 - 170. (Singapore): World Scientific, 1988.
Type of production: Book chapter **Format:** Book
- 78** M.A. Rubio; J.C. Antoranz; M. de la Torre; M. G. Velarde. Digital and Analog Approach to Intermittencies and 1/f Noise in a Nonlinear Helmholtz Oscillator. Computational Systems: Natural and Artificial; editado por H. Haken. pp. 196 - 201. Berlin(Germany): Springer-Verlag, 1987.
Type of production: Book chapter **Format:** Book
- 79** S. Ciliberto; F. Simonelli; M.A. Rubio. Time Dependent Structures in Rayleigh-Bénard Convection. pp. 113 - 116. (France): Les Editions de la Physique, 1985.
Type of production: Book chapter **Format:** Book

Works submitted to national or international conferences

- 1** **Title of the work:** Phase transitions in fatty acid Langmuir monolayers: a thermo-rheological study of the transitions to the LS phase
Name of the conference: 10th International Colloids Conference
Type of event: Conference **Geographical area:** Non EU International
Type of participation: 'Participatory - poster
City of event: Palma de Mallorca, Spain
Date of event: 12/2020
Organising entity: Elsevier
With external admission assessment committee: Yes
Pablo Sánchez Puga; Javier Tajuelo Rodríguez; Miguel Ángel Rubio Álvarez.
- 2** **Title of the work:** Thermo-rheological studies of phase transitions in fatty acid Langmuir monolayers: Transitions to the LS phase
Name of the conference: 18th International Congress on Rheology
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Rio de Janeiro, Brazil
Date of event: 12/2020
With external admission assessment committee: Yes
Pablo Sánchez Puga; Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Miguel Ángel Rubio Álvarez.
- 3** **Title of the work:** DFT molecular dynamics simulations of a Langmuir monolayer
Name of the conference: XXII Reunión Nacional de Física Estadística
Type of participation: 'Participatory - poster
City of event: Madrid, Spain
Date of event: 10/2018
Óscar Toledano; Óscar Gálvez; Pep Español; Miguel Ángel Rubio Álvarez.
- 4** **Title of the work:** Flow field-based data processing for the oscillating conical bob rotational rheometer
Name of the conference: XXII Reunión Nacional de Física Estadística
Type of participation: 'Participatory - poster
City of event: Madrid, Spain
Date of event: 10/2018
Pablo Sánchez Puga; Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Miguel Ángel Rubio Álvarez.

- 5** **Title of the work:** Linear shear rheology of aging B-casein films adsorbing at the air/water interface
Name of the conference: XXII Reunión Nacional de Física Estadística
Type of participation: 'Participatory - poster
City of event: Madrid, Spain
Date of event: 10/2018
Fernando Martínez Pedrero; Javier Tajuelo Rodríguez; Pablo Sánchez Puga; Francisco Ortega; Miguel Ángel Rubio Álvarez; Ramón González Rubio.
- 6** **Title of the work:** Dynamic measurements with the bicone interfacial shear rheometer: Flow field based data processing.
Name of the conference: 16th Conference of the International Association of Colloid and Interface Scientists
Type of event: Conference **Geographical area:** Non EU International
Type of participation: Participatory - oral communication
City of event: Rotterdam, Holland
Date of event: 21/05/2018
End date: 25/05/2018
Organising entity: International Association of Colloid and Interface Scientists
With external admission assessment committee: Yes
Miguel Ángel Rubio Álvarez; Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Pablo Sánchez Puga.
- 7** **Title of the work:** Linear shear rheology of aging B-casein films adsorbing at the air/water interface
Name of the conference: 12th Annual European Rheology Conference
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication **Reasons for participation:** Review before acceptance
City of event: Sorrento, Italy
Date of event: 17/04/2018
End date: 20/04/2018
Organising entity: The European Society of Rheology
Fernando Martínez Pedrero; Javier Tajuelo Rodríguez; Pablo Sánchez Puga; Francisco Ortega; Miguel Ángel Rubio Álvarez; Ramón González Rubio.
- 8** **Title of the work:** The bicone interfacial shear rheometer revisited: Flow field based data processing for the oscillating conical bob
Name of the conference: 12th Annual European Rheology Conference
Type of event: Conference **Geographical area:** European Union
Type of participation: Participatory - oral communication **Reasons for participation:** Review before acceptance
City of event: Sorrento, Italy
Date of event: 17/04/2018
End date: 20/04/2018
Organising entity: The European Society of Rheology
Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Miguel Ángel Rubio Álvarez.
- 9** **Title of the work:** Phase transitions in fatty acid Langmuir monolayers: Interfacial shear rheology results
Name of the conference: VII Iberian Meeting on Colloids and Interfaces
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: 04/07/2017
End date: 07/07/2017



Javier Tajuelo Rodríguez; Eduardo Guzmán; Ramón González Rubio; Francisco Ortega; Miguel Ángel Rubio Álvarez.

10 Title of the work: The unusual interfacial shear rheology of fatty acid/alcohol Langmuir monolayers

Name of the conference: 11th Annual European Rheology Conference

Type of participation: Participatory - oral communication

City of event: Copenhagen, Denmark

Date of event: 04/2017

Organising entity: European Society of Rheology

Javier Tajuelo Rodríguez; Eduardo Guzmán; Francisco Ortega; Ramón González Rubio; Miguel Ángel Rubio Álvarez.

11 Title of the work: Magnetic Trap Interfacial Shear Rheometer: Design and theoretical model

Name of the conference: International Winter School on Complex Wetting Phenomena (CoWet)

Type of participation: Participatory - invited/keynote talk

City of event: Madrid, Spain

Date of event: 11/2016

Javier Tajuelo Rodríguez; Eduardo Guzmán; Ramón González Rubio; Francisco Ortega; Miguel Ángel Rubio Álvarez.

12 Title of the work: Interfacial shear micro- and macro-rheology of Langmuir monolayers: Fatty acids, fatty alcohols and polymers

Name of the conference: 30th Conference of the European Colloid and Interface Society

Type of participation: Participatory - oral communication

City of event: Roma, Italy

Date of event: 09/2016

Organising entity: European Colloid and Interface Society

Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Francisco Ortega; Ramón González Rubio; Eduardo Guzmán; Miguel Ángel Rubio Álvarez.

13 Title of the work: A high sensitivity magnetic trap driven Interfacial Shear Rheometer

Name of the conference: XVIIth International Congress on Rheology (ICR2016)

Type of participation: Participatory - oral communication

City of event: Kyoto, Japan

Date of event: 08/2016

Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Miguel Ángel Rubio Álvarez.

14 Title of the work: Phase transitions and mechanical properties of Langmuir monolayers studied with an Interfacial Shear Rheometer

Name of the conference: XX Reunión Nacional de Física Estadística

Type of participation: Participatory - oral communication

City of event: Badajoz, Spain

Date of event: 10/2015

Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Francisco Ortega; Ramón González Rubio; Miguel Ángel Rubio Álvarez.

15 Title of the work: Interfacial rheology

Name of the conference: IberReo15

Type of participation: Participatory - oral communication

City of event: Coimbra, Portugal

Date of event: 09/2015

Francisco Ortega; Ramón González Rubio; Eduardo Guzmán; Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Miguel Ángel Rubio Álvarez.

- 16 Title of the work:** Magnetic needle interfacial shear rheometer: Connecting micro- and macro-rheology using magnetic microwires

Name of the conference: 6th International Workshop on Bubble and Drop Interfaces

Type of participation: Participatory - oral communication

City of event: Potsdam, Germany

Date of event: 07/2015

Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Francisco Ortega; Ramón González Rubio; Miguel Ángel Rubio Álvarez.

- 17 Title of the work:** Magnetic Microwires: A new and valuable tool for the Interfacial Stress Rheometer

Name of the conference: 10th Annual European Rheology Conference

Type of participation: Participatory - oral communication

City of event: Nantes, France

Date of event: 04/2015

Organising entity: European Society of Rheology

Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Francisco Ortega; Ramón González Rubio; Miguel Ángel Rubio Álvarez.

- 18 Title of the work:** Macro- and micro-rheology of surfactant monolayers

Name of the conference: 20th International Symposium on Surfactants in Solution

Type of participation: Participatory - oral communication

City of event: Coimbra, Portugal

Date of event: 06/2014

Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Fernando Martínez Pedrero; Manuel Vázquez Villalabeitia; Francisco Ortega; Ramón González Rubio; Miguel Ángel Rubio Álvarez.

- 19 Title of the work:** Interfacial Stress Rheometer. Analysis of the device's response and viscoelastic properties of monolayers using magnetic needle and microwires.

Name of the conference: 3rd Workshop on Advances in Colloidal Materials

Type of participation: Participatory - oral communication

City of event: Granada, Spain

Date of event: 10/2013

Javier Tajuelo Rodríguez; Juan Manuel Pastor Ruiz; Fernando Martínez Pedrero; Manuel Vázquez Villalabeitia; Francisco Ortega; Ramón González Rubio; Miguel Ángel Rubio Álvarez.

- 20 Title of the work:** Discrete magnetic microfluidics

Name of the conference: International Workshop on Bubble and Drop Interfaces 2007

Type of event: Conference

Geographical area: Non EU International

Type of participation: Participatory - oral communication

Reasons for participation: Review before acceptance

City of event: Granada, Spain

Date of event: 2007

With external admission assessment committee: Yes

Type of contribution: Scientific paper

P. Domínguez-García; A. Egatz-Gómez; A.A. García; S. Melle; M.A. Rubio; S. Lindsay; M. Márquez; S.T. Picraux; J.L. Taraci; T. Clement; D. Yang; M.A. Hayes; D. Gust; P. Aella; S. Loyprasert; T. Vázquez-Alvarez; J. Wang. "Colloids and Surfaces A: Physicochemical and Engineering Aspects (en prensa)". 2007.

- 21 Title of the work:** Magnetic movement of biological fluids
Name of the conference: 6th International Conference on Scientific and Clinical Applications of Magnetic Carriers
City of event: Viena, Austria,
Date of event: 2006
A.A. García; A. Egatz-Gómez; S. Lindsay; P. Domínguez-García; S. Melle; M. Márquez; M.A. Rubio; S.T. Picraux; D. Yang; P. Aella; M.A. Hayes; D. Gust; S. Loyprasert; T. Vázquez-Alvarez; J. Wang. "J. Mag. Mag. Mat., 311, 238-243 (2007)". 2006.
- 22 Title of the work:** Silicon nanowire and polyethylene superhydrophobic surfaces for discrete magnetic microfluidics
Name of the conference: 13th International Conference on Solid Films and Surfaces
City of event: Bariloche, Argentina,
Date of event: 2006
A. Egatz-Gómez; J. Schneider; P. Aella; D. Yang; P. Domínguez-García; S. Lindsay; S.T. Picraux; M.A. Rubio; S. Melle; M. Márquez; A.A. García. "Applied Surface Science, 254, 330-334 (2007)". 2006.
- 23 Title of the work:** Superhydrophobic nanowire surfaces for drop movement using magnetic fields
Name of the conference: NSTI Nanotech
City of event: Boston, E.E.U.U.,
Date of event: 2006
A. Egatz-Gómez; S. Melle; A.A. García; S. Lindsay; M.A. Rubio; P. Domínguez-García; S.T. Picraux; J.L. Taraci; T. Clement; M.A. Hayes. "NSTI Nanotech Technical Proceedings". 2006.
- 24 Title of the work:** Aggregation Kinetics in Magneto-rheological Fluids
Name of the conference: EuroRheo-2002
City of event: Torremolinos, Málaga,
Date of event: 2002
M.A. Rubio; S. Melle; O.G. Calderón; P.L. Lucas; V. Maestro; G.G. Fuller. "No se publicó en los Proceedings". 2002.
- 25 Title of the work:** How big is a Polymer molecule? Part III: semidilute and bulk behavior
Name of the conference: European Graduate School on "Non-Equilibrium Phenomena and Phase Transitions in Complex Systems"
City of event: Avila,
Date of event: 2002
M.A. Rubio. "No se publicaron Proceedings". 2002.
- 26 Title of the work:** Microstructure evolution in MR suspensions governed by Mason number
Name of the conference: EuroRheo 2002
City of event: Torremolinos,
Date of event: 2002
S. Melle; O.G. Calderón; G.G. Fuller; M.A. Rubio. "Progress in Rheology: Theory and Applications". 2002.
- 27 Title of the work:** Chain rotational dynamics in MR suspensions
Name of the conference: 8th International Conference on Electrorheological Fluids and Magnetorheological Suspensions
City of event: NICE, FRANCE,
Date of event: 2001
Melle; S; Calderon; OG; Rubio; MA; Fuller; GG. "0217-9792 INTERNATIONAL JOURNAL OF MODERN PHYSICS B (ISIP:000177280100005)". 2001.



- 28** **Title of the work:** Orientation dynamics of magnetorheological fluids subject to rotating external fields
Name of the conference: 7th International Conference on Electro-Rheological Fluids and Magneto-Rheological Suspension
City of event: HONOLULU, HAWAII,
Date of event: 1999
Melle; S; Rubio; MA; Fuller; GG. "0217-9792 INTERNATIONAL JOURNAL OF MODERN PHYSICS B (ISIP:000168832300025)". 1999.
- 29** **Title of the work:** Dynamics of solitary relaxations in stick-slip
Name of the conference: Illrd International Workshop "Chaos and Complexity"
City of event: Turín, Italy
Date of event: 1997
M.A. Rubio. "No se publicaron Proceedings". 1997.
- 30** **Title of the work:** Instabilities in the growth of compact electrodeposits
Name of the conference: IInd International Workshop on Chaos and Complexity
City of event: Turín, Italy
Date of event: 1996
J. M. Pastor; M. A. Rubio. "No se publicaron Proceedings". 1996.
- 31** **Title of the work:** Small scale properties of the stochastic stabilized Kuramoto-Sivashinsky equation
Name of the conference: International Conference on Fluctuations, Nonlinearity and Disorder
City of event: HERAKLION,
Date of event: 1996
Buceta; J; Pastor; JM; Rubio; MA; de la Rubia; FJ. "0167-2789 PHYSICA D (ISIP:000072573000009)". 1996.
- 32** **Title of the work:** Compact patterns in galvanostatic electrodeposition
Name of the conference: March Meeting of the American Physical Society
City of event: San José,
Date of event: 1995
M.A. Rubio; J.M. Pastor. "No se publican Proceedings". 1995.
- 33** **Title of the work:** Dynamical regimes of the relaxation of stresses at a gel boundary
Name of the conference: March Meeting of the American Physical Society
City of event: San José,
Date of event: 1995
M.A. Rubio; J. Galeano. "No se publican Proceedings". 1995.
- 34** **Title of the work:** Effect of boundary conditions in mode I fracture in brittle materials
Name of the conference: International Workshop on Measures of Spatio-Temporal Dynamics
Type of participation: 'Participatory - poster
City of event: BRYN MAWR, PA,
Date of event: 1995
Español; P; Zuniga; I; Rubio; MA. "0167-2789 PHYSICA D (ISIP:A1996VJ20400029)". 1995.
- 35** **Title of the work:** Experiments on Dynamics with Threshold: Stick-slip and Earthquakes
Name of the conference: International Workshop "Measures of Spatio-Temporal Dynamics"
City of event: Bryn Mawr, United States of America
Date of event: 1995
M.A. Rubio. "No se publicó en los Proceedings". 1995.



- 36** **Title of the work:** Experiments on earthquake dynamics and compact growth in electrodeposition
Name of the conference: Workshop on "Chaos and Complexity"
City of event: Florencia, Italia,
Date of event: 1995
M.A. Rubio; J. Galeano. "No se publicaron Proceedings". 1995.
- 37** **Title of the work:** Instabilities in the Growth of Compact Electrodeposits
Name of the conference: Ist International Workshop "Chaos and Complexity"
City of event: Turín, Italy
Date of event: 1995
M.A. Rubio. "No se publicaron Proceedings". 1995.
- 38** **Title of the work:** Instabilities in the growth of compact electrodeposits
Name of the conference: International Workshop on Measures of Spatio-Temporal Dynamics
Type of participation: 'Participatory - poster
City of event: BRYN MAWR, PA,
Date of event: 1995
Pastor; JM; Rubio; MA. "0167-2789 PHYSICA D (ISIP:A1996VJ20400030)". 1995.
- 39** **Title of the work:** Isotropic MD simulations of dynamic brittle fracture
Name of the conference: Symposium Q on Fracture-Instability Dynamics, Scaling, and Ductile/Brittle Behavior, at the 1995 MRS Fall Meeting
City of event: BOSTON, MA,
Date of event: 1995
Espanol; P; Rubio; MA; Zuniga; I. "0272-9172 FRACTURE-INSTABILITY DYNAMICS, SCALING, AND DUCTILE/BRITTLE BEHAVIOR (ISIP:A1996BF31N00013)". 1995.
- 40** **Title of the work:** Dynamique des relaxations dans un milieu elastique continu
Name of the conference: Journées Grenobloises de Formation en Physique Non-linéaire
City of event: Aix-les-Bains, France
Date of event: 1994
M.A. Rubio. "No se publicaron Proceedings". 1994.
- 41** **Title of the work:** Dynamique de stick-slip dans un milieu elastique continu
Name of the conference: Reunion Ordre et Chaos dans la matière: Friction et Fracture
City of event: Paris,
Date of event: 1993
M. A. Rubio; J. Galeano. "No se publicaron Proceedings". 1993.
- 42** **Title of the work:** Experimentos sobre terremotos en un medio elástico
Name of the conference: Reunión Nacional de Física Estadística
City of event: El Escorial,
Date of event: 1993
M. A. Rubio; J. Galeano. "No se publicaron Proceedings". 1993.
- 43** **Title of the work:** Experiments on Earthquakes in a continuous elastic medium
Name of the conference: Rencontres de Blois: Chaos and Complexity
City of event: Blois, France
Date of event: 1993
M. A. Rubio; J. Galeano. "Chaos and Complexity 93, 1995, Editions Frontieres (pp:225-228)". 1993.



- 44** **Title of the work:** In vitro testing of the BCM 3.5 Ventricular assist device
Name of the conference: Workshop on "In vitro testing of Blood Pumps"
City of event: Aachen, Germany
Date of event: 1991
F. J. Del Cañizo; M. M. Desco; J. C. Antoranz; M. J. Cano; D. Fernández-Caleya; J. M. Alvarez-Valdivielso; J. Duarte; M. A. Rubio. "Proceedings of the Aachen meeting of the HEART European Community Program, 1991, Elsevier (pp: 81-91)". 1991.
- 45** **Title of the work:** Instabilities in streams with moving contact lines
Name of the conference: NATO ASI "New trends in nonlinear dynamics: non-variational effects"
City of event: Estella,
Date of event: 1991
M.A. Rubio; B. Gluckman; A. Dougherty; J.P. Gollub. "No se publicó en los Proceedings". 1991.
- 46** **Title of the work:** Estructuras fractales en flujos a través de medios porosos
Name of the conference: III Reunión Nacional de Física Estadística
City of event: Badajoz,
Date of event: 1990
M. A. Rubio. "No se publicaron proceedings". 1990.
- 47** **Title of the work:** Instabilities in streams with moving contact lines
Name of the conference: NATO ASI "The global geometry of turbulence"
City of event: Rota,
Date of event: 1990
M. A. Rubio; B. Gluckman; A. Dougherty; J.P. Gollub. "No se publicó en los Proceedings". 1990.
- 48** **Title of the work:** Anisotropic scaling of interfaces in porous media
Name of the conference: Fall Meeting of the Materials Research Society, Symposium on "Fractal aspects of Materials"
Type of participation: 'Participatory - poster
City of event: Boston, United States of America
Date of event: 1989
M. A. Rubio; A. Dougherty; J. P. Gollub. "Procdeidngs of the Materials Research Society, 1989, (pp: 79-82)". 1989.
- 49** **Title of the work:** Characterization of irregular interfaces: roughness and self-affine fractals
Name of the conference: NATO ASI "Measures of Complexity and Chaos"
Type of participation: 'Participatory - poster
City of event: Brynn-Mawr,
Date of event: 1989
M. A. Rubio; A. Dougherty; J. P. Gollub. "Measures of Complexity and Chaos, 1989, Plenum Press (pp: 461-464)". 1989.
- 50** **Title of the work:** Irregular fluid interfaces moving in a porous medium: self-affine fractals
Name of the conference: VIIIth Dynamics Days Meeting
City of event: Houston,
Date of event: 1989
M. A. Rubio; A. Dougherty; C. Edwards; J. P. Gollub. "No se publicaron Proceedings". 1989.



- 51 Title of the work:** Transition between localized oscillations and travelling waves in thermal convection
Name of the conference: Workshop on Chaos and Complexity
City of event: Turín, Italy
Date of event: 1987
M. A. Rubio; S. Ciliberto; P. Bigazzi. "Chaos and Complexity, 1988, World Scientific (pp:157-170)". 1987.

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

- 1 Committee title:** Comité Científico de la Reunión Nacional de Física Estadística FisEs
Geographical area: National
Affiliation entity: REAL SOCIEDAD ESPAÑOLA DE FISICA
Start-End date: 2016 - 2021
- 2 Committee title:** Junta de Gobierno de la Real Sociedad Española de Física
Geographical area: National
Affiliation entity: REAL SOCIEDAD ESPAÑOLA DE FISICA
City affiliation entity: Madrid, Community of Madrid, Spain
Start-End date: 2002 - 2005
- 3 Committee title:** Comité Científico de la Reunión Nacional de Física Estadística FisEs
Geographical area: National
Affiliation entity: REAL SOCIEDAD ESPAÑOLA DE FISICA
Start-End date: 1994 - 1999

Organization of R&D activities

- 1 Title of the activity:** Bienal-Centenario de la Real Sociedad Española de Física
Type of activity: Congreso Internacional **Geographical area:** National
City of event: Madrid, Community of Madrid, Spain
Convening entity: REAL SOCIEDAD ESPAÑOLA DE FISICA
City convening entity: Madrid, Community of Madrid, Spain
Type of participation: Organiser
Nº assistants: 600
Start date: 2003
- 2 Title of the activity:** Reunión Nacional No-lineal 97
Type of activity: Congreso Nacional **Geographical area:** National
City convening entity: Avila, Community of Madrid, Spain
Type of participation: Organiser
Nº assistants: 180
Start date: 1997

R&D management

Name of the activity: Programa de Doctorado Interuniversitario con Mención de Calidad "Física de Sistemas Complejos"

Type of management: Programme management

Performed tasks: Coordinador General desde 2004 hasta octubre de 2007

Entity: Universidad Nacional de Educación a Distancia

Type of entity: University

Start date: 2004

Evaluation and revision of R&D projects and articles

1 **Performed tasks:** Evaluador de Becas, Acciones integradas y otras acciones de investigación

Entity where activity was carried out: Agencia Nacional de Evaluación y Prospectiva

Type of entity: Agencia Nacional

Type of activity: Participación en comité de evaluación

Frequency of the activity: 5

Access system: Designated by the corresponding party without competition

Geographical area: National

Start-End date: 2000 - 2002

2 **Performed tasks:** Miembro de la Ponencia de Física y Matemáticas

Entity where activity was carried out: Agencia Nacional de Evaluación y Prospectiva

Type of entity: Agencia Nacional

Type of activity: Participación en Comité de Evaluación de Proyectos

Frequency of the activity: 3

Access system: Designated by the corresponding party without competition

Geographical area: National

Start-End date: 1996 - 1999

3 **Performed tasks:** Censor de Proyectos del Plan Nacional de Investigación

Entity where activity was carried out: Agencia Nacional de Evaluación y Prospectiva

Type of entity: Agencia Nacional

Type of activity: Participación en Comité de Evaluación de Proyectos

Frequency of the activity: 20

Access system: By public merit

Geographical area: National

Start date: 1990

4 **Name of the activity:** Revisión de Artículos enviados para su publicación

Performed tasks: Censor de artículos para Physical Review E

Entity where activity was carried out: American Physical Society

Type of entity: Sociedad científica

Type of activity: Review of articles in scientific or technological journals

Frequency of the activity: 20

Access system: Designated by the corresponding party without competition

Geographical area: Non EU International

Start date: 1990

- 5** **Name of the activity:** Revisión de Artículos enviados para su publicación
Performed tasks: Censor de artículos para Physical Review Letters
Entity where activity was carried out: American Physical Society
Type of activity: Review of articles in scientific or technological journals
Access system: Designated by the corresponding party without competition
Start date: 1990
Type of entity: Sociedad científica
Frequency of the activity: 20
Geographical area: Non EU International
- 6** **Performed tasks:** Miembro de Tribunales de Tesis doctoral (en España)
Type of activity: Participation in panels
Access system: Designated by the corresponding party without competition
Frequency of the activity: 20
Geographical area: National
- 7** **Name of the activity:** Rapporteur
Performed tasks: Miembro de Tribunales de Tesis doctoral (en Francia)
Type of activity: Participation in panels
Access system: Designated by the corresponding party without competition
Frequency of the activity: 2
Geographical area: European Union
- 8** **Performed tasks:** Miembro de Tribunales de concursos a plazas de Catedrático de Universidad
Entity where activity was carried out: Universidad de las Islas Baleares
Type of activity: Participation in panels
Access system: With or without publicity for the decision
Type of entity: University
Frequency of the activity: 1
Geographical area: National
- 9** **Performed tasks:** Miembro de Tribunales de concursos a plazas de Catedrático de Universidad
Entity where activity was carried out: Universidad Complutense de Madrid
Type of activity: Participation in panels
Access system: With or without publicity for the decision
Type of entity: University
Frequency of the activity: 2
Geographical area: National
- 10** **Performed tasks:** Miembro de Tribunales de concursos a plazas de Catedrático de Universidad
Entity where activity was carried out: Universidad del País Vasco
Type of activity: Participation in panels
Access system: With or without publicity for the decision
Type of entity: University
Frequency of the activity: 2
Geographical area: National
- 11** **Performed tasks:** Miembro de Tribunales de concursos a plazas de Catedrático de Universidad
Entity where activity was carried out: Universidad Nacional de Educación a Distancia
Type of activity: Participation in panels
Access system: With or without publicity for the decision
Type of entity: University
Frequency of the activity: 5
Geographical area: National
- 12** **Performed tasks:** Miembro de Tribunales de concursos a plazas de Catedrático de Universidad
Entity where activity was carried out: Universidad Autónoma de Madrid
Type of activity: Participation in panels
Frequency of the activity: 1



Access system: With or without publicity for the decision

Geographical area: National

- 13 Performed tasks:** Miembro de Tribunales de concursos a plazas de Profesor Titular
Entity where activity was carried out: Universidad de Málaga **Type of entity:** University

Type of activity: Participation in panels

Frequency of the activity: 1

Access system: With or without publicity for the decision

Geographical area: National

- 14 Performed tasks:** Miembro de Tribunales de concursos a plazas de Profesor Titular
Entity where activity was carried out: Universitat Politècnica de Catalunya **Type of entity:** University

Type of activity: Participation in panels

Frequency of the activity: 1

Access system: With or without publicity for the decision

Geographical area: National

Other achievements

Stays in public or private R&D centres

- 1 Entity:** Haverford College (Dept. Física) **Type of entity:** University
City of entity: Haverford - Philadelphia, United States of America
Start date: 1988 **Duration:** 448 days
Goals of the stay: Post-doctoral
Provable tasks: Rugosidad de interfases en medios porosos
- 2 Entity:** CEA (Servicio de Física del Sólido y Resonancia Magnética) **Type of entity:** R&D Centre
City of entity: Saclay, France
Start date: 1988 **Duration:** 3 months - 84 days
Goals of the stay: Post-doctoral
Provable tasks: Dinámica no-lineal en la inestabilidad de Rayleigh-Bénard en un sistema extenso
- 3 Entity:** Istituto Nazionale di Ottica **Type of entity:** R&D Centre
City of entity: Florencia, Italy
Start date: 1987 **Duration:** 56 days
Goals of the stay: Post-doctoral
Provable tasks: Caos homoclínico en convección de Rayleigh-Bénard
- 4 Entity:** Istituto Nazionale di Ottica **Type of entity:** R&D Centre
City of entity: Florencia, Italy
Start date: 1986 **Duration:** 56 days
Goals of the stay: Post-doctoral
Provable tasks: Filtrado de señales caóticas y aumento de dimensionalidad
- 5 Entity:** Istituto Nazionale di Ottica **Type of entity:** R&D Centre
City of entity: Florencia, Italy
Start date: 1985 **Duration:** 56 days
Goals of the stay: Post-doctoral



Provable tasks: Oscilaciones localizadas y ondas viajeras en convección de Rayleigh-Bénard

- | | | |
|-----------|---|---|
| 6 | Entity: Istituto Nazionale di Ottica
City of entity: Florencia, Italy
Start date: 1984
Name of programme: Caos por mode-locking en un láser de CO2
Goals of the stay: Predoctoral
Provable tasks: Caos por mode-locking en un láser de CO2 | Type of entity: R&D Centre

Duration: 56 days |
| 7 | Entity: Istituto Nazionale di Ottica
City of entity: Florencia, Italy
Start date: 1983
Goals of the stay: Predoctoral
Provable tasks: Dinámica no-lineal por competición entre modos espaciales en la inestabilidad de Rayleigh-Bénard | Type of entity: R&D Centre

Duration: 196 days |
| 8 | Entity: CEA (Servicio de Física del Sólido y Resonancia Magnética)
City of entity: Saclay, France
Start date: 1982
Goals of the stay: Predoctoral
Provable tasks: Estudio del régimen de intermitencia tipo III en la inestabilidad de Rayleigh-Bénard | Type of entity: R&D Centre

Duration: 3 months - 112 days |
| 9 | Entity: Istituto Nazionale di Ottica
City of entity: Florencia, Italy
Start date: 1982
Name of programme: Estudio experimental de la inestabilidad de Bénard-Marangoni
Goals of the stay: Predoctoral
Provable tasks: Estudio experimental de la inestabilidad de Bénard-Marangoni | Type of entity: R&D Centre

Duration: 196 days |
| 10 | Entity: CEA (Servicio de Física del Sólido y Resonancia Magnética)
City of entity: Saclay, France
Start date: 1981
Goals of the stay: Predoctoral
Provable tasks: Estudio experimental de la inestabilidad de Rayleigh-Bénard por medio de técnicas de velocimetría láser-Doppler | Type of entity: R&D Centre

Duration: 3 months - 84 days |

Obtained grants and scholarships

- | | | |
|----------|--|---|
| 1 | Name of the grant: Contrato como Visiting Scientist en el Departamento de Física de Haverford College
Aims: Post-doctoral
Awarding entity: Haverford College, PA, E.E.U.U.
Conferral date: 01/11/1989 | Type of entity: University
Duration: 3 months |
| 2 | Name of the grant: Beca senior para realización de estancia post-doctoral en Haverford College
Aims: Post-doctoral
Awarding entity: Oficina Científica de la OTAN
Conferral date: 01/11/1988 | Type of entity: Organismo Internacional
Duration: 1 year |



- 3** **Name of the grant:** Beca de la Fundación Volkswagen
Aims: Pre-doctoral
Awarding entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Conferral date: 1982 **Duration:** 2 years
- 4** **Name of the grant:** Becas del CEA -Saclay durante las estancias en dicho centro.
Aims: Pre-doctoral
Awarding entity: Commissariat de l'Energie Atomique - Saclay **Type of entity:** R&D Centre
Conferral date: 1982 **Duration:** 9 months

Scientific societies and professional associations

- 1** **Name of the society:** European Physical Society
- 2** **Name of the society:** Real Sociedad Española de Física
City affiliation entity: Madrid, Community of Madrid, Spain
Nº of members: 2.500
- 3** **Name of the society:** The Society of Rheology
City affiliation entity: United States of America

Periods of research activity

Nº of recognized periods: 6
Certifying entity: Comisión Nacional Evaluadora de la Actividad Investigadora **Type of entity:** State agency
Date of recognition: 2018

Summary of other achievements

- 1** **Description of the achievement:** Más de 1740 citas en revistas internacionales.
Accrediting entity: ISI - Web of Knowledge **Type of entity:** Business
Conferral date: 2020
- 2** **Description of the achievement:** Más de 2450 citas en documentos de investigación.
Accrediting entity: Google Scholar **Type of entity:** Business
Conferral date: 2020
- 3** **Description of the achievement:** Evaluación positiva de 7 tramos docentes (quinquenos)
Accrediting entity: Universidad Nacional de Educación a Distancia **Type of entity:** University
Conferral date: 2018

**C****V****n**

CURRÍCULUM VÍTAE NORMALIZADO

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- 4** **Description of the achievement:** Más de 100 posters presentados en Congresos por colaboradores.
- 5** **Description of the achievement:** Más de 50 comunicaciones orales en Congresos presentadas por colaboradores.