



## **Vicente Garzó Puertos**

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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.

Vicente Garzó is Professor of Theoretical Physics in the Department of Physics at the University of Extremadura (UEX). He graduated in Physics from the University of Valencia (Spain) in 1982 where he also obtained a PhD in Physics in 1986. Then, he was appointed as a Teaching Assistant of the University of Sevilla (Spain) in February 1988. Two years later, he got a permanent position at the UEX as an Associate Professor. Then, in November 2000 he was promoted to Full Professor of the UEX where he has remained ever since.

Professor Garzó has carried out long stays (for periods of 10 months) in the Instituto de Investigación en Materiales (UNAM, México) and the University of Florida (USA) apart from short stays (2-4 weeks) in those universities and others like the Université Paris-Sud (France), the University of Colorado (USA), Universidad of Chile (Santiago, Chile), and Kyoto University (Kyoto, Japan).

His research has been essentially focused on the application of kinetic theory to both classical gases in far from equilibrium states and granular media. During the first years of his career, his research has been mainly addressed on the derivation of exact nonlinear transport properties using the Boltzmann kinetic equation and related kinetic models. These efforts were partially collected in a monograph co-authored with A. Santos (Kinetic Theory of Gases in Shear Flows: Nonlinear Transport) and published by Springer in 2003. In the last fifteen years, he has extended his background in kinetic theory by applying this tool to the study of the so-called granular rapid flows (granular matter under rapid flow conditions), collaborating in some of the most important advances in the field. As for his research on granular media, one can highlight the papers published in PRE **59**, 5895 (1999) and PRE **60**, 5706 (1999), in collaboration with J. W. Dufty, which have been cited more than 322 and 158 times, respectively. The efforts made in granular fluids have recently been collected in the monograph (Granular Gaseous Flows) published by Springer in 2019.

He has authored 194 publications, including two books, 27 book chapters, and 165 journal articles (112 of them being Q1). Moreover, Prof. Garzó has delivered 23 lectures in different meetings as an invited speaker [one of them as Keynote Speaker in the IMA conference on dense granular flows (Cambridge, 2013) and three of them as Keynote Lectures in the Yukawa Institute for Theoretical Physics (Kyoto University, Kyoto, 2018)], he has acted as a referee for 31 different journals (in several of them on a regular basis), he is member of the editorial board of the international journals Granular Matter (Springer) and Entropy (MDPI) and he has been the coordinator of ANECA (Spanish National Agency) for FPU grants of the 2012 and 2013 calls in the field "Physics and Space Sciences". Moreover, Prof. Garzó's work and trajectory has been recognized with a number of awards and honors: Quality Research Prize (shared with A. Santos) for the book Kinetic Theory of Gases in Shear Flows. Nonlinear Transport (Springer, 2003), UEX, 2004; Excellence Prize to Research Trajectory, UEX, 2017.

For an extended version of Prof. Garzó's vitae, see <http://www.eweb.unex.es/eweb/fisteor/vicente/curricula/vgarzo.pdf>



## 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.

- Número de sexenios de investigación: 5 (1985-2014)
- Número de dirección de tesis doctorales: 5 (1 en los últimos 10 años más 1 en desarrollo)
- Número de postdocs supervisados: 3
- Libros de difusión internacional: 2 (publicados por Springer en 2003 y 2019)
- Número de citas (WOS): 3.066
- Número de artículos JCR del primer cuartil (Q1): **112**
- Número de artículos JCR del segundo cuartil (Q2): **47**
- Capítulos de libro de edición internacional: 5
- Índice h : 28
- Proyectos competitivos como IP: 4 de convocatoria nacional +1 de convocatoria nacional para adquisición de equipamiento+1 de convocatoria nacional de cooperación con grupo de Marruecos+1de convocatoria autonómica
- Miembro del comité editorial de la revistas internacionales "Granular Matter" desde 2012 hasta la actualidad y "Entropy" desde 2020
- Coordinador en ANECA del programa de evaluación de becas FPU durante las convocatorias de 2012 y 2013 dentro del campo "Física y Ciencias del Espacio"
- Premio a la Excelencia Investigadora 2017 (Universidad de Extremadura)
- De acuerdo a un estudio presentado en el congreso Powders&Grains (EPJ Web of Conferences 140, 16006, 2017) y tomando como fuente la revista Physical Review E (American Physical Society) ocupó el tercer lugar en el ranking de investigadores con mayor número de publicaciones y el noveno lugar en número de citas en artículos publicados entre 2006-2016 en el campo de la física de los medios granulares





- 2** **Employing entity:** Universidad de Sevilla  
**Professional category:** Profesor Titular interino  
**Start-End date:** 01/10/1988 - 11/07/1989  
**Type of entity:** University
- 3** **Employing entity:** Universidad de Sevilla  
**Professional category:** Ayudante de Universidad  
**Start-End date:** 06/02/1988 - 30/09/1988  
**Type of entity:** University
- 4** **Employing entity:** Generalitat Valenciana  
**Professional category:** Becario  
**Start-End date:** 01/01/1985 - 05/02/1988  
**Duration:** 3 years - 1 month - 5 days  
**Type of entity:** Public Research Body



## Education

### University education

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

**University degree:** Higher degree

**Name of qualification:** Licenciado en Física Especialidad Física Fundamental

**Degree awarding entity:** Universitat de València      **Type of entity:** University

**Date of qualification:** 28/09/1984

### Doctorates

**Degree awarding entity:** Universitat de València      **Type of entity:** University

**Date of degree:** 30/09/1986

### Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
French	B1	B1	A2	A2	B1
English	B2	B2	C1	C1	B2

## Teaching experience

### Experience supervising doctoral thesis and/or final year projects

- Project title:** Kinetic theory of driven granular fluids  
**Type of project:** Doctoral thesis  
**Co-director of thesis:** Vcente Garzó Puertos; Francisco Vega Reyes  
**Entity:** Universidad de Extremadura  
**Student:** Moisés García Chamorro  
**Obtained qualification:** Sobresaliente CUM LAUDE  
**Date of reading:** 28/06/2017  
**European doctorate:** 28/06/2017      **Date of recognition:** 28/06/2017  
**Quality recognition:** Yes      **Date of award:** 28/06/2017
- Project title:** Estabilidad de las ecuaciones hidrodinámicas en una suspensión granular  
**Co-director of thesis:** Vicente Garzó Puertos  
**Entity:** Universidad de Extremadura      **Type of entity:** University  
**Student:** Rubén Gómez González  
**Obtained qualification:** Sobresaliente (9)



**Date of reading:** 02/07/2016

- 3** **Project title:** Influencia del fluido intersticial en las propiedades dinámicas de gases granulares  
**Type of project:** End of course project  
**Co-director of thesis:** Vicente Garzó Puertos  
**Entity:** Universidad de Extremadura **Type of entity:** University  
**Student:** Aleksander Marcín Kubicki  
**Obtained qualification:** Matricula de Honor (10)  
**Date of reading:** 01/07/2014
- 4** **Project title:** Análisis de la estabilidad lineal de las ecuaciones hidrodinámicas en presencia de fuerzas externas no conservativas  
**Type of project:** End of course project  
**Co-director of thesis:** Vicente Garzó Puertos  
**Entity:** Universidad de Extremadura **Type of entity:** University  
**Student:** José Carlos Pérez Fuentes  
**Obtained qualification:** Sobresaliente 9  
**Date of reading:** 12/09/2013
- 5** **Project title:** ESTUDIO MEDIANTE LA TEORÍA CINÉTICA DE MEDIOS GRANULARES EN RÉGIMEN DE FLUJO RÁPIDO  
**Type of project:** Doctoral thesis  
**Co-director of thesis:** Andrés Santos Reyes; Vicente Garzó Puertos  
**Entity:** Universidad de Extremadura **Type of entity:** University  
**Student:** Antonio Astillero Vivas  
**Obtained qualification:** Sobresaliente CUM LAUDE  
**Date of reading:** 01/06/2007  
**European doctorate:** 01/06/2007  
**Date of award:** 01/06/2007
- 6** **Project title:** FENÓMENOS DE TRANSPORTE EN MEZCLAS DILUIDAS ALEJADAS DEL EQUILIBRIO  
**Type of project:** Doctoral thesis  
**Co-director of thesis:** Vicente Garzó Puertos; Andrés Santos Reyes  
**Entity:** Universidad de Extremadura **Type of entity:** University  
**Student:** Concepción Marín Porgueres  
**Obtained qualification:** Sobresaliente CUM LAUDE  
**Date of reading:** 20/02/1997  
**European doctorate:** 20/02/1997  
**Date of award:** 20/02/1997
- 7** **Project title:** ANÁLISIS DE ALGUNAS PROPIEDADES DE FLUIDOS SOMETIDOS AL FLUJO TANGENCIAL UNIFORME LEJOS DEL EQUILIBRIO.  
**Type of project:** Doctoral thesis  
**Co-director of thesis:** Andrés Santos Reyes; Vicente Garzó Puertos  
**Entity:** Universidad de Extremadura **Type of entity:** University  
**Student:** José María Montanero Fernández  
**Obtained qualification:** Sobresaliente CUM LAUDE  
**Date of reading:** 20/06/1996  
**European doctorate:** 20/06/1996  
**Date of award:** 20/06/1996





- 8** **Project title:** Transporte no lineal en una mezcla binaria diluida  
**Type of project:** Minor thesis  
**Co-director of thesis:** Vicente Garzó Puertos; Andrés Santos Reyes  
**Entity:** Universidad de Extremadura **Type of entity:** University  
**Student:** Concepción Marín Porgueres  
**Obtained qualification:** Sobresaliente  
**Date of reading:** 24/03/1994
- 9** **Project title:** Simulación por el método de Monte Carlo de la ecuación de Boltzmann para el flujo de Fourier estacionario  
**Type of project:** Minor thesis  
**Co-director of thesis:** Andrés Santos Reyes; Vicente Garzó Puertos  
**Entity:** Universidad de Extremadura **Type of entity:** University  
**Student:** José María Montanero Fernández  
**Obtained qualification:** Sobresaliente  
**Date of reading:** 17/03/1994

## Scientific and technological experience

### Scientific or technological activities

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

- 1** **Name of the project:** Una aproximación físico-estadística a los sistemas desordenados y complejos  
**Identify key words:** Physics chemical and mathematical  
**Type of project:** Basic research (including archaeological digs, etc) **Geographical area:** National  
**Degree of contribution:** Scientific coordinator  
**Entity where project took place:** Dpto. de Física de la UEx  
**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes; Vicente Garzó Puertos  
**Nº of researchers:** 7 **Nª people/year:** 7  
**Type of participation:** Principal investigator  
**Code according to the funding entity:** FIS2016-76359-P  
**Start-End date:** 30/12/2016 - 29/12/2020 **Duration:** 3 years - 11 months - 30 days  
**Total amount:** 145.200 € **Sub-project amount:** 0 €  
**Dedication regime:** Full time
- 2** **Name of the project:** Computación avanzada en física de los sistemas complejos, química teórica y modelos estocásticos  
**Identify key words:** Physics chemical and mathematical  
**Geographical area:** Regional  
**Degree of contribution:** Scientific coordinator  
**Entity where project took place:** Instituto de Computación Científica Avanzada de Extremadura (ICCAEX)  
**Name principal investigator (PI, Co-PI....):** Vicente Garzó Puertos  
**Nº of researchers:** 10 **Nª people/year:** 10  
**Type of participation:** Principal investigator  
**Code according to the funding entity:** IB16013  
**Start-End date:** 03/06/2017 - 02/06/2020 **Duration:** 3 years - 11 months - 30 days





**Total amount:** 140.999,3 €  
**Dedication regime:** Full time

**Sub-project amount:** 0 €

**3 Name of the project:** Ayudas para la realización de actividades de investigación y desarrollo tecnológico, de divulgación y de transferencia de conocimiento por los grupos de investigación de Extremadura

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** Regional

**Degree of contribution:** Researcher

**Entity where project took place:** Grupo Catalogado SphinX (FQM005)

**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes

**Nº of researchers:** 10

**Nª people/year:** 10

**Funding entity or bodies:**

Junta de Extremadura

**Type of entity:** Otros

**City funding entity:** Spain

**Type of participation:** Team member

**Start-End date:** 11/02/2015 - 31/12/2017

**Duration:** 2 years - 10 months - 21 days

**Total amount:** 72.028,76 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**4 Name of the project:** NUEVOS RETOS EN LAS PROPIEDADES ESTÁTICAS Y DINÁMICAS DE LOS MEDIOS DESORDENADOS

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** National

**Degree of contribution:** Scientific coordinator

**Entity where project took place:** Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Juan Jesús Ruiz Lorenzo; Vicente Garzó Puertos

**Nº of researchers:** 8

**Nª people/year:** 8

**Funding entity or bodies:**

Ministerio de Economía y Competitividad

**Type of participation:** Principal investigator

**Code according to the funding entity:** FIS2013-42840-P

**Start-End date:** 01/01/2014 - 31/12/2016

**Duration:** 2 years - 11 months - 30 days

**Total amount:** 96.800 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**5 Name of the project:** RED DE FISICA ESTADÍSTICA DE NO EQUILIBRIO Y SUS APLICACIONES MULTIDISCIPLINARES

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** National

**Degree of contribution:** Researcher

**Entity where project took place:** Grupo SphinX de la UEx+8 grupos nacionales

**Name principal investigator (PI, Co-PI....):** Miguel Rubí Capaceti

**Nº of researchers:** 10

**Nª people/year:** 10

**Funding entity or bodies:**

Ministerio de Economía y Competitividad

**Type of participation:** Team member

**Start-End date:** 01/11/2014 - 30/10/2016

**Duration:** 1 year - 11 months - 29 days



**Total amount:** 30.000 €  
**Dedication regime:** Full time

**Sub-project amount:** 0 €

**6 Name of the project:** Adquisición de cámara de ultra-alta velocidad con gran resolución para el análisis de procesos mecánicos y fluidomecánicos

**Geographical area:** National

**Degree of contribution:** Researcher

**Entity where project took place:** Escuela de Ingenierías Industriales de la UEx+Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Emilo José Vega Rodríguez

**Nº of researchers:** 10

**Nª people/year:** 10

**Funding entity or bodies:**

Ministerio de Economía y Competitividad (SE Infraestructuras Científicas y Técnicas y Equipamiento 2013)

**Type of participation:** Team member

**Code according to the funding entity:** UNEX13-1E-1542

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

**Duration:** 2 years

**Total amount:** 170.150 €

**Sub-project amount:** 0 €

**7 Name of the project:** SISTEMA DE CÓMPUTO PARALELO CON UN MODELO DE MEMORIA MIXTO (COMPARTIDA/DISTRIBUIDA) PARA UNA RED DE 8 GRUPOS CATALOGADOS DE INVESTIGACIÓN DE LA UNIVERSIDAD DE EXTREMADURA

**Identify key words:** Physics chemical and mathematical; Engineering

**Geographical area:** National

**Degree of contribution:** Scientific coordinator

**Entity where project took place:** Instituto de Computación Científica Avanzada de Extremadura (ICCAEX)

**Name principal investigator (PI, Co-PI....):** Vicente Garzó Puertos

**Nº of researchers:** 28

**Funding entity or bodies:**

Ministerio de Economía y Competitividad (SE Infraestructuras Científicas y Técnicas y Equipamiento 2013)

**Type of participation:** Principal investigator

**Code according to the funding entity:** UNEX13-1E-1529

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

**Duration:** 2 years

**Total amount:** 120.000 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**8 Name of the project:** APOYO A LOS PLANES DE ACTUACIÓN DE LOS GRUPOS CATALOGADOS

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** Regional

**Degree of contribution:** Researcher

**Entity where project took place:** Grupo catalogado SphinX (FQM005)

**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes

**Nº of researchers:** 10

**Nª people/year:** 10

**Funding entity or bodies:**

Junta de Extremadura

**Type of entity:** Body, others

**Type of participation:** Team member

**Code according to the funding entity:** GR10158

**Start-End date:** 01/01/2011 - 31/12/2014

**Duration:** 3 years - 11 months - 30 days

**Total amount:** 87.878 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time



**9 Name of the project:** SISTEMAS COMPLEJOS: UN ENFOQUE FISICO ESTADISTICO A LOS MEDIOS DESORDENADOS Y GRANULARES

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** National

**Degree of contribution:** Researcher

**Entity where project took place:** Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Juan Jesús Ruiz Lorenzo

**Nº of researchers:** 9

**Nª people/year:** 9

**Funding entity or bodies:**

Ministerio de Ciencia e Innovación

**Type of entity:** Body, others

**Type of participation:** Team member

**Code according to the funding entity:** FIS2010-16587

**Start-End date:** 01/01/2011 - 30/06/2014

**Duration:** 3 years - 5 months - 30 days

**Total amount:** 141.570 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**10 Name of the project:** RED ESPAÑOLA DE FÍSICA DE SISTEMAS FUERA DE EQUILIBRIO (ACCIÓN COMPLEMENTARIA).

**Identify key words:** Physics chemical and mathematical

**Geographical area:** National

**Degree of contribution:** Researcher

**Entity where project took place:** Grupo SphinX de la UEx+13 laboratorios nacionales

**Name principal investigator (PI, Co-PI....):** Ignacio Pagonabarraga Mora

**Nº of researchers:** 10

**Nª people/year:** 10

**Funding entity or bodies:**

Ministerio de Ciencia e Innovación

**Type of entity:** Body, others

**Type of participation:** Team member

**Code according to the funding entity:** FIS2010-11438-E

**Start-End date:** 01/10/2011 - 01/12/2012

**Duration:** 1 year

**Total amount:** 15.000 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**11 Name of the project:** RED ESPAÑOLA DE FÍSICA DE SISTEMAS FUERA DE EQUILIBRIO (ACCIÓN COMPLEMENTARIA).

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** National

**Degree of contribution:** Researcher

**Entity where project took place:** Grupo SphinX de la UEx+13 laboratorios nacionales

**Name principal investigator (PI, Co-PI....):** Ignacio Pagonabarraga Mora

**Nº of researchers:** 10

**Nª people/year:** 10

**Funding entity or bodies:**

Ministerio de Ciencia e Innovación

**Type of entity:** Body, others

**Type of participation:** Team member

**Code according to the funding entity:** FIS2008-04403-E

**Start-End date:** 01/05/2009 - 30/04/2011

**Duration:** 1 year - 11 months - 29 days

**Total amount:** 40.000 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**12 Name of the project:** MOLECULAR SIMULATIONS IN BIOSYSTEMS AND MATERIAL SCIENCE (SimBioMa)**Identify key words:** Physics chemical and mathematical**Type of project:** Basic research (including archaeological digs, etc)**Geographical area:** European Union**Degree of contribution:** Researcher**Entity where project took place:** Dpto. de Física de la UEx+diversos laboratorios europeos**Name principal investigator (PI, Co-PI....):** Berend Smit**Nº of researchers:** 7**Nª people/year:** 7**Funding entity or bodies:**

European Science Foundation (Research Networking Programmes)

**Type of participation:** Team member**Code according to the funding entity:** SimBioMa**Start-End date:** 01/05/2006 - 30/04/2011**Duration:** 4 years - 11 months - 29 days**Total amount:** 101.000 €**Sub-project amount:** 0 €**Dedication regime:** Full time**13 Name of the project:** FÍSICA ESTADÍSTICA DE SISTEMAS COMPLEJOS: MEDIOS DESORDENADOS Y GRANULARES**Identify key words:** Physics chemical and mathematical**Type of project:** Basic research (including archaeological digs, etc)**Geographical area:** National**Degree of contribution:** Researcher**Entity where project took place:** Dpto. de Física de la UEx**Name principal investigator (PI, Co-PI....):** Santos Barvo Yuste**Nº of researchers:** 8**Nª people/year:** 8**Funding entity or bodies:**

Secretaría de Estado de Universidades e Investigación-MICINN

**Type of participation:** Team member**Code according to the funding entity:** IFS2007-60977**Start-End date:** 01/10/2007 - 31/12/2010**Duration:** 3 years - 2 months - 30 days**Total amount:** 191.785 €**Sub-project amount:** 0 €**Dedication regime:** Full time**14 Name of the project:** AYUDAS PARA LA CONSOLIDACIÓN Y APOYO A LOS GRUPOS DE INVESTIGACIÓN**Identify key words:** Physics chemical and mathematical**Geographical area:** Regional**Degree of contribution:** Researcher**Entity where project took place:** Grupo catalogado SphinX (FQM005)**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes**Nº of researchers:** 10**Nª people/year:** 10**Type of participation:** Team member**Code according to the funding entity:** GRU09038**Start-End date:** 16/04/2009 - 31/12/2009**Duration:** 8 months - 15 days**Total amount:** 21.434,6 €**Sub-project amount:** 0 €**Dedication regime:** Full time**15 Name of the project:** AYUDAS PARA LA CONSOLIDACIÓN Y APOYO A LOS GRUPOS DE INVESTIGACIÓN**Identify key words:** Physics chemical and mathematical



**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** Regional

**Degree of contribution:** Researcher

**Entity where project took place:** Grupo catalogado SphinX (FQM005)

**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes

**Nº of researchers:** 7

**Nª people/year:** 7

**Type of participation:** Team member

**Code according to the funding entity:** GRU08069

**Start-End date:** 22/05/2008 - 31/12/2008

**Duration:** 7 months - 9 days

**Total amount:** 12.195 €

**Dedication regime:** Full time

**16 Name of the project:** AYUDAS PARA LA CONSOLIDACIÓN Y APOYO A LOS GRUPOS DE INVESTIGACIÓN

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** Regional

**Degree of contribution:** Researcher

**Entity where project took place:** Grupo catalogado SphinX (FQM005)

**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes

**Nº of researchers:** 7

**Nª people/year:** 7

**Funding entity or bodies:**

Junta de Extremadura

**Type of entity:** Body, others

**Type of participation:** Team member

**Code according to the funding entity:** GRU07046

**Start-End date:** 19/07/2007 - 31/03/2008

**Duration:** 8 months - 12 days

**Total amount:** 15.048 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**17 Name of the project:** MATERIA FUERA DEL EQUILIBRIO: MEDIOS DESORDENADOS Y FLUIDOS GRANULARES

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** National

**Degree of contribution:** Researcher

**Entity where project took place:** Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Santos Bravo Yuste

**Nº of researchers:** 7

**Nª people/year:** 7

**Funding entity or bodies:**

Ministerio de Educación y Ciencia

**Type of participation:** Team member

**Code according to the funding entity:** FIS2004-01399

**Start-End date:** 13/12/2004 - 12/12/2007

**Duration:** 2 years - 11 months - 30 days

**Total amount:** 89.340 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**18 Name of the project:** AYUDAS PARA LA CONSOLIDACIÓN Y APOYO A LOS GRUPOS DE INVESTIGACIÓN

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** Regional





**Degree of contribution:** Researcher  
**Entity where project took place:** Grupo catalogado SPhinX (FQM005)  
**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes  
**Nº of researchers:** 7 **Nª people/year:** 7  
**Funding entity or bodies:** Junta de Extremadura **Type of entity:** Body, others  
**Type of participation:** Team member  
**Code according to the funding entity:** GRU06037  
**Start-End date:** 12/12/2006 - 30/09/2007 **Duration:** 9 months - 18 days  
**Total amount:** 10.989 € **Sub-project amount:** 0 €  
**Dedication regime:** Full time

**19 Name of the project:** ESTÁTICA Y DINÁMICA DE MEDIOS GRANULARES  
**Identify key words:** Physics chemical and mathematical  
**Type of project:** Basic research (including archaeological digs, etc) **Geographical area:** National  
**Degree of contribution:** Researcher  
**Entity where project took place:** Dpto. de Física de la UEx+varias universidades españolas  
**Name principal investigator (PI, Co-PI....):** Angel Garcimartín Montero (UN)  
**Nº of researchers:** 4 **Nª people/year:** 4  
**Funding entity or bodies:** Ministerio de Educación y Ciencia  
**Type of participation:** Team member  
**Code according to the funding entity:** FIS2004-21545-E  
**Start-End date:** 01/06/2005 - 31/12/2006 **Duration:** 1 year - 6 months - 30 days  
**Total amount:** 9.000 € **Sub-project amount:** 0 €  
**Dedication regime:** Full time

**20 Name of the project:** DYNAMICS AND STATISTICS OF GLASSES AND SPIN GLASSES: FROM AGING TO MEMORY AND EQUILIBRIUM STRUCTURES  
**Identify key words:** Physics chemical and mathematical  
**Type of project:** Basic research (including archaeological digs, etc) **Geographical area:** European Union  
**Degree of contribution:** Researcher  
**Entity where project took place:** Dpto. de Física de la UEx+20 laboratorios europeos  
**Name principal investigator (PI, Co-PI....):** Giorgio Parisi  
**Nº of researchers:** 4 **Nª people/year:** 4  
**Funding entity or bodies:** Research Training Networks (Unión Europea)  
**Type of participation:** Team member  
**Code according to the funding entity:** HPRN-CT-2002-00307  
**Start-End date:** 01/09/2002 - 31/12/2006 **Duration:** 4 years - 3 months - 30 days  
**Total amount:** 1.446.163 € **Sub-project amount:** 0 €  
**Dedication regime:** Full time

**21 Name of the project:** CHALLENGES IN MOLECULAR SIMULATIONS: BRIDGING THE LENGTH AND TIME-SCALE GAP  
**Identify key words:** Physics chemical and mathematical  
**Geographical area:** European Union  
**Degree of contribution:** Researcher



**Entity where project took place:** Dpto. de Física de la UEx+111 laboratorios europeos

**Name principal investigator (PI, Co-PI....):** Michel Mareschal

**Nº of researchers:** 7

**Nª people/year:** 7

**Funding entity or bodies:**

European Science Foundation

**Type of participation:** Team member

**Code according to the funding entity:** SIMU

**Start-End date:** 01/01/1999 - 31/12/2004

**Duration:** 5 years - 11 months - 30 days

**Total amount:** 600.000 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**22 Name of the project:** MECÁNICA ESTADÍSTICA DE FLUIDOS, MEDIOS GRANULARES Y SISTEMAS DESORDENADOS

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** National

**Degree of contribution:** Scientific coordinator

**Entity where project took place:** Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Vicente Garzó Puertos

**Nº of researchers:** 6

**Nª people/year:** 6

**Funding entity or bodies:**

Secretaría de Estado de Política Científica y Tecnológica

**Type of participation:** Principal investigator

**Code according to the funding entity:** BFM2001-0718

**Start-End date:** 28/12/2001 - 27/12/2004

**Duration:** 2 years - 11 months - 30 days

**Total amount:** 39.189 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**23 Name of the project:** DESCRIPCIÓN CINÉTICA DE GASES, LÍQUIDOS Y MEDIOS GRANULARES

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** National

**Degree of contribution:** Scientific coordinator

**Entity where project took place:** Dpto. de Física de la UEx y Fac. Física (Univ. Moulay Ismail, Marruecos)

**Name principal investigator (PI, Co-PI....):** Vicente Garzó Puertos; Mohamed Tij

**Nº of researchers:** 4

**Nª people/year:** 4

**Funding entity or bodies:**

Agencia Española de Cooperación Internacional. Programa de Cooperación Interuniversitaria Hispano-Marroquí. Ministerio de Asuntos Exteriores

**Type of participation:** Principal investigator

**Code according to the funding entity:** 14/00

**Start-End date:** 01/01/2001 - 31/12/2001

**Duration:** 11 months - 30 days

**Total amount:** 4.273,89 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**24 Name of the project:** TEORÍA CINÉTICA DE FLUIDOS, MEDIOS GRANULARES Y SISTEMAS RETICULARES

**Identify key words:** Physics chemical and mathematical

**Identify key words:** Physics chemical and mathematical

**Geographical area:** National





**Type of project:** Basic research (including archaeological digs, etc)

**Degree of contribution:** Scientific coordinator

**Entity where project took place:** Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Vicente Garzó Puertos

**Nº of researchers:** 6

**Nª people/year:** 6

**Funding entity or bodies:**

D.G.E.S.

**Type of participation:** Principal investigator

**Code according to the funding entity:** PB97-1501

**Start-End date:** 01/10/1998 - 30/09/2001

**Duration:** 2 years - 11 months - 29 days

**Total amount:** 19.232,39 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**25 Name of the project:** AYUDAS A EQUIPOS COMPETITIVOS DE INVESTIGACIÓN

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** Regional

**Degree of contribution:** Researcher

**Entity where project took place:** Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Santos Bravo Yuste

**Nº of researchers:** 6

**Nª people/year:** 6

**Type of participation:** Team member

**Code according to the funding entity:** IPR99C031

**Start-End date:** 01/01/2000 - 31/12/2000

**Duration:** 11 months - 30 days

**Total amount:** 4.507,59 €

**Dedication regime:** Full time

**26 Name of the project:** DESCRIPCIÓN CINÉTICA DE GASES, LÍQUIDOS Y MEDIOS GRANULARES

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** National

**Degree of contribution:** Scientific coordinator

**Entity where project took place:** Dpto. de Física de la UEx y Facultad de Física (Univ. Moulay Ismail, Marruecos)

**Name principal investigator (PI, Co-PI....):** Vicente Garzó Puertos; Mohamed Tij

**Nº of researchers:** 8

**Nª people/year:** 8

**Funding entity or bodies:**

Agencia Española de Cooperación Internacional. Programa de Cooperación Hispano-Marroquí. Ministerio de Asuntos Exteriores

**Type of participation:** Principal investigator

**Code according to the funding entity:** 14/97

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

**Duration:** 1 year - 11 months - 30 days

**Total amount:** 10.026,29 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**27 Name of the project:** AYUDAS A EQUIPOS COMPETITIVOS DE INVESTIGACIÓN

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** Regional

**Degree of contribution:** Researcher



**Entity where project took place:** Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Santos Bravo Yuste

**Nº of researchers:** 6

**Nª people/year:** 6

**Funding entity or bodies:**

Junta de Extremadura

**Type of entity:** Body, others

**Type of participation:** Team member

**Code according to the funding entity:** IPR98C019

**Start-End date:** 07/10/1998 - 06/10/1999

**Duration:** 11 months - 30 days

**Total amount:** 4.507,59 €

**Sub-project amount:** 0 €

**28 Name of the project:** AYUDAS A EQUIPOS COMPETITIVOS DE INVESTIGACIÓN

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** Regional

**Degree of contribution:** Researcher

**Entity where project took place:** Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes

**Nº of researchers:** 6

**Nª people/year:** 6

**Funding entity or bodies:**

Junta de Extremadura

**Type of entity:** Body, others

**Type of participation:** Team member

**Code according to the funding entity:** PRI97C1041

**Start-End date:** 07/10/1997 - 07/10/1998

**Duration:** 11 months - 30 days

**Total amount:** 4.357,34 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**29 Name of the project:** FENÓMENOS DE TRANSPORTE DE GASES Y MEDIOS DESORDENADOS

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** National

**Degree of contribution:** Researcher

**Entity where project took place:** Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes

**Nº of researchers:** 6

**Nª people/year:** 6

**Funding entity or bodies:**

D.G.I.C.Y.T.

**Type of participation:** Team member

**Code according to the funding entity:** PB94-1021

**Start-End date:** 01/07/1995 - 30/06/1998

**Duration:** 2 years - 11 months - 29 days

**Total amount:** 58.899,19 €

**Sub-project amount:** 0 €

**Dedication regime:** Full time

**30 Name of the project:** AYUDAS A EQUIPOS COMPETITIVOS DE INVESTIGACIÓN

**Identify key words:** Physics chemical and mathematical

**Type of project:** Basic research (including archaeological digs, etc)

**Geographical area:** Regional

**Degree of contribution:** Researcher

**Entity where project took place:** Dpto. de Física de la UEx

**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes

**Nº of researchers:** 6

**Nª people/year:** 6

**Funding entity or bodies:**

Junta de Extremadura y Fondo Social Europeo

**Type of participation:** Team member**Code according to the funding entity:** EIA94-39**Start-End date:** 22/12/1994 - 21/12/1997**Duration:** 2 years - 11 months - 29 days**Total amount:** 9.015,18 €**Sub-project amount:** 0 €**Dedication regime:** Full time**31 Name of the project:** PROCESOS DE TRANSPORTE ALEJADOS DEL EQUILIBRIO**Identify key words:** Physics chemical and mathematical**Type of project:** Basic research (including archaeological digs, etc)**Geographical area:** National**Degree of contribution:** Researcher**Entity where project took place:** Dpto. de Física de la UEx**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes**Nº of researchers:** 4**Nª people/year:** 4**Funding entity or bodies:**

D.G.I.C.Y.T.

**Type of entity:** State agency**Type of participation:** Team member**Code according to the funding entity:** PB91-0316**Start-End date:** 15/06/1992 - 16/06/1995**Duration:** 2 years - 11 months - 29 days**Total amount:** 21.636,44 €**Sub-project amount:** 0 €**Dedication regime:** Full time**32 Name of the project:** MODELOS TEÓRICOS PARA EL ESTUDIO DE PROPIEDADES TERMOFÍSICAS EN SISTEMAS DESORDENADOS**Identify key words:** Physics chemical and mathematical**Type of project:** Basic research (including archaeological digs, etc)**Geographical area:** National**Degree of contribution:** Researcher**Entity where project took place:** Dpto. de Física de la UEx e Instituto de Investigaciones en Materiales (UNAM, México)**Name principal investigator (PI, Co-PI....):** Mariano López de Haro; Andrés Santos Reyes**Nº of researchers:** 6**Nª people/year:** 6**Funding entity or bodies:**

M.E.C. (Instituto de Cooperación Iberoamericana)

**Type of participation:** Team member**Code according to the funding entity:** ICI**Start-End date:** 04/12/1991 - 04/12/1992**Duration:** 11 months - 30 days**Total amount:** 3.000 €**Sub-project amount:** 0 €**Dedication regime:** Full time**33 Name of the project:** ESTUDIO CINÉTICO DE LOS PROCESOS DE TRANSPORTE ALEJADOS DEL EQUILIBRIO**Identify key words:** Physics chemical and mathematical**Type of project:** Basic research (including archaeological digs, etc)**Geographical area:** National**Degree of contribution:** Researcher**Entity where project took place:** Dpto. de Física de la UEx**Name principal investigator (PI, Co-PI....):** Andrés Santos Reyes

**Nº of researchers:** 3**Funding entity or bodies:**

D.G.I.C.Y.T.

**Type of participation:** Team member**Code according to the funding entity:** PS89-0183**Start-End date:** 22/11/1990 - 21/11/1992**Total amount:** 11.779,84 €**Dedication regime:** Full time**Nª people/year:** 3**Type of entity:** State agency**Duration:** 1 year - 11 months - 29 days**Sub-project amount:** 0 €**34 Name of the project:** ESTUDIO MECÁNICO-ESTADÍSTICO DE SISTEMAS ALEJADOS DEL EQUILIBRIO**Identify key words:** Physics chemical and mathematical**Type of project:** Basic research (including archaeological digs, etc)**Geographical area:** National**Degree of contribution:** Researcher**Entity where project took place:** Dpto. de Física Teórica de la Universidad de Sevilla**Name principal investigator (PI, Co-PI...):** José Javier Brey Abalo**Nº of researchers:** 8**Nª people/year:** 8**Funding entity or bodies:**

D.G.I.C.Y.T.

**Type of participation:** Team member**Code according to the funding entity:** PB86-0205**Start-End date:** 17/11/1987 - 16/11/1990**Total amount:** 28.548,07 €**Dedication regime:** Full time**Duration:** 2 years - 11 months - 29 days**Sub-project amount:** 0 €

## Scientific and technological activities

### Scientific production

#### Publications, scientific and technical documents

- 1 Ricardo Brito; Rodrigo Soto; Vicente Garzó. Energy nonequilibrium in a collisional model of a confined quasi-two-dimensional granular mixture. *Physical Review E*. 102, pp. 052904(1) - 052904(14). APS, 2020.  
**Type of production:** Scientific paper **Format:** Journal
- 2 Rubén Gómez González; Nagi Khalil; Vicente Garzó. Enskog kinetic theory for multicomponent granular suspensions. *Physical Review E*. 101, pp. 012904(1) - 012904(23). APS, 2020.  
**Type of production:** Scientific paper **Format:** Journal
- 3 Satoshi Takata; Hisao Hayakawa; Andrés Santos; Vicente Garzó. Enskog kinetic theory of rheology for a moderately dense inertial suspension. *Physical Review E*. 102, pp. 022907(1) - 022907(23). APS, 2020.  
**Type of production:** Scientific paper **Format:** Journal
- 4 Rubén Gómez González; Vicente Garzó. Non-Newtonian rheology in inertial suspensions of inelastic rough hard spheres under simple shear flow. *Physics of Fluids*. 32, pp. 073315(1) - 073315(20). AIP, 2020.  
**Type of production:** Scientific paper **Format:** Journal



- 5** Nagi Khalil; Vicente Garzó. Unified hydrodynamic description for driven and undriven inelastic Maxwell mixtures at low density. *Journal of Physics A: Mathematical and Theoretical*. 53, pp. 355002(1) - 355002(33). IOP, 2020.  
**Type of production:** Scientific paper **Format:** Journal
- 6** Rubén Gómez González; Vicente Garzó. Influence of the first-order contributions to the partial temperatures on transport properties in polydisperse dense granular mixtures. *Physical Review E*. 100, pp. 032904(1) - 032904(9). 2019.  
**Type of production:** Scientific paper **Format:** Journal
- 7** Antonio Lasanta; Francisco Vega Reyes; Vicente Garzó; Andrés Santos. Intruders in disguise: Mimicry effect in granular gases. *Physics of Fluids*. 31, pp. 063306(1) - 063306(9). 2019.  
**Type of production:** Scientific paper **Format:** Journal
- 8** Rubén Gómez González; Vicente Garzó. Simple shear flow in granular suspensions: Inelastic Maxwell models and BGK-type kinetic model. *Journal of Statistical Mechanics-Theory and Experiment*. pp. 013206(1) - 013206(32). (Spain): 2019.  
**Type of production:** Scientific paper **Format:** Journal
- 9** Rubén Gómez González; Vicente Garzó. Transport coefficients for granular suspensions at moderate densities. *Journal of Statistical Mechanics-Theory and Experiment*. pp. 093204(1) - 093204(35). 2019.  
**Type of production:** Scientific paper **Format:** Journal
- 10** Vicente Garzo; Ricardo Brito; Rodrigo Soto. Enskog kinetic theory for a model of a confined quasi-two-dimensional granular fluid. *Physical Review E*. 98, pp. 052904(1) - 052904(18). 2018.  
**Type of production:** Scientific paper **Format:** Journal
- 11** Nagi Khalil; Vicente Garzó. Heat flux of driven granular mixtures at low density: Stability analysis of the homogeneous steady state. *Physical Review E*. 97, pp. 022902(1) - 022902(13). APS, 2018.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 12** Vicente Garzó; Andrés Santos; Gilberto Kremer. Impact of roughness on the instability of a free-cooling granular gas. *Physical Review E*. 97, pp. 052901(1) - 052901(12). APS, 2018.  
**Type of production:** Scientific paper **Format:** Journal
- 13** Francisco Vega Reyes; Antonio Lasanta; Andrés Santos; Vicente Garzó. Energy nonequipartition in gas mixtures of inelastic rough hard spheres. The tracer limit. *Physical Review E*. 96, pp. 052901(1) - 052901(9). 2017.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** 2,366 **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 55
- 14** Rubén Gómez González; Vicente Garzó. Instabilities in granular gas-solid flows. *Journal of Physics A: Mathematical and Theoretical*. 50, pp. 155502(1) - 155502(24). 2017.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** 1,865 **Journal in the top 25%:** Yes  
**Position of publication:** 12 **No. of journals in the cat.:** 55



- 15** Hisao Hayakawa; Satoshi Takada; Vicente Garzó. Kinetic theory of shear thickening for a moderately dense gas-solid suspension: from discontinuous thickening to continuous thickening. *Physical Review E*. 96, pp. 042903(1) - 042903(24). 2017.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** 2,366 **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 55
- 16** Vicente Garzó. Shear-rate -dependent transport coefficients in granular suspensions. *Physical Review E*. 95, pp. 062905(1) - 062905(19). 2017.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** 2,366 **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 55
- 17** V. Garzó; E. Trizac. Tracer diffusion coefficients in a sheared inelastic Maxwell gas. *Journal of Statistical Mechanics-Theory and Experiment*. pp. 073206-1 - 073206-26. IOP and SISSA, 2016.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** 2,196 **Journal in the top 25%:** Yes  
**Position of publication:** 8 **No. of journals in the cat.:** 55
- 18** Vicente Garzo; William D. Fullmer; Christine M. Hrenya; Xiaolong Yin. Transport coefficients of solid particles immersed in a viscous gas. *Physical Review E*. 93 - 1, pp. 012905-1 - 012905-19. American Physical Society, 2016.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 55
- 19** Vicente Garz; Nagi Khalil; Emmanuel Trizac. Anomalous transport of impurities in inelastic Maxwell gases. *European Physical Journal E*. 38 - 3, pp. 16-1 - 16-13. Springer, 2015.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Applied  
**Impact index in year of publication:** 1,625 **Journal in the top 25%:** No  
**Position of publication:** 72 **No. of journals in the cat.:** 145
- 20** Vicente Garzo; Emmanuel Trizac. Generalized transport coefficients for inelastic Maxwell mixtures under shear flow. *Physical Review E*. 92 - 5, pp. 052202-1 - 052202-20. American Physical Society, 2015.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** 2,252 **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 53
- 21** Aleksander Kubicki; Vicente Garzo. Inelastic Maxwell models for monodisperse gas-solid flows. *Journal of Statistical Mechanics-Theory and Experiment*. P03015, pp. 1 - 26. Institute of Physics and SISSA, 2015.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical

**Impact index in year of publication:**  
**Position of publication:** 8

**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 53

- 22** Moises G. Chamorro; Francisco Vega Reyes; Vicente Garzo. Non-Newtonian hydrodynamics for a dilute granular suspension under uniform shear flow. *Physical Review E*. 92 - 5, pp. 052205-1 - 052205-15. American Physical Society, 2015.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:** 2,252  
**Position of publication:** 6

**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 53

- 23** Vicente Garzo. Stability of freely cooling granular mixtures at moderate densities. *Chaos Solitons & Fractals*. 81, pp. 497 - 509. Elsevier, 2015.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 17

**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 53

- 24** N. Khalil; V. Garzo. Homogeneous states in driven granular mixtures: Enskog kinetic theory versus molecular dynamics simulations. *Journal of Chemical Physics*. 140, pp. 164901-1 - 164901-10. American Institute of Physics, 2014.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:** 2,952  
**Position of publication:** 8

**Format:** Journal  
**Category:** Physics, Atomic, Molecular & Chemical  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 34

- 25** N. Khalil; V. Garzo; A. Santos. Hydrodynamic Burnett equations for inelastic Maxwell models of granular gases. *Physical Review E*. 89, pp. 052201-1 - 052201-14. American Physical Society, 2014.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 5

**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 54

- 26** F. V. Reyes; V. Garzo; N. Khalil. Hydrodynamic granular segregation induced by boundary heating and shear. *Physical Review E*. 89, pp. 052206-1 - 052206-9. American Physical Society, 2014.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 5

**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 54

- 27** J. C. Perez-Fuentes; V. Garzo. Influence of a drag force on linear transport in low-density gases. Stability analysis. *Physica A-Statistical Mechanics and Its Applications*. 410, pp. 428 - 438. Elsevier, 2014.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:** 1,732  
**Position of publication:** 25

**Format:** Journal  
**Category:** Physics, Multidisciplinar  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 78



- 28** P. P. Mitrano; V. Garzo; C. M. Hrenya. Instabilities in granular binary mixtures at moderate densities. *Physical Review E, Rapid Communications*. 89, pp. 020201-1 - 020201-4. American Physical Society, 2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 5 **No. of journals in the cat.:** 54
- 29** M. G. Chamorro; V. Garzo; F. V. Reyes. Navier-Stokes transport coefficients for driven inelastic Maxwell models. *Journal of Statistical Mechanics-Theory and Experiment*. P06008, pp. 1 - 26. Institute of Physics and SISSA, 2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** 2,404 **Journal in the top 25%:** Yes  
**Position of publication:** 4 **No. of journals in the cat.:** 54
- 30** Gilberto M. Kremer; Andres Santos; Vicente Garzo. Transport coefficients of a granular gas of inelastic rough hard spheres. *Physical Review E*. 90 - 2, pp. 022205-1 - 022205-16. American Physical Society, 2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** 2,288 **Journal in the top 25%:** Yes  
**Position of publication:** 5 **No. of journals in the cat.:** 54
- 31** L. Almazan; J. A. Carrillo; C. Saluena; V. Garzo; T. Poschel. A numerical study of the Navier-Stokes transport coefficients for two-dimensional granular hydrodynamics. *New Journal of Physics*. 15, pp. 043044-1 - 043044-25. Institute of Physics, 2013.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Multidisciplinary  
**Impact index in year of publication:** 3,671 **Journal in the top 25%:** Yes  
**Position of publication:** 10 **No. of journals in the cat.:** 78
- 32** V. Garzo; J. A. Murray; F. V. Reyes. Diffusion transport coefficients for granular binary mixtures at low density: Thermal diffusion segregation. *Physics of Fluids*. 25 - 4, pp. 043301-1 - 043301-28. American Institute of Physics, 2013.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 21 **No. of journals in the cat.:** 139
- 33** V. Garzo. Grad's moment method for a granular fluid at moderate densities: Navier-Stokes transport coefficients. *Physics of Fluids*. 25 - 4, pp. 043301-1 - 043301-22. American Institute of Physics, 2013.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 21 **No. of journals in the cat.:** 139
- 34** M. G. Chamorro; F. V. Reyes; V. Garzo. Homogeneous steady states in a granular fluid driven by a stochastic bath with friction. *Journal of Statistical Mechanics-Theory and Experiment*. P07013, pp. 1 - 21. Institute of Physics and SISSA, 2013.



**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 9

**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 55

- 35** F. V. Reyes; A. Santos; V. Garzo. Steady base states for non-Newtonian granular hydrodynamics. *Journal of Fluid Mechanics*. 719, pp. 431 - 464. Cambridge University Press, 2013.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 12

**Format:** Journal  
**Category:** Mechanics  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 139

- 36** N. Khalil; V. Garzo. Transport coefficients for driven granular mixtures at low density. *Physical Review E*. 88, pp. 052201-1 - 052201-19. American Physical Society, 2013.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 6

**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 55

- 37** V. Garzo; M. G. Chamorro; F. V. Reyes. Transport properties for driven granular fluids in situations close to homogeneous steady states. *Physical Review E*. 87 - 3, pp. 032201-1 - 032201-18. American Physical Society, 2013.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 6

**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 55

- 38** P. P. Mitrano; V. Garzo; A. M. Hilger; C. J. Ewasko; C. M. Hrenya. Assessing a hydrodynamic description for instabilities in highly dissipative, freely cooling granular gases. *Physical Review E*. 85 - 4, pp. 041303-1 - 041303-5. American Physical Society, 2012.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 6

**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 55

- 39** A. Santos; V. Garzo. Collisional rates for the inelastic Maxwell model: application to the divergence of anisotropic high-order velocity moments in the homogeneous cooling state. *Granular Matter*. 14 - 2, pp. 105 - 110. Springer, 2012.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:** 1,504  
**Position of publication:** 45

**Format:** Journal  
**Category:** Mechanics  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 135

- 40** V. Garzo; E. Trizac. Dissipative homogeneous Maxwell mixtures: ordering transition in the tracer limit. *Granular Matter*. 14 - 2, pp. 99 - 104. Springer, 2012.

**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:** 1,504

**Format:** Journal  
**Category:** Mechanics  
**Journal in the top 25%:** No

**Position of publication:** 45**No. of journals in the cat.:** 135

- 41** V. Garzo; S. Tenneti; S. Subramaniam; C. M. Hrenya. Enskog kinetic theory for monodisperse gas-solid flows. *Journal of Fluid Mechanics*. 712, pp. 129 - 168. Cambridge University Press, 2012.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 15 **No. of journals in the cat.:** 135
- 42** J. A. Murray; V. Garzo; C. M. Hrenya. Enskog theory for polydisperse granular mixtures. III. Comparison of dense and dilute transport coefficients and equations of state for a binary mixture. *Powder Technology*. 220, pp. 24 - 36. Elsevier, 2012.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Engineering, Chemical  
**Impact index in year of publication:** 2,024 **Journal in the top 25%:** No  
**Position of publication:** 34 **No. of journals in the cat.:** 133
- 43** V. Garzo; E. Trizac. Impurity in a sheared inelastic Maxwell gas. *Physical Review E*. 85 - 1, pp. 011302-1 - 011302-14. American Physical Society, 2012.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 55
- 44** V. Garzo; F. V. Reyes. Segregation of an intruder in a heated granular dense gas. *Physical Review E*. 85 - 2, pp. 021308-1 - 021308-11. American Physical Society, 2012.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 55
- 45** F. V. Reyes; V. Garzo; A. Santos. Class of dilute granular Couette flows with uniform heat flux. *Physical Review E*. 83 - 2, pp. 021302-1 - 021302-13. American Physical Society, 2011.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 55
- 46** F. V. Reyes; A. Santos; V. Garzo. Computer simulations of an impurity in a granular gas under planar Couette flow. *Journal of Statistical Mechanics-Theory and Experiment*. P07005, pp. 1 - 24. Institute of Physics and SISSA, 2011.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 29 **No. of journals in the cat.:** 132



- 47** V. Garzo; A. Santos. Hydrodynamics of Inelastic Maxwell Models. *Mathematical Modelling of Natural Phenomena*. 6 - 4, pp. 37 - 76. EDP Sciences, 2011.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 27  
**Format:** Journal  
**Category:** Multidisciplinary Sciences  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 56
- 48** V. Garzo; E. Trizac. Non-equilibrium phase transition in a sheared granular mixture. *EPL*. 94 - 5, pp. 50009-1 - 50009-6. Institute of Physics, 2011.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 16  
**Format:** Journal  
**Category:** Physics, Multidisciplinary  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 84
- 49** V. Garzo. Thermal diffusion segregation in granular binary mixtures described by the Enskog equation. *New Journal of Physics*. 13, pp. 055020-1 - 055020-24. Institute of Physics, 2011.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 8  
**Format:** Journal  
**Category:** Physics, Multidisciplinary  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 84
- 50** V. Garzo. Transport coefficients of driven granular fluids at moderate volume fraction. *Physical Review E*. 84 - 1, pp. 012301-1 - 012301-4. American Physical Society, 2011.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 6  
**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 55
- 51** A. Santos; G. M. Kremer; V. Garzo. Energy Production Rates in Fluid Mixtures of Inelastic Rough Hard Spheres. *Progress of Theoretical Physics Supplement*. 184, pp. 31 - 48. Oxford University Press, 2010.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 36  
**Format:** Journal  
**Category:** Physics, Multidisciplinary  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 80
- 52** F. V. Reyes; A. Santos; V. Garzo. Non-Newtonian Granular Hydrodynamics. What Do the Inelastic Simple Shear Flow and the Elastic Fourier Flow Have in Common?. *Physical Review Letters*. 104 - 2, pp. 028001-1 - 028001-4. American Physical Society, 2010.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 5  
**Format:** Journal  
**Category:** Physics, Multidisciplinary  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 80
- 53** V. Garzo; E. Trizac. Rheological properties for inelastic Maxwell mixtures under shear flow. *Journal of Non-Newtonian Fluid Mechanics*. 165 - 17-18, pp. 932 - 940. Elsevier, 2010.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Format:** Journal  
**Category:** Mechanics  
**Journal in the top 25%:** Yes

**Position of publication:** 32**No. of journals in the cat.:** 133

- 54** V. Garzo; F. V. Reyes. Segregation by thermal diffusion in granular shear flows. *Journal of Statistical Mechanics-Theory and Experiment*. P07024, pp. 1 - 22. Institute of Physics and SISSA, 2010.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 22 **No. of journals in the cat.:** 133
- 55** A. Santos; V. Garzo; F. V. Reyes. An exact solution of the inelastic Boltzmann equation for the Couette flow with uniform heat flux. *European Physical Journal-Special Topics*. 179, pp. 141 - 156. Springer, 2009.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Multidisciplinary  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 44 **No. of journals in the cat.:** 71
- 56** V. Garzo; F. V. Reyes. Mass transport of impurities in a moderately dense granular gas. *Physical Review E*. 79 - 4, pp. 041303-1 - 041303-17. American Physical Society, 2009.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 5 **No. of journals in the cat.:** 47
- 57** V. Garzo; F. V. Reyes; J. M. Montanero. Modified Sonine approximation for granular binary mixtures. *Journal of Fluid Mechanics*. 623, pp. 387 - 411. Cambridge University Press, 2009.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 9 **No. of journals in the cat.:** 123
- 58** V. Garzo. Segregation by thermal diffusion in moderately dense granular mixtures. *European Physical Journal E*. 29 - 3, pp. 261 - 274. Springer, 2009.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Applied  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 26 **No. of journals in the cat.:** 108
- 59** V. Garzo. A note on the violation of the Einstein relation in a driven moderately dense granular gas. *Journal of Statistical Mechanics-Theory and Experiment*. P07005, pp. 1 - 15. Institute of Physics and SISSA, 2008.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 112
- 60** V. Garzo. Brazil-nut effect versus reverse Brazil-nut effect in a moderately dense granular fluid. *Physical Review E, Rapid Communications*. 78 - 2, pp. 020301-1 - 020301-4. American Physical Society, 2008.  
**Type of production:** Scientific paper **Format:** Journal





**Impact source:** ISI

**Impact index in year of publication:**

**Position of publication:** 6

**Category:** Physics, Mathematical

**Journal in the top 25%:** Yes

**No. of journals in the cat.:** 46

- 61** F. V. Reyes; V. Garzo; A. Santos. Impurity in a granular gas under nonlinear Couette flow. *Journal of Statistical Mechanics-Theory and Experiment*. P09003, pp. 1 - 30. Institute of Physics and SISSA, 2008.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Mechanics

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 6

**No. of journals in the cat.:** 112

- 62** V. Garzo. Mass flux of a binary mixture of Maxwell molecules under shear flow. *Physica A-Statistical Mechanics and Its Applications*. 387 - 14, pp. 3423 - 3431. Elsevier, 2008.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Multidisciplinary

**Impact index in year of publication:**

**Journal in the top 25%:** No

**Position of publication:** 25

**No. of journals in the cat.:** 68

- 63** V. Garzo; J. W. Dufty; C. M. Hrenya. Enskog theory for polydisperse granular mixtures. I. Navier-Stokes order transport. *Physical Review E*. 76 - 3, pp. 031303-1 - 27. American Physical Society, 2007.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Mathematical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 4

**No. of journals in the cat.:** 43

- 64** V. Garzo; C. M. Hrenya; J. W. Dufty. Enskog theory for polydisperse granular mixtures. II. Sonine polynomial approximation. *Physical Review E*. 76 - 3, pp. 031304-1 - 031304-20. American Physical Society, 2007.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Mathematical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 4

**No. of journals in the cat.:** 43

- 65** J. M. Montanero; A. Santos; V. Garzo. First-order Chapman-Enskog velocity distribution function in a granular gas. *Physica A-Statistical Mechanics and Its Applications*. 376, pp. 75 - 93. Elsevier, 2007.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Multidisciplinary

**Impact index in year of publication:**

**Journal in the top 25%:** No

**Position of publication:** 25

**No. of journals in the cat.:** 69

- 66** F. V. Reyes; V. Garzo; A. Santos. Granular mixtures modeled as elastic hard spheres subject to a drag force. *Physical Review E*. 75 - 6, pp. 061306-1 - 061306-14. American Physical Society, 2007.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Mathematical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 4

**No. of journals in the cat.:** 43



- 67** Hydrodynamics for inelastic Maxwell mixtures: Some applications. Bulletin of the Institute of Mathematics. 2, pp. 155 - 177. Academica Sinica (New Series), 2007.  
**Type of production:** Scientific paper **Format:** Journal
- 68** V. Garzo. Mass transport of an impurity in a strongly sheared granular gas. Journal of Statistical Mechanics-Theory and Experiment. P02012, pp. 1 - 28. Institute of Physics and SISSA, 2007.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 112
- 69** V. Garzo; A. Santos; J. M. Montanero. Modified Sonine approximation for the Navier-Stokes transport coefficients of a granular gas. Physica A-Statistical Mechanics and Its Applications. 376, pp. 94 - 107. Elsevier, 2007.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Multidisciplinary  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 25 **No. of journals in the cat.:** 69
- 70** V. Garzo; J. M. Montanero. Navier-stokes transport coefficients of d-dimensional granular binary mixtures at low density. Journal of Statistical Physics. 129 - 1, pp. 27 - 58. Springer, 2007.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 18 **No. of journals in the cat.:** 43
- 71** V. Garzo. Shear-rate-dependent transport coefficients for inelastic Maxwell models. Journal of Physics A-Mathematical and Theoretical. 40 - 35, pp. 10729 - 10757. Institute of Physics, 2007.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Multidisciplinary  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 21 **No. of journals in the cat.:** 69
- 72** A. Santos; V. Garzo. Simple shear flow in inelastic Maxwell models. Journal of Statistical Mechanics-Theory and Experiment. P08021, pp. 1 - 22. Institute of Physics and SISSA, 2007.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 112
- 73** V. Garzo; A. Santos. Third and fourth degree collisional moments for inelastic Maxwell models. Journal of Physics A-Mathematical and Theoretical. 40 - 50, pp. 14927 - 14943. Institute of Physics, 2007.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Multidisciplinary  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 21 **No. of journals in the cat.:** 69





- 74** V. Garzo; J. M. Montanero; J. W. Dufty. Mass and heat fluxes for a binary granular mixture at low density. *Physics of Fluids*. 18 - 8, pp. 083305-1 - 083305-14. American Institute of Physics, 2006.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 12 **No. of journals in the cat.:** 109
- 75** J. M. Montanero; V. Garzo; M. Alam; S. Luding. Rheology of two- and three-dimensional granular mixtures under uniform shear flow: Enskog kinetic theory versus molecular dynamics simulations. *Granular Matter*. 8 - 2, pp. 103 - 115. Springer, 2006.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 52 **No. of journals in the cat.:** 109
- 76** V. Garzo. Segregation in granular binary mixtures: Thermal diffusion. *Europhysics Letters*. 75 - 4, pp. 521 - 527. Institute of Physics, 2006.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Multidisciplinary  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 14 **No. of journals in the cat.:** 68
- 77** V. Garzo. Transport coefficients for an inelastic gas around uniform shear flow: Linear stability analysis. *Physical Review E*. 73 - 2, pp. 021304-1 - 021304-19. American Physical Society, 2006.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 2 **No. of journals in the cat.:** 41
- 78** V. Garzo. Instabilities in a free granular fluid described by the Enskog equation. *Physical Review E*. 72 - 2, pp. 021106-1 - 021106-9. American Physical Society, 2005.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 2 **No. of journals in the cat.:** 41
- 79** V. Garzo; A. Astillero. Transport coefficients for inelastic Maxwell mixtures. *Journal of Statistical Physics*. 118 - 5-6, pp. 935 - 971. Springer, 2005.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 12 **No. of journals in the cat.:** 38
- 80** V. Garzo; J. M. Montanero. Diffusion of impurities in a granular gas. *Physical Review E*. 69 - 2, pp. 021301-1 - 021301-13. American Physical Society, 2004.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes

**Position of publication:** 2**No. of journals in the cat.:** 34

- 81** A. Santos; V. Garzo; J. W. Dufty. Inherent rheology of a granular fluid in uniform shear flow. *Physical Review E*. 69 - 6, pp. 061303-1 - 061303-10. American Physical Society, 2004.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 2 **No. of journals in the cat.:** 34
- 82** V. Garzo. On the Einstein relation in a heated granular gas. *Physica A-Statistical Mechanics and Its Applications*. 343, pp. 105 - 126. Elsevier, 2004.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Multidisciplinary  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 25 **No. of journals in the cat.:** 68
- 83** V. Garzo; J. M. Montanero. Effect of energy nonequipartition on the transport properties in a granular mixture. *Granular Matter*. 5 - 3, pp. 165 - 168. Springer, 2003.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 23 **No. of journals in the cat.:** 106
- 84** J. M. Montanero; V. Garzo. Energy nonequipartition in a sheared granular mixture. *Molecular Simulation*. 29 - 6-7, pp. 357 - 362. Taylor and Francis, 2003.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 26 **No. of journals in the cat.:** 33
- 85** V. Garzo. Nonlinear transport in inelastic Maxwell mixtures under simple shear flow. *Journal of Statistical Physics*. 112 - 3-4, pp. 657 - 683. Springer, 2003.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 12 **No. of journals in the cat.:** 31
- 86** J. M. Montanero; V. Garzo. Shear viscosity for a heated granular binary mixture at low density. *Physical Review E*. 67 - 2, pp. 021308-1 - 021308-12. American Physical Society, 2003.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 1 **No. of journals in the cat.:** 31
- 87** V. Garzo; J. M. Montanero. Shear viscosity for a moderately dense granular binary mixture. *Physical Review E*. 68 - 4, pp. 041302-1 - 041302-17. American Physical Society, 2003.  
**Type of production:** Scientific paper **Format:** Journal



**Impact source:** ISI

**Impact index in year of publication:**

**Position of publication:** 1

**Category:** Physics, Mathematical

**Journal in the top 25%:** Yes

**No. of journals in the cat.:** 31

- 88** C. Marin; V. Garzo. Exact solution of the Gross-Krook kinetic model for a multicomponent gas in steady Couette flow. *Physica A-Statistical Mechanics and Its Applications*. 312 - 3-4, pp. 315 - 341. Elsevier, 2002.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Multidisciplinary

**Impact index in year of publication:**

**Journal in the top 25%:** No

**Position of publication:** 22

**No. of journals in the cat.:** 68

- 89** V. Garzo; J. W. Dufty. Hydrodynamics for a granular binary mixture at low density. *Physics of Fluids*. 14 - 4, pp. 1476 - 1490. American Institute of Physics, 2002.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Mechanics

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 9

**No. of journals in the cat.:** 102

- 90** S. R. Dahl; C. M. Hrenya; V. Garzo; J. W. Dufty. Kinetic temperatures for a granular mixture. *Physical Review E*. 66 - 4, pp. 041301-1 - 041301-10. American Physical Society, 2002.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Multidisciplinary

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 1

**No. of journals in the cat.:** 29

- 91** J. M. Montanero; V. Garzo. Monte Carlo simulation of the homogeneous cooling state for a granular mixture. *Granular Matter*. 4 - 1, pp. 17 - 24. Springer, 2002.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Mechanics

**Impact index in year of publication:**

**Journal in the top 25%:** No

**Position of publication:** 48

**No. of journals in the cat.:** 102

- 92** J. M. Montanero; V. Garzo. Rheological properties in a low-density granular mixture. *Physica A-Statistical Mechanics and Its Applications*. 310 - 1-2, pp. 17 - 38. Elsevier, 2002.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Multidisciplinary

**Impact index in year of publication:**

**Journal in the top 25%:** No

**Position of publication:** 22

**No. of journals in the cat.:** 68

- 93** V. Garzo. Tracer diffusion in granular shear flows. *Physical Review E*. 66 - 2, pp. 021308-1 - 021308-11. American Physical Society, 2002.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Mathematical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 1

**No. of journals in the cat.:** 29



- 94** V. Garzo; J. M. Montanero. Transport coefficients of a heated granular gas. *Physica A-Statistical Mechanics and Its Applications*. 313 - 3-4, pp. 336 - 356. Elsevier, 2002.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 22  
**Format:** Journal  
**Category:** Physics, Multidisciplinary  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 68
- 95** V. Garzo. Heat and momentum transport in a multicomponent mixture far from equilibrium. *Physica A*. 289 - 1-2, pp. 37 - 56. Elsevier, 2001.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 21  
**Format:** Journal  
**Category:** Physics, Multidisciplinary  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 67
- 96** J. W. Dufty; V. Garzo. Mobility and diffusion in granular fluids. *Journal of Statistical Physics*. 105 - 5-6, pp. 723 - 744. Springer, 2001.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 9  
**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 29
- 97** M. Tij; E. E. Tahiri; J. M. Montanero; V. Garzo; A. Santos; J. W. Dufty. Nonlinear Couette flow in a low density granular gas. *Journal of Statistical Physics*. 103 - 5-6, pp. 1035 - 1068. Springer, 2001.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 9  
**Format:** Journal  
**Category:** Physics, Mathematical  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 29
- 98** E. E. Tahiri; M. Tij; V. Garzo. Nonlinear transport in a binary mixture in the presence of gravitation. *Physica A*. 297 - 1-2, pp. 97 - 114. Elsevier, 2001.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 21  
**Format:** Journal  
**Category:** Physics, Multidisciplinary  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 167
- 99** J. M. Montanero; A. Santos; V. Garzo. Monte Carlo simulation of nonlinear Couette flow in a dilute gas. *Physics of Fluids*. 12 - 11, pp. 3060 - 3073. American Institute of Physics, 2000.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 6  
**Format:** Journal  
**Category:** Mechanics  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 191
- 100** C. Marin; V. Garzo; M. L. de Haro. Shear-rate dependent transport coefficients in a binary mixture of Maxwell molecules. *Physics of Fluids*. 12 - 3, pp. 717 - 726. American Institute of Physics, 2000.  
**Type of production:** Scientific paper  
**Impact source:** ISI  
**Impact index in year of publication:**  
**Position of publication:** 6  
**Format:** Journal  
**Category:** Mechanics  
**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 191



- 101** V. Garzo; J. W. Dufty. Dense fluid transport for inelastic hard spheres. *Physical Review E*. 59 - 5, pp. 5895 - 5911. American Physical Society, 1999.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 1 **No. of journals in the cat.:** 25
- 102** C. Marin; V. Garzo. Electrical current density in a sheared dilute gas. *Physica A*. 265 - 3-4, pp. 508 - 519. Elsevier, 1999.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Multidisciplinary  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 20 **No. of journals in the cat.:** 65
- 103** V. Garzo; J. Dufty. Homogeneous cooling state for a granular mixture. *Physical Review E*. 60 - 5, pp. 5706 - 5713. American Physical Society, 1999.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 1 **No. of journals in the cat.:** 25
- 104** M. Tij; V. Garzo; A. Santos. Influence of gravity on nonlinear transport in the planar Couette flow. *Physics of Fluids*. 11 - 4, pp. 893 - 904. American Institute of Physics, 1999.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 9 **No. of journals in the cat.:** 89
- 105** J. M. Montanero; V. Garzo; A. Santos; J. J. Brey. Kinetic theory of simple granular shear flows of smooth hard spheres. *Journal of Fluid Mechanics*. 389, pp. 391 - 411. Cambridge University Press, 1999.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 7 **No. of journals in the cat.:** 89
- 106** J. M. Montanero; M. L. de Haro; A. Santos; V. Garzo. Simple and accurate theory for strong shock waves in a dense hard-sphere fluid. *Physical Review E*. 60 - 6, pp. 7592 - 7595. American Physical Society, 1999.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 1 **No. of journals in the cat.:** 25
- 107** V. Garzo. Electrical conductivity in a dilute gas far from equilibrium. *Physical Review E*. 57 - 4, pp. 4186 - 4197. American Physical Society, 1998.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical





**Impact index in year of publication:**  
**Position of publication:** 1

**Journal in the top 25%:** Yes  
**No. of journals in the cat.:** 23

- 108** C. Marin; V. Garzo. Mutual diffusion in a binary mixture under shear flow. Physical Review E. 57 - 1, pp. 507 - 513. American Physical Society, 1998.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Mathematical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 1

**No. of journals in the cat.:** 23

- 109** J. M. Montanero; V. Garzo. Nonlinear Couette flow in a dilute gas: Comparison between theory and molecular-dynamics simulation. Physical Review E. 58 - 2, pp. 1836 - 1842. American Physical Society, 1998.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Mathematical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 1

**No. of journals in the cat.:** 23

- 110** J. M. Montanero; M. L. de Haro; V. Garzo; A. Santos. Strong shock waves in a dense gas: Burnett theory versus Monte Carlo simulation. Physical Review E. 58 - 6, pp. 7319 - 7324. American Physical Society, 1998.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Mathematical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 1

**No. of journals in the cat.:** 23

- 111** J. M. Montanero; A. Santos; V. Garzo. Distribution function for large velocities of a two-dimensional gas under shear flow. Journal of Statistical Physics. 88 - 5-6, pp. 1165 - 1181. Springer, 1997.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Mathematical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 3

**No. of journals in the cat.:** 25

- 112** V. Garzo. Kinetic model for uniform shear flow. Physica A. 243 - 1-2, pp. 113 - 128. Elsevier, 1997.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics

**Impact index in year of publication:**

**Journal in the top 25%:** No

**Position of publication:** 21

**No. of journals in the cat.:** 63

- 113** M. Tij; V. Garzo; A. Santos. Nonlinear heat transport in a dilute gas in the presence of gravitation. Physical Review E. 56 - 6, pp. 6729 - 6734. American Physical Society, 1997.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Mathematical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 1

**No. of journals in the cat.:** 25

- 114** V. Garzo; M. L. deHaro. Nonlinear transport for a dilute gas in steady Couette flow. Physics of Fluids. 9 - 3, pp. 776 - 787. American Institute of Physics, 1997.

**Type of production:** Scientific paper

**Format:** Journal



**Impact source:** ISI

**Impact index in year of publication:**

**Position of publication:** 6

**Category:** Mechanics

**Journal in the top 25%:** Yes

**No. of journals in the cat.:** 79

- 115** C. Marin; V. Garzo. On the validity of a variational principle for multicomponent systems. Journal of Chemical Physics. 107 - 7, pp. 2573 - 2579. American Institute of Physics, 1997.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Atomic, Molecular & Chemical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 5

**No. of journals in the cat.:** 30

- 116** C. Marin; V. Garzo; A. Santos. Tracer limit in a gas mixture under shear flow with repulsive interactions. Physical Review E. 56 - 2, pp. 2291 - 2294. American Physical Society, 1997.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Mathematical

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 1

**No. of journals in the cat.:** 25

- 117** C. Marin; J. M. Montanero; V. Garzo. Kinetic models for diffusion generated by an external force. Physica A. 225 - 2, pp. 235 - 253. Elsevier, 1996.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics

**Impact index in year of publication:**

**Journal in the top 25%:** No

**Position of publication:** 22

**No. of journals in the cat.:** 62

- 118** J. M. Montanero; A. Santos; V. Garzo. Monte Carlo simulation of the Boltzmann equation for uniform shear flow. Physics of Fluids. 8 - 7, pp. 1981 - 1983. American Institute of Physics, 1996.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Mechanics

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 7

**No. of journals in the cat.:** 68

- 119** C. Marin; J. M. Montanero; V. Garzo. Monte Carlo simulation of the Boltzmann equation in the colour conductivity problem for general repulsive potentials. Molecular Physics. 88 - 5, pp. 1249 - 1261. Taylor and Francis, 1996.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics, Atomic, Molecular & Chemical

**Impact index in year of publication:**

**Journal in the top 25%:** No

**Position of publication:** 14

**No. of journals in the cat.:** 27

- 120** C. Marin; A. Santos; V. Garzo. Non-equilibrium phase transition in a binary mixture. Europhysics Letters. 33 - 8, pp. 599 - 604. Institute of Physics, 1996.

**Type of production:** Scientific paper

**Format:** Journal

**Impact source:** ISI

**Category:** Physics

**Impact index in year of publication:**

**Journal in the top 25%:** Yes

**Position of publication:** 8

**No. of journals in the cat.:** 62





- 121** J. M. Montanero; A. Santos; V. Garzo. Singular behavior of the velocity moments of a dilute gas under uniform shear flow. *Physical Review E*. 53 - 1, pp. 1269 - 1272. American Physical Society, 1996.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 1 **No. of journals in the cat.:** 18
- 122** V. Garzo. Tracer diffusion under heat and momentum transport for general repulsive potentials. *Physica A*. 234 - 1-2, pp. 108 - 128. Elsevier, 1996.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 22 **No. of journals in the cat.:** 62
- 123** C. Marin; V. Garzo. Uniform shear flow in a binary mixture with general repulsive interactions. *Physics of Fluids*. 8 - 10, pp. 2756 - 2765. American Institute of Physics, 1996.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 7 **No. of journals in the cat.:** 68
- 124** J. M. Montanero; A. Santos; V. Garzo. ANALYSIS ON THE STABILITY OF THE UNIFORM SHEAR-FLOW FROM A MONTE-CARLO SIMULATION OF THE BOLTZMANN-EQUATION. *Physics Letters A*. 203 - 2-3, pp. 73 - 76. Elsevier, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 21 **No. of journals in the cat.:** 62
- 125** V. Garzo; A. Santos. COMPARISON BETWEEN THE BOLTZMANN AND BGK EQUATIONS FOR UNIFORM SHEAR-FLOW. *Physica A*. 213 - 3, pp. 426 - 434. Elsevier, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 20 **No. of journals in the cat.:** 62
- 126** V. Garzo; A. Santos. DIFFUSION IN A GASEOUS DILUTE-SOLUTION UNDER HEAT AND MOMENTUM TRANSPORT. *Physical Review E*. 52 - 5, pp. 4942 - 4951. American Physical Society, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 1 **No. of journals in the cat.:** 17
- 127** J. M. Montanero; A. Santos; V. Garzo. DOES THE GAUSSIAN THERMOSTAT MAXIMIZE THE PHASE-SPACE COMPRESSION FACTOR. *Journal of Statistical Physics*. 81 - 5-6, pp. 989 - 1005. Springer, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** No

**Position of publication:** 5**No. of journals in the cat.:** 17

- 128** A. Santos; V. Garzo. EXACT MOMENT SOLUTION OF THE BOLTZMANN-EQUATION FOR UNIFORM SHEAR-FLOW. *Physica A.* 213 - 3, pp. 409 - 425. Elsevier, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 20 **No. of journals in the cat.:** 62
- 129** V. Garzo. HEAT TRANSPORT IN A DILUTE GAS UNDER UNIFORM SHEAR-FLOW. *Physical Review E.* 51 - 4, pp. 3156 - 3163. American Physical Society, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 1 **No. of journals in the cat.:** 17
- 130** A. Santos; V. Garzo; J. J. Brey. ON THE VALIDITY OF A VARIATIONAL PRINCIPLE FOR FAR-FROM-EQUILIBRIUM STEADY-STATES. *Europhysics Letters.* 29 - 9, pp. 693 - 698. Institute of Physics, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 8 **No. of journals in the cat.:** 62
- 131** M. L. Deharo; V. Garzo. SHOCK-WAVES IN A DENSE GAS. *Physical Review E.* 52 - 5, pp. 5688 - 5691. American Physical Society, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematica  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 1 **No. of journals in the cat.:** 17
- 132** V. Garzo. THERMAL TRANSPORT GENERATED BY AN EXTERNAL FORCE IN A SHEARED DILUTE GAS. *Journal of Chemical Physics.* 103 - 11, pp. 4626 - 4631. American Institute of Physics, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 2 **No. of journals in the cat.:** 24
- 133** V. Garzo; M. L. Deharo. TRACER DIFFUSION UNDER SHEAR-FLOW FOR GENERAL REPULSIVE INTERACTIONS. *Physics of Fluids.* 7 - 3, pp. 478 - 486. American Institute of Physics, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 12 **No. of journals in the cat.:** 64



- 134** C. Marin; V. Garzo; A. Santos. TRANSPORT-PROPERTIES IN A BINARY MIXTURE UNDER SHEAR-FLOW. Physical Review E. 52 - 4, pp. 3812 - 3820. American Physical Society, 1995.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 1 **No. of journals in the cat.:** 17
- 135** V. Garzo. HEAT FLUX INDUCED BY AN EXTERNAL FORCE IN A STRONGLY SHEARING DILUTE GAS. Journal of Chemical Physics. 101 - 2, pp. 1423 - 1430. American Institute of Physics, 1994.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 2 **No. of journals in the cat.:** 22
- 136** V. Garzo; M. L. Deharo. KINETIC MODEL FOR HEAT AND MOMENTUM TRANSPORT. Physics of Fluids. 6 - 11, pp. 3787 - 3794. American Institute of Physics, 1994.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 8 **No. of journals in the cat.:** 61
- 137** J. M. Montanero; M. Alaoui; A. Santos; V. Garzo. MONTE CARLO SIMULATION OF THE BOLTZMANN EQUATION FOR STEADY FOURIER FLOW. Physical Review E. 49 - 1, pp. 367 - 375. American Physical Society, 1994.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 3 **No. of journals in the cat.:** 15
- 138** C. Marin; V. Garzo; A. Santos. NONLINEAR TRANSPORT IN A DILUTE BINARY MIXTURE OF MECHANICALLY DIFFERENT PARTICLES. Journal of Statistical Physics. 75 - 5-6, pp. 797 - 816. Springer, 1994.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 5 **No. of journals in the cat.:** 15
- 139** A. Santos; V. Garzo; J. J. Brey; J. W. Dufty. SINGULAR BEHAVIOR OF SHEAR-FLOW FAR FROM EQUILIBRIUM (VOL 71, 3971, 1993). Physical Review Letters. 72 - 9, pp. 1392 - 1392. American Physical Society, 1994.  
**Type of production:** Scientific paper **Format:** Journal
- 140** J. J. Brey; A. Santos; V. Garzo. ANALYSIS OF THE EVANS AND BARANYAI VARIATIONAL PRINCIPLE IN DILUTE GASES. Physical Review Letters. 70 - 18, pp. 2730 - 2733. American Physical Society, 1993.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 2 **No. of journals in the cat.:** 61



- 141** V. Garzo; A. Santos. COLOR CONDUCTIVITY INDUCED BY A SHEAR-RATE DEPENDENT COLOR FIELD. Journal of Chemical Physics. 98 - 8, pp. 6569 - 6570. American Institute of Physics, 1993.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 3 **No. of journals in the cat.:** 20
- 142** V. Garzo; M. L. Deharo. EFFECT OF MASS-RATIO DEPENDENCE OF THE FORCE LAW FOR TRACER DIFFUSION IN SHEAR-FLOW. Physics of Fluids A-Fluid Dynamics. 5 - 4, pp. 1059 - 1061. American Institute of Physics, 1993.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 5 **No. of journals in the cat.:** 57
- 143** V. Garzo; A. Santos. HEAT AND MOMENTUM TRANSPORT IN A GASEOUS DILUTE-SOLUTION. Physical Review E. 48 - 1, pp. 256 - 262. American Physical Society, 1993.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 10 **No. of journals in the cat.:** 61
- 144** V. Garzo. KINETIC MODEL FOR TRANSPORT AROUND UNIFORM SHEAR-FLOW. Molecular Physics. 78 - 5, pp. 1129 - 1141. Taylor and Francis, 1993.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 10 **No. of journals in the cat.:** 20
- 145** M. L. Deharo; V. Garzo. ON THE BURNETT EQUATIONS FOR A DENSE MONATOMIC HARD-SPHERE GAS. Physica A-Statistical Mechanics and Its Applications. 197 - 1-2, pp. 98 - 112. Elsevier, 1993.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 21 **No. of journals in the cat.:** 61
- 146** A. Santos; V. Garzo; J. J. Brey; J. W. Dufty. SINGULAR BEHAVIOR OF SHEAR-FLOW FAR FROM EQUILIBRIUM. Physical Review Letters. 71 - 24, pp. 3971 - 3974. American Physical Society, 1993.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 2 **No. of journals in the cat.:** 61
- 147** V. Garzo. THERMAL CONDUCTIVITY OF A DILUTE GAS IN A THERMOSTATED SHEAR-FLOW STATE. Physical Review E. 48 - 5, pp. 3589 - 3593. American Physical Society, 1993.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes

**Position of publication:** 10**No. of journals in the cat.:** 61

- 148** A. Santos; V. Garzó. An exact solution of the Boltzmann equation for a binary mixture. *Transp. Theory and Stat. Phys.* 21, pp. 403 - 416. Marcel Dekker, 1992.  
**Type of production:** Scientific paper **Format:** Journal
- 149** A. Santos; V. Garzo; J. J. Brey. COMPARISON BETWEEN THE HOMOGENEOUS-SHEAR AND THE SLIDING-BOUNDARY METHODS TO PRODUCE SHEAR-FLOW. *Physical Review A.* 46 - 12, pp. 8018 - 8020. American Physical Society, 1992.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 11 **No. of journals in the cat.:** 64
- 150** V. Garzo; M. L. Deharo. KINETIC MODELS FOR DIFFUSION IN SHEAR FLOW. *Physics of Fluids A-Fluid Dynamics.* 4 - 5, pp. 1057 - 1069. American Institute of Physics, 1992.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 6 **No. of journals in the cat.:** 56
- 151** V. Garzo; A. Santos. NONLINEAR MASS AND MOMENTUM TRANSPORT IN A DILUTE GAS. *Journal of Chemical Physics.* 97 - 3, pp. 2039 - 2045. American Institute of Physics, 1992.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 2 **No. of journals in the cat.:** 18
- 152** A. Santos; V. Garzo. SELF-DIFFUSION IN A DILUTE GAS UNDER HEAT AND MOMENTUM TRANSPORT. *Physical Review A.* 46 - 6, pp. 3276 - 3287. American Physical Society, 1992.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 11 **No. of journals in the cat.:** 64
- 153** V. Garzo; A. Santos. DIVERGENCE OF THE NONLINEAR THERMAL CONDUCTIVITY IN THE HOMOGENEOUS HEAT-FLOW. *Chemical Physics Letters.* 177 - 1, pp. 79 - 83. Elsevier, 1991.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 5 **No. of journals in the cat.:** 17
- 154** V. Garzo; A. Santos. EXACT SOLUTION OF THE BOLTZMANN-EQUATION IN THE HOMOGENEOUS COLOR CONDUCTIVITY PROBLEM. *Journal of Statistical Physics.* 65 - 3-4, pp. 747 - 760. Springer, 1991.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Mathematical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 4 **No. of journals in the cat.:** 11





- 155** V. Garzo; M. L. Deharo. TRACER DIFFUSION IN SHEAR FLOW. Physical Review A. 44 - 2, pp. 1397 - 1400. American Physical Society, 1991.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 11 **No. of journals in the cat.:** 60
- 156** V. Garzo. TRANSPORT EQUATIONS FROM THE LIU MODEL. Physics of Fluids A-Fluid Dynamics. 3 - 8, pp. 1980 - 1982. American Institute of Physics, 1991.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Mechanics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 5 **No. of journals in the cat.:** 54
- 157** V. Garzo; A. Santos; J. J. Brey. INFLUENCE OF NONCONSERVATIVE EXTERNAL FORCES ON SELF-DIFFUSION IN DILUTE GASES. Physica A. 163 - 2, pp. 651 - 671. Elsevier, 1990.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 22 **No. of journals in the cat.:** 60
- 158** V. Garzo; A. Santos; J. J. Brey. A KINETIC MODEL FOR A MULTICOMPONENT GAS. Physics of Fluids A-Fluid Dynamics. 1 - 2, pp. 380 - 383. American Institute of Physics, 1989.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Fluids & Plasmas  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 4 **No. of journals in the cat.:** 10
- 159** V. Garzo. ON THE DERIVATION OF THE BURNETT HYDRODYNAMIC EQUATIONS FROM THE HILBERT EXPANSION. Physica A. 149 - 3, pp. 551 - 560. Elsevier, 1988.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 23 **No. of journals in the cat.:** 64
- 160** V. Garzo. PERTURBATIVE SOLUTION OF THE BGK EQUATION FOR VERY HARD PARTICLE INTERACTION. Molecular Physics. 63 - 3, pp. 517 - 521. Taylor and Francis, 1988.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 7 **No. of journals in the cat.:** 16
- 161** V. Garzó. Solution of the BGK model kinetic to study a system with a constant temperature gradient. Anales de Física A. 84, pp. 25 - 30. RSEF, 1988.  
**Type of production:** Scientific paper **Format:** Journal





- 162** V. Garzo. GENERALIZED TRANSPORT COEFFICIENTS IN A GAS WITH LARGE SHEAR RATE. *Molecular Physics*. 61 - 2, pp. 421 - 432. Taylor and Francis, 1987.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 9 **No. of journals in the cat.:** 18
- 163** V. Garzo; J. Delarubia. THE HILBERT EXPANSION OF THE BGK EQUATION. *Chemical Physics Letters*. 135 - 1-2, pp. 143 - 146. Elsevier, 1987.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 8 **No. of journals in the cat.:** 18
- 164** V. Garzo. TRANSPORT PROPERTIES IN DISPARATE-MASS BINARY GASES. *Chemical Physics Letters*. 141 - 3, pp. 255 - 260. Elsevier, 1987.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 8 **No. of journals in the cat.:** 18
- 165** V. Garzo; J. Delarubia. COUPLING BETWEEN SHEAR-FLOW AND TEMPERATURE-GRADIENT FOR THE VERY HARD PARTICLES INTERACTION. *Chemical Physics Letters*. 132 - 6, pp. 526 - 530. Elsevier, 1986.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics, Atomic, Molecular & Chemical  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 10 **No. of journals in the cat.:** 17
- 166** A. Santos; J. J. Brey; V. Garzo. KINETIC MODEL FOR STEADY HEAT-FLOW. *Physical Review A*. 34 - 6, pp. 5047 - 5050. American Physical Society, 1986.  
**Type of production:** Scientific paper **Format:** Journal  
**Impact source:** ISI **Category:** Physics  
**Impact index in year of publication:** **Journal in the top 25%:** Yes  
**Position of publication:** 13 **No. of journals in the cat.:** 58
- 167** Kinetic theory for binary granular mixtures at low-density. *Lectures Notes In Physics: Theory and Simulations of Hard-Sphere Fluids and Related Systems*. 753, pp. 493 - 540. (Germany): SpringerVerlag, Heidelberg, 2008. ISBN 978-3-540-78766-2  
**Type of production:** Book chapter **Format:** Book
- 168** J. M. Montanero; V. Garzó. Nonlinear Couette flow in dilute gases. *Trends in Statistical Physics*. 3, pp. 105 - 115. Research Trends (Trivandrum), 2000. ISBN 81-258-0075-1  
**Type of production:** Book chapter **Format:** Book
- 169** J. M. Montanero; V. Garzó. Strong shock waves in a dense gas. *Recent Research Developments in Fluid Dynamics*. 3, pp. 113 - 123. Transworld Research Network, 2000. ISBN 81-86846-86-7  
**Type of production:** Book chapter **Format:** Book



- 170** C. Marín; V. Garzó. Transport of mass and energy in a mixture far from equilibrium. Trends in Statistical Physics. 3, pp. 127 - 136. Research Trends (Trivandrum), 2000. ISBN 81-258-0075-1  
**Type of production:** Book chapter **Format:** Book
- 171** V. Garzó; C. Marín. Nonlinear transport in a dilute binary mixture. Recent Research Developments in Physics of Fluids. 1, pp. 45 - 60. Transworld Research Network, 1998.  
**Type of production:** Book chapter **Format:** Book
- 172** Granular Gaseous Flows. Springer Nature. pp. 1 - 394. Springer Nature, 2019.  
**Type of production:** Scientific book or monograph **Format:** Book
- 173** V. Garzó; A. Santos. Kinetic Theory of Gases in Shear Flows. Nonlinear Transport. Kluwer Academic Publishers. pp. 1 - 319. Kluwer Academic Publishers, Dordrecht, 2003. ISBN 1-4020-1436-8  
**Type of production:** Scientific book or monograph **Format:** Book
- 174** Transport properties from driven inelastic Maxwell mixtures. AIP Conf. Proceedings. 2132, pp. 130004(1) - 130004(9). American Institute of Physics, 2019.  
**Type of production:** Proceedings **Format:** Book
- 175** Antonio Lasanta; Francisco Vega Reyes; Andrés Santos; Vicente Garzó. Thermal properties of an impurity immersed in a granular gas of rough hard spheres. EPJ Web Conf.140, pp. 04003(1) - 04003(4). (France): EDP Sciences, 2017. ISSN 21016275  
**Type of production:** Proceedings  
**Impact source:** SCOPUS **Category:** Physics and Astronomy  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 197 **No. of journals in the cat.:** 248
- 176** F. Vega Reyes; V. Garzo. Thermal diffusion segregation of an impurity in a driven granular fluid. AIP Conference Proceedings. 1628, pp. 488 - 493. AIP Conference Proceedings, 2014. ISSN 0094-243X  
**Type of production:** Proceedings **Format:** Book  
**Impact source:** SCOPUS **Category:** Physics and Astronomy  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 213 **No. of journals in the cat.:** 250
- 177** F. Vega Reyes; V. Garzo. Energy non-equipartition in a system with a granular impurity under Couette-Fourier flow. AIP Conference Proceedings. 1501, pp. 1017 - 1023. AIP Conference Proceedings, 2012. ISSN 0094-243X  
**Type of production:** Proceedings **Format:** Book  
**Impact source:** SCOPUS **Category:** Physics and Astronomy  
**Position of publication:** 208 **No. of journals in the cat.:** 252
- 178** V. Garzo. Grad's Moment Method for a Low-Density Granular Gas. Navier-Stokes Transport Coefficients. AIP Conference Proceedings. 1501, pp. 1031 - 1037. AIP Conference Proceedings, 2012. ISSN 0094-243X  
**Type of production:** Proceedings **Format:** Book  
**Impact source:** SCOPUS **Category:** Physics and Astronomy  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 208 **No. of journals in the cat.:** 252



- 179** M. García Chamorro; F. Vega Reyes; V. Garzo. Homogeneous states in granular fluids driven by thermostats. AIP Conference Proceedings. 1501, pp. 1024 - 1030. AIP Conference Proceedings, 2012. ISSN 0094-243X  
**Type of production:** Proceedings **Format:** Book  
**Impact source:** SCOPUS **Category:** Physics and Astronomy  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 208 **No. of journals in the cat.:** 252
- 180** L. Almazan; C. Saluena; V. Garzo; J. A. Carrillo; T. Poschel. Hydrodynamics at the Navier-Stokes Level Applied to Fast, Transient, Supersonic Granular Flows. AIP Conference Proceedings. 1501, pp. 993 - 1000. AIP Conference Proceedings, 2012. ISSN 0094-243X  
**Type of production:** Proceedings **Format:** Book  
**Impact source:** SCOPUS **Category:** Physics and Astronomy  
**Position of publication:** 208 **No. of journals in the cat.:** 252
- 181** F. Vega Reyes; V. Garzo; A. Santos Reyes. Rheological properties of a granular impurity in the Couette flow. AIP Conference Proceedings. 1027, pp. 953 - 955. AIP Conference Proceedings, 2008. ISSN 0094-243X  
**Type of production:** Proceedings **Format:** Book  
**Impact source:** SCOPUS **Category:** Physics and Astronomy  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 174 **No. of journals in the cat.:** 216
- 182** V. Garzo. Segregation in moderately dense granular binary mixtures. AIP Conference Proceedings. 1027, pp. 917 - 919. AIP Conference Proceedings, 2008. ISSN 0094-243X  
**Type of production:** Proceedings **Format:** Book  
**Impact source:** SCOPUS **Category:** Physics and Astronomy  
**Impact index in year of publication:** **Journal in the top 25%:** No  
**Position of publication:** 174 **No. of journals in the cat.:** 216
- 183** J. M. Montanero; A. Santos; V. Garzo. DSMC evaluation of the Navier-Stokes shear viscosity of a granular fluid. AIP Conference Proceedings. 762, pp. 797 - 802. AIP Conference Proceedings, 2005. ISSN 0094-243X  
**Type of production:** Proceedings **Format:** Book
- 184** V. Garzo. Impurities in inelastic Maxwell models. AIP Conference Proceedings. 762, pp. 803 - 808. AIP Conference Proceedings, 2005. ISSN 0094-243X  
**Type of production:** Proceedings **Format:** Book
- 185** M. Tij; V. Garzó; A. Santos. Influence of gravity on the thermal conductivity. Rarefied Gas Dynamics 21, R. Brun, R. Campargue, R. Gatignol, and J.-C. Lengrand, eds. pp. 239 - 246. Cepadues Editions, Toulouse, 1999.  
**Type of production:** Proceedings **Format:** Book
- 186** V. Garzó. Electrical conductivity tensor in a dilute gas under Couette flow. Anales de Física Monografías. 4, pp. 225 - 226. MadridCIEMAT, 1998. ISBN 84-7834-326-1  
**Type of production:** Proceedings **Format:** Journal
- 187** C. Marín; V. Garzó. Mutual diffusion under shear flow. Anales de Física Monografías. 4, pp. 267 - 268. MadridCIEMAT, 1998. ISBN 84-7834-326-1  
**Type of production:** Proceedings **Format:** Journal



- 188** C. Marín; V. Garzó. Kinetic model for momentum transport in a binary mixture. *Rarefied Gas Dynamics 20*, C. Shen ed.pp. 91 - 96. Peking University Press, Beijing, 1997.  
**Type of production:** Proceedings **Format:** Book
- 189** J. M. Montanero; A. Santos; V. Garzó. High velocity tail in a dilute gas under shear. *Rarefied Gas Dynamics 20*, C. Shen ed.pp. 113 - 117. Peking University Press, Beijing, 1997.  
**Type of production:** Proceedings **Format:** Book
- 190** A. Santos; V. Garzó. Exact non-linear transport from the Boltzmann equation. *Rarefied Gas Dynamics 19*, J. Harvey and G. Lord, eds.pp. 13 - 22. Oxford University Press, Oxford, 1995.  
**Type of production:** Proceedings **Format:** Book
- 191** C. Marín; V. Garzó. Momentum transport in a dilute binary mixture. *Rarefied Gas Dynamics 19*, J. Harvey and G. Lord, eds.pp. 244 - 249. Oxford University Press, Oxford, 1995.  
**Type of production:** Proceedings **Format:** Book
- 192** M. López de Haro; V. Garzó. Tracer diffusion far from equilibrium. *CAM 94 Physics Meeting*, A. Zepeda ed.pp. 737 - 742. American Institute of Physics Press, N.Y., 1995.  
**Type of production:** Proceedings **Format:** Book
- 193** V. Garzo. SELF-DIFFUSION IN STEADY COUETTE FLOWS. *Rarefied Gas Dynamics 17*, Beylich ed.pp. 207 - 213. VCH, Weinheim, 1991.  
**Type of production:** Proceedings **Format:** Book

### Works submitted to national or international conferences

- 1** **Title of the work:** Transport coefficients of granular suspensions at moderate densities  
**Name of the conference:** 3rd IMA Conference on Dense Granular Flows  
**City of event:** Cambridge, United Kingdom  
**Date of event:** 01/07/2019  
**End date:** 04/07/2019  
**Organising entity:** IMA (Cambridge University)  
Vicente Garzó; Rubén Gómez González.
- 2** **Title of the work:** Transport properties of driven inelastic Maxwell mixtures  
**Name of the conference:** 31st International Symposium on Rarefied Gas Dynamics  
**City of event:** Glasgow, United Kingdom  
**Date of event:** 23/07/2018  
**End date:** 27/07/2018  
**Organising entity:** Rarefied Gas Dynamics  
Vicente Garzó.
- 3** **Title of the work:** Enskog kinetic theory of monodisperse granular gases  
**Name of the conference:** Rheology of disordered particle-suspensions, glassy and granular materials  
**City of event:** Kyoto, Japan  
**Date of event:** 18/06/2018  
**End date:** 29/06/2018  
**Organising entity:** Yukawa Institute for Theoretical Physics (Kyoto Univ.)



- 4** **Title of the work:** Enskog kinetic theory for granular mixtures. Some applications  
**Name of the conference:** Rheology of disordered particle-suspensions, glassy and granular materials  
**City of event:** Kyoto, Japan  
**Date of event:** 18/06/2018  
**End date:** 29/06/2018  
**Organising entity:** Yukawa Institute for Theoretical Physics (Kyoto Univ.)
- 5** **Title of the work:** Transport properties in driven granular mixtures at lowdensity. Some applications  
**Name of the conference:** Rheology of disordered particle-suspensions, glassy and granular materials  
**City of event:** Kyoto, Japan  
**Date of event:** 18/06/2018  
**End date:** 29/06/2018  
**Organising entity:** Yukawa Institute for Theoretical Physics (Kyoto Univ.)  
Vicente Garzó.
- 6** **Title of the work:** Transport in sheared granular suspensions  
**Name of the conference:** International Conference on Statistical Physics 2017  
**Type of event:** Conference  
**Type of participation:** Participatory - oral communication  
**Corresponding author:** Yes  
**City of event:** Corfu, Greece  
**Date of event:** 10/07/2017  
**End date:** 14/07/2017  
**Organising entity:** Statistical and Nonlinear Physics Division of the European Physical Society (SNP/EPS)  
Vicente Garzo Puertos. "Book of Abstracts".
- 7** **Title of the work:** Non-newtonian transport properties of granular suspensions under simple shear flow  
**Name of the conference:** Flowing Matter 2016.  
**Type of participation:** Participatory - oral communication  
**City of event:** Oporto, Portugal  
**Date of event:** 11/01/2016  
**End date:** 15/01/2016  
**Organising entity:** Network Flowing Matter (COST Action MP1305)  
V. Garzó; M. G. Chamorro and F. Vega Reyes. "Book of Abstracts".
- 8** **Title of the work:** Inelastic Maxwell models for monodisperse gas-solid flows  
**Name of the conference:** Física Estadística'15.  
**Type of participation:** 'Participatory - poster  
**City of event:** Badajoz,  
**Date of event:** 05/10/2015  
**End date:** 07/10/2015  
**Organising entity:** Grupo FENOL  
A. Kubicki y V. Garzó. "Libro de Resúmenes."
- 9** **Title of the work:** Rheology of gas-solid flows under simple shear flow  
**Name of the conference:** Física Estadística'15.  
**Type of participation:** 'Participatory - poster  
**City of event:** Badajoz,  
**Date of event:** 05/10/2015  
**End date:** 07/10/2015  
**Organising entity:** Grupo FENOL





M. G. Chamorro; V. Garzó; F. Vega Reyes. "Libro de Resúmenes."

- 10** **Title of the work:** Shear-rate dependent transport coefficients in granular binary mixtures  
**Name of the conference:** Física Estadística'15.  
**Type of participation:** Participatory - poster  
**City of event:** Badajoz,  
**Date of event:** 05/10/2015  
**End date:** 07/10/2015  
**Organising entity:** Grupo FENOL  
V. Garzó y E. Trizac. "Libro de Resúmenes."
- 11** **Title of the work:** Flow instabilities in undriven granular fluids at moderate densities  
**Name of the conference:** Flowing Matter 2014  
**Type of participation:** Participatory - oral communication  
**City of event:** Lisboa, Portugal  
**Date of event:** 15/12/2014  
**End date:** 17/12/2014  
**Organising entity:** Network Flowing Matter (COST Action MP1305)  
V. Garzó. "Book of Abstracts."
- 12** **Title of the work:** Instabilities in granular fluids at moderate densities  
**Name of the conference:** International Conference on Statistical Physics (SigmaPhi 2014)  
**Type of participation:** Participatory - oral communication  
**City of event:** Rodas, Greece  
**Date of event:** 07/07/2014  
**End date:** 11/07/2014  
**Organising entity:** Statistical and Nonlinear Physics Division of the European Physical Society (SNP/EPS)  
V. Garzó; P. Mitrano and C. Hrenya. "Book of Abstracts."
- 13** **Title of the work:** Molecular dynamics simulations of driven granular mixtures  
**Name of the conference:** Workshop on Numerical Modelling of Grains/Fluids Flows  
**Type of participation:** Participatory - oral communication  
**City of event:** Lyon, France  
**Date of event:** 05/11/2013  
**End date:** 06/11/2013  
**Organising entity:** Instituto de Salud Carlos III  
N. Khalil and V. Garzó. "Book of Abstracts."
- 14** **Title of the work:** Characteristic length and time scales for granular dynamics  
**Name of the conference:** Physics of glassy and granular materials  
**Type of participation:** Participatory - oral communication  
**City of event:** Kyoto, Japan  
**Date of event:** 14/07/2013  
**End date:** 17/07/2013  
**Organising entity:** Yukawa Institute  
F. Vega Reyes; A. Santos; V. Garzó; M. García Chamorro and N. Khalil. "Book of Abstracts."
- 15** **Title of the work:** Diffusion and segregation of a granular impurity in a dense inelastic fluid  
**Name of the conference:** 2nd IMA Conference on Dense Granular Flows  
**Type of participation:** Participatory - oral communication  
**City of event:** Isaac Newton Institute for Mathematical Sciences (Cambridge), United Kingdom





**Date of event:** 01/07/2013  
**End date:** 04/07/2013  
**Organising entity:** IMA (Cambridge University)  
F. Vega Reyes and V. Garzó. "Book of Abstracts."

**16** **Title of the work:** Kinetic theory for granular mixtures at moderate densities. Some applications  
**Name of the conference:** 2nd IMA Conference on Dense Granular Flows  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Isaac Newton Institute for Mathematical Sciences (Cambridge), United Kingdom  
**Date of event:** 01/07/2013  
**End date:** 04/07/2013  
**Organising entity:** IMA (Cambridge University)  
V. Garzó. "Book of Abstracts."

**17** **Title of the work:** Energy non-equipartition in a granular impurity under Couette-Fourier flow  
**Name of the conference:** 28th International Symposium on Rarefied Gas Dynamics  
**Type of participation:** Participatory - oral communication  
**City of event:** Zaragoza,  
**Date of event:** 09/07/2012  
**End date:** 13/07/2012  
**Organising entity:** Rarefied Gas Dynamics  
F. Vega Reyes and V. Garzó. "Book of Abstracts."

**18** **Title of the work:** Grad's moment method for a low-density granular gas. Navier-Stokes transport coefficients  
**Name of the conference:** 28th International Symposium on Rarefied Gas Dynamics  
**Type of participation:** Participatory - poster  
**City of event:** Zaragoza,  
**Date of event:** 09/07/2012  
**End date:** 13/07/2012  
**Organising entity:** Rarefied Gas Dynamics  
V. Garzó. "Book of Abstracts."

**19** **Title of the work:** Homogeneous states in driven granular fluids  
**Name of the conference:** 28th International Symposium on Rarefied Gas Dynamics  
**Type of participation:** Participatory - poster  
**City of event:** Zaragoza,  
**Date of event:** 09/07/2012  
**End date:** 13/07/2012  
**Organising entity:** Rarefied Gas Dynamics  
M. G. Chamorro; F. Vega Reyes and V. Garzó. "Book of Abstracts."

**20** **Title of the work:** The role of kinetic transport coefficients in the hydrodynamic simulations of granular flow  
**Name of the conference:** 28th International Symposium on Rarefied Gas Dynamics  
**Type of participation:** Participatory - oral communication  
**City of event:** Zaragoza,  
**Date of event:** 09/07/2012  
**End date:** 13/07/2012  
**Organising entity:** Rarefied Gas Dynamics  
L. Almazán; J. A. Carrillo; C. Salueña; V. Garzó; and T. Pöschel. "Book of Abstracts."



- 21** **Title of the work:** Non-Newtonian properties in granular Couette flows  
**Name of the conference:** Granular and Active Fluids  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Zaragoza,  
**Date of event:** 12/10/2011  
**End date:** 15/10/2011  
**Organising entity:** ZCAM  
V. Garzó; F. Vega Reyes; and A. Santos. "Book of Abstracts."
- 22** **Title of the work:** Non-equilibrium phase transition in a sheared inelastic granular mixture  
**Name of the conference:** Fluctuation Phenomena in Interdisciplinary Science  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Barcelona,  
**Date of event:** 27/04/2011  
**End date:** 29/04/2011  
**Organising entity:** Red Española de Física de sistemas fuera de equilibrio  
V. Garzó. "Book of Abstracts."
- 23** **Title of the work:** Influencia del fluido intersticial en la descripción hidrodinámica de flujos granulares  
**Name of the conference:** Flujos y Partículas (Red de Física de los Sistemas Fuera de Equilibrio)  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Pamplona,  
**Date of event:** 20/05/2010  
**End date:** 22/05/2010  
**Organising entity:** Red Española de Física de sistemas fuera de equilibrio  
V. Garzó. "Libro de resúmenes".
- 24** **Title of the work:** Energy production rates in fluid mixtures of inelastic rough hard spheres  
**Name of the conference:** Southern Workshop on Granular Materials SWGM09  
**Type of participation:** Participatory - oral communication  
**City of event:** Viña del Mar, Chile  
**Date of event:** 30/11/2009  
**End date:** 04/12/2009  
**Organising entity:** Universidad de Santiago de Chile  
A. Santos; G. K. Kremer; and V. Garzó. "Book of Abstracts."
- 25** **Title of the work:** Incorporation of Fluid Phase into Hydrodynamic Description of Granular Flows  
**Name of the conference:** Southern Workshop on Granular Materials SWGM09  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Viña del Mar, Chile  
**Date of event:** 30/11/2009  
**End date:** 04/12/2009  
**Organising entity:** Universidad de Santiago de Chile  
C.M. Hrenya; V. Garzó; S. Subramaniam; R. Garg; and S. Tennetti. "Book of Abstracts."
- 26** **Title of the work:** What do the inelastic uniform shear flow and the elastic Fourier flow have in common?  
**Name of the conference:** Southern Workshop on Granular Materials SWGM09  
**Type of participation:** Participatory - oral communication  
**City of event:** Viña del Mar, Chile  
**Date of event:** 30/11/2009  
**End date:** 04/12/2009



**Organising entity:** Universidad de Santiago de Chile  
F. V. Reyes; A. Santos; and V. Garzó. "Book of Abstracts."

- 27** **Title of the work:** Kinetic theory for binary granular gas mixtures: Some applications  
**Name of the conference:** 5th Internacional Workshop on Nonequilibrium Thermodynamics  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Cuernavaca, Mexico  
**Date of event:** 24/09/2009  
**End date:** 28/09/2009  
**Organising entity:** UNAM  
V. Garzó. "Book of Abstracts."
- 28** **Title of the work:** Teoría cinética de fluidos granulares: Algunos problemas abiertos  
**Name of the conference:** Red de Física de los Sistemas Fuera de Equilibrio  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Barcelona,  
**Date of event:** 08/06/2009  
**End date:** 10/06/2009  
**Organising entity:** Red de Física de los Sistemas Fuera de Equilibrio  
V. Garzó. "Libro de resúmenes".
- 29** **Title of the work:** Rheology for a special class of steady Couette flows in granular gases and its equivalence with the uniform shear flow  
**Name of the conference:** Workshop on Moment Methods in Kinetic Gas Theory  
**Type of participation:** 'Participatory - poster  
**City of event:** Zurich, Switzerland  
**Date of event:** 06/11/2008  
**End date:** 11/11/2008  
**Organising entity:** ETHZ  
F. Vega Reyes; A. Santos; V. Garzó. "<http://www.math.ethz.ch/~matorril/Workshop/posters.html>".
- 30** **Title of the work:** Kinetic theory of granular gas mixtures  
**Name of the conference:** Temperature in non-equilibrium systems  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Barcelona,  
**Date of event:** 18/09/2008  
**End date:** 19/09/2008  
**Organising entity:** Universitat Autònoma de Barcelona  
**Type of entity:** University  
V. Garzó. "Book of Abstracts."
- 31** **Title of the work:** Segregation by thermal difusión of an intruder in a granular dense gas  
**Name of the conference:** Granular Gas 2008: Beyond the dilute limit  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Thurnau, Germany  
**Date of event:** 07/09/2008  
**End date:** 12/09/2008  
**Organising entity:** Bayreuth University  
V. Garzó. "Book of Abstracts."



- 32** **Title of the work:** Rheological properties of a granular impurity in the Couette flow  
**Name of the conference:** The XV International Congress on Rheology  
**Type of participation:** 'Participatory - poster  
**City of event:** Monterey (CA), United States of America  
**Date of event:** 03/08/2008  
**End date:** 08/08/2008  
**Organising entity:** The Society of Rheology  
F. Vega Reyes; V. Garzó; A. Santos. "Book of Abstracts."
- 33** **Title of the work:** Segregation in moderately dense granular binary mixtures  
**Name of the conference:** The XV International Congress on Rheology  
**Type of participation:** Participatory - oral communication  
**City of event:** Monterey (CA), United States of America  
**Date of event:** 03/08/2008  
**End date:** 08/08/2008  
**Organising entity:** The Society of Rheology  
V. Garzó. "Book of Abstracts."
- 34** **Title of the work:** Impureza en un gas granular bajo flujo laminar de Couette no lineal  
**Name of the conference:** Física Estadística'08.  
**Type of participation:** 'Participatory - poster  
**City of event:** Salamanca,  
**Date of event:** 27/03/2008  
**End date:** 29/03/2008  
**Organising entity:** Grupo FENOL  
F. Vega Reyes; V. Garzó; A. Santos. "Libro de Resúmenes."
- 35** **Title of the work:** Segregación en un gas granular denso bajo la acción de la gravedad  
**Name of the conference:** Física Estadística'08.  
**Type of participation:** Participatory - oral communication  
**City of event:** Salamanca,  
**Date of event:** 27/03/2008  
**End date:** 29/03/2008  
**Organising entity:** Grupo FENOL  
V. Garzó. "Libro de Resúmenes."
- 36** **Title of the work:** Sobre la relación de Einstein en gases granulares densos forzados  
**Name of the conference:** Física Estadística'08.  
**Type of participation:** 'Participatory - poster  
**City of event:** Salamanca,  
**Date of event:** 27/03/2008  
**End date:** 29/03/2008  
**Organising entity:** Grupo FENOL  
V. Garzó. "Libro de Resúmenes."
- 37** **Title of the work:** Dense fluid transport for granular mixtures of inelastic hard spheres  
**Name of the conference:** Granular Fluids- A Proving Ground for Nonequilibrium Statistical Mechanics  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Sevilla,  
**Date of event:** 26/09/2007  
**End date:** 29/09/2007



**Organising entity:** Universidad de Sevilla  
V. Garzó. "Book of Abstracts."

**Type of entity:** University

- 38** **Title of the work:** Mass transport of an impurity in a strongly sheared granular gas  
**Name of the conference:** Statistics and dynamics of granular media and colloidal suspensions  
**Type of participation:** 'Participatory - poster  
**City of event:** Nápoles, Italy  
**Date of event:** 04/07/2007  
**End date:** 06/07/2007  
**Organising entity:** Universidad de Nápoles  
V. Garzó. "Book of Abstracts."
- 39** **Title of the work:** Modelo cinético con colisiones elásticas para una mezcla gaseosa granular  
**Name of the conference:** Física Estadística'06.  
**Type of participation:** 'Participatory - poster  
**City of event:** Granada,  
**Date of event:** 14/09/2006  
**End date:** 16/09/2006  
**Organising entity:** Grupo FENOL  
F. Vega Reyes; V. Garzó.; A. Santos. "Libro de Resúmenes."
- 40** **Title of the work:** Segregation in granular mixtures: Thermal diffusion  
**Name of the conference:** DYGRAM 2006 granular dynamics, jamming, rheology and instabilities  
**Type of participation:** Participatory - oral communication  
**City of event:** Rennes, France  
**Date of event:** 19/06/2006  
**End date:** 23/06/2006  
**Organising entity:** University of Rennes  
V. Garzó. "Book of Abstracts."
- 41** **Title of the work:** Shear Flow of Inelastic Maxwell particles  
**Name of the conference:** DuftyFest  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Gainesville (FL), United States of America  
**Date of event:** 22/09/2005  
**End date:** 24/09/2005  
**Organising entity:** University of Florida  
A. Santos and V. Garzó. "Book of Abstracts."
- 42** **Title of the work:** Navier-Stokes velocity distribution of a granular gas in the heat flux problem  
**Name of the conference:** CECAM Workshop on "From gases to glasses in granular matter: Thermodynamic and hydrodynamic aspects.  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Lyon, France  
**Date of event:** 27/06/2005  
**End date:** 30/06/2005  
**Organising entity:** CECAM  
A. Santos; J. M. Montanero and V. Garzó. "Book of Abstracts."



- 43** **Title of the work:** Transport coefficients for a granular gas under simple shear flow  
**Name of the conference:** CECAM Workshop on "From gases to glasses in granular matter: Thermodynamic and hydrodynamic aspects."  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Lyon, France  
**Date of event:** 27/06/2005  
**End date:** 30/06/2005  
**Organising entity:** CECAM  
V. Garzó. "Book of Abstracts."
- 44** **Title of the work:** Hydrodynamics for inelastic Maxwell mixtures  
**Name of the conference:** Sixth International Workshop on Mathematical Aspects of Fluid and Plasma Dynamics.  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Kyoto, Japan  
**Date of event:** 19/10/2004  
**End date:** 23/10/2004  
**Organising entity:** University of Kyoto  
V. Garzó. "Book of Abstracts."
- 45** **Title of the work:** DSMC evaluation of the Navier-Stokes shear viscosity of a granular fluid.  
**Name of the conference:** 24th International Symposium on Rarefied Gas Dynamics.  
**Type of participation:** Participatory - oral communication  
**City of event:** Bari, Italy  
**Date of event:** 10/07/2004  
**End date:** 16/07/2004  
**Organising entity:** Rarefied Gas Dynamics  
J. M. Montanero; A. Santos; and V. Garzó."Book of Abstracts."
- 46** **Title of the work:** Impurities in inelastic Maxwell models  
**Name of the conference:** 24th International Symposium on Rarefied Gas Dynamics.  
**Type of participation:** Participatory - oral communication  
**City of event:** Bari, Italy  
**Date of event:** 10/07/2004  
**End date:** 16/07/2004  
**Organising entity:** Rarefied Gas Dynamics  
V. Garzó. "Book of Abstracts."
- 47** **Title of the work:** Transport coefficients for granular mixtures at low density  
**Name of the conference:** Florida-Paris Workshop on Granular Fluids.  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Paris, France  
**Date of event:** 06/11/2003  
**End date:** 07/11/2003  
**Organising entity:** University of Florida  
V. Garzó and J. W. Dufty. "Book of Abstracts."
- 48** **Title of the work:** Estado homogéneo no forzado en una mezcla inelástica de Maxwell.  
**Name of the conference:** Física Estadística'03.  
**Type of participation:** 'Participatory - poster  
**City of event:** Pamplona,





**Date of event:** 23/09/2003  
**End date:** 25/09/2003  
**Organising entity:** Grupo FENOL  
A. Astillero y V. Garzó."Libro de Resúmenes."

**49 Title of the work:** Viscosidad tangencial de un fluido granular multicomponente.

**Name of the conference:** Física Estadística'03.  
**Type of participation:** 'Participatory - poster  
**City of event:** Pamplona,  
**Date of event:** 23/09/2002  
**End date:** 25/09/2002  
**Organising entity:** Grupo FENOL  
V. Garzó y J. M. Montanero."Libro de Resúmenes."

**50 Title of the work:** Entropía de un gas alejado alejado del equilibrio

**Name of the conference:** VIII Encuentro del Grupo Especializado en Termodinámica  
**Type of participation:** Participatory - oral communication  
**City of event:** Jarandilla de la Vera (Cáceres),  
**Date of event:** 26/06/2002  
**End date:** 29/06/2002  
**Organising entity:** RSEF (Grupo especializado de Termodinámica)  
: A. Santos y V. Garzó. "Libro de Resúmenes."

**51 Title of the work:** Difusión en un medio granular sometido a esfuerzos tangenciales

**Name of the conference:** Física Estadística'02.  
**Type of participation:** Participatory - oral communication  
**City of event:** Tarragona,  
**Date of event:** 23/05/2002  
**End date:** 25/05/2002  
**Organising entity:** Grupo FENOL  
V. Garzó. "Libro de Resúmenes."

**52 Title of the work:** Rheological properties in a granular mixture

**Name of the conference:** Euroconference on Asymptotic Methods and applications in Kinetic and Quantum-Kinetic Theory.  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Granada,  
**Date of event:** 17/09/2001  
**End date:** 21/09/2001  
**Organising entity:** Universidad de Granada  
**Type of entity:** University  
V. Garzó and J.M. Montanero."Book of Abstracts."

**53 Title of the work:** Simulation of the Couette flow in a granular gas

**Name of the conference:** Bridging the time-scale gap  
**Type of participation:** 'Participatory - poster  
**City of event:** Constanza, Germany  
**Date of event:** 10/09/2001  
**End date:** 13/09/2001  
**Organising entity:** Konstanz University  
J.M. Montanero; V. Garzó and A. Santos."Book of Abstracts."



- 54** **Title of the work:** Diffusion in granular shear flows  
**Name of the conference:** CECAM Workshop on Granular Gases: Theory-Experiments-Simulations.  
**Type of participation:** Participatory - oral communication  
**City of event:** Lyon, France  
**Date of event:** 02/09/2001  
**End date:** 05/09/2001  
**Organising entity:** CECAM  
V. Garzó. "Book of Abstracts."
- 55** **Title of the work:** Simulation of the shear viscosity of a dilute granular fluid  
**Name of the conference:** STATPHYS21  
**Type of participation:** 'Participatory - poster  
**City of event:** Cancún, Mexico  
**Date of event:** 15/07/2001  
**End date:** 20/07/2001  
**Organising entity:** IUPAP  
J.M. Montanero; V. Garzó; A. Santos and J. W. Dufty."Book of Abstracts."
- 56** **Title of the work:** Shear viscosity of a granular fluid.  
**Name of the conference:** CECAM Workshop on Computational Kinetic Theory: Mesoscale Applications.  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Lyon, France  
**Date of event:** 28/05/2001  
**End date:** 31/05/2001  
**Organising entity:** CECAM  
A. Santos; J. M. Montanero; V. Garzó and J.W. Dufty."Book of Abstracts".
- 57** **Title of the work:** Diffusion in a granular mixture at low density.  
**Name of the conference:** CECAM Workshop on Statistical Physics for Dynamic Granular Media.  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Lyon, France  
**Date of event:** 24/07/2000  
**End date:** 27/07/2000  
**Organising entity:** CECAM  
V. Garzó and J.W. Dufty."Book of Abstracts".
- 58** **Title of the work:** Transporte no lineal en una mezcla binaria diluída.  
**Name of the conference:** No Lineal 2000.  
**Type of participation:** Participatory - oral communication  
**City of event:** Almagro,  
**Date of event:** 29/05/2000  
**End date:** 02/06/2000  
**Organising entity:** Grupo FENOL  
C. Marín y V. Garzó."Libro de resúmenes."
- 59** **Title of the work:** Tensor de Dufour en una mezcla binaria sometida a flujo tangencial.  
**Name of the conference:** Física Estadística'99.  
**Type of participation:** 'Participatory - poster  
**City of event:** Santander,  
**Date of event:** 06/08/1999  
**End date:** 08/08/1999



**Organising entity:** Grupo FENOL  
C. Marín y V. Garzó."Libro de Resúmenes."

- 60** **Title of the work:** Steady heat flow for a dilute granular gas.  
**Name of the conference:** 4th Liquid Matter Conference.  
**Type of participation:** 'Participatory - poster  
**City of event:** Granada,  
**Date of event:** 03/07/1999  
**End date:** 07/07/1999  
**Organising entity:** European Physical Society  
V. Garzó and J. W. Dufty."Book of Abstracts."
- 61** **Title of the work:** Influence of gravity on the thermal conductivity.  
**Name of the conference:** 21th International Symposium on Rarefied Gas Dynamics.  
**Type of participation:** Participatory - oral communication  
**City of event:** Marsella, France  
**Date of event:** 26/07/1998  
**End date:** 31/07/1998  
**Organising entity:** Rarefied Gas Dynamics  
A. Santos.; M. Tij and V. Garzó. "Proceedings (Cépaduès Editions, Toulouse)".
- 62** **Title of the work:** Electrical current density in a dilute gas under shear flow.  
**Name of the conference:** 20th IUPAP International Conference on Statistical Physics.  
**Type of participation:** 'Participatory - poster  
**City of event:** Paris, France  
**Date of event:** 20/07/1998  
**End date:** 24/07/1998  
**Organising entity:** IUPAP  
C. Marín and V. Garzó."Book of Abstracts."
- 63** **Title of the work:** Rheological properties of a granular fluid.  
**Name of the conference:** 20th IUPAP International Conference on Statistical Physics.  
**Type of participation:** 'Participatory - poster  
**City of event:** Paris, France  
**Date of event:** 20/07/1998  
**End date:** 24/07/1998  
**Organising entity:** IUPAP  
J. M. Montanero; V. Garzó and A. Santos."Book of Abstracts."
- 64** **Title of the work:** Electrical current density in a dilute gas under Couette flow.  
**Name of the conference:** First European Symposium on Applied Kinetic Theory.  
**Type of participation:** Participatory - oral communication  
**City of event:** Toulouse, France  
**Date of event:** 04/05/1998  
**End date:** 07/05/1998  
**Organising entity:** Universite Paul Sabatier (Toulouse)  
V. Garzó."Book of Abstracts."
- 65** **Title of the work:** Difusión mutua bajo flujo tangencial uniforme.  
**Name of the conference:** Física Estadística'97.  
**Type of participation:** 'Participatory - poster



**City of event:** Getafe,  
**Date of event:** 25/09/1997  
**End date:** 27/09/1997  
**Organising entity:** Grupo FENOL  
C. Marín y V. Garzó."Libro de Resúmenes."

- 66** **Title of the work:** Tensor de conductividad eléctrica en el flujo de Couette.  
**Name of the conference:** Física Estadística'97.  
**Type of participation:** 'Participatory - poster  
**City of event:** Getafe,  
**Date of event:** 25/09/1997  
**End date:** 27/09/1997  
**Organising entity:** Grupo FENOL  
V. Garzó."Libro de Resúmenes."
- 67** **Title of the work:** High-velocity tail in a dilute gas under shear.  
**Name of the conference:** 20th International Symposium on Rarefied Gas Dynamics.  
**Type of participation:** Participatory - oral communication  
**City of event:** Pekín, China  
**Date of event:** 19/08/1996  
**End date:** 23/08/1996  
**Organising entity:** Rarefied Gas Dynamics  
A. Santos.; J.M. Montanero and V. Garzó. "Proceedings (Peking University Press, Beijing)."
- 68** **Title of the work:** Kinetic model for momentum transport in a binary mixture.  
**Name of the conference:** 20th International Symposium on Rarefied Gas Dynamics.  
**Type of participation:** 'Participatory - poster  
**City of event:** Pekín, China  
**Date of event:** 19/08/1996  
**End date:** 23/08/1996  
**Organising entity:** Rarefied Gas Dynamics  
C. Marín. and V. Garzó."Proceedings (Peking University Press, Beijing)."
- 69** **Title of the work:** Phase Transition in a Binary Mixture under Uniform Shear Flow.  
**Name of the conference:** CECAM Euroconference on The Microscopic Approach to Complexity by Molecular Simulations.  
**Type of participation:** 'Participatory - poster  
**City of event:** Lyon, France  
**Date of event:** 15/07/1996  
**End date:** 19/07/1996  
**Organising entity:** CECAM  
C. Marín and V. Garzó."Book of Abstracts."
- 70** **Title of the work:** Transición de fase de no equilibrio en una mezcla binaria.  
**Name of the conference:** Física Estadística'96.  
**Type of participation:** Participatory - oral communication  
**City of event:** Zaragoza,  
**Date of event:** 23/05/1996  
**End date:** 25/05/1996  
**Organising entity:** Grupo FENOL  
V. Garzó; C. Marín; A. Santos."Libro de Resúmenes."



- 71** **Title of the work:** Heat and momentum transport in the ellipsoidal statistical model.  
**Name of the conference:** European Workshop on Kinetic Equations.  
**Type of participation:** Participatory - oral communication  
**City of event:** Granada,  
**Date of event:** 17/04/1996  
**End date:** 20/04/1996  
**Organising entity:** Universidad de Granada **Type of entity:** University  
M. López de Haro and V. Garzó."Book of Abstracts."
- 72** **Title of the work:** High-velocity tail in a dilute gas under uniform shear flow.  
**Name of the conference:** European Workshop on Kinetic Equations.  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Granada,  
**Date of event:** 17/04/1996  
**End date:** 20/04/1996  
**Organising entity:** Universidad de Granada **Type of entity:** University  
V. Garzó; J.M. Montanero and A. Santos."Book of Abstracts."
- 73** **Title of the work:** Viscosidad no lineal en una mezcla binaria diluida.  
**Name of the conference:** Física Estadística'94.  
**Type of participation:** Participatory - oral communication  
**City of event:** Sevilla,  
**Date of event:** 06/10/1994  
**End date:** 08/10/1994  
**Organising entity:** Grupo FENOL  
C. Marín y V. Garzó."Libro de Resúmenes."
- 74** **Title of the work:** Tracer diffusion far from equilibrium.  
**Name of the conference:** CAM 94 Physics Meeting  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Cancún, Mexico  
**Date of event:** 26/09/1994  
**End date:** 30/09/1994  
**Organising entity:** Sociedad Mexicana de Física  
M. López de Haro and V. Garzó."AIP Conference Proceedings 342 (American Institute of Physics Press, Woodbury NY)".
- 75** **Title of the work:** Exact non-linear transport from the Boltzmann equation.  
**Name of the conference:** 19th International Symposium on Rarefied Gas Dynamics.  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Oxford, United Kingdom  
**Date of event:** 25/07/1994  
**End date:** 29/07/1994  
**Organising entity:** Rarefied Gas Dynamics  
A. Santos and V. Garzó."Proceedings (Oxford University Press, Oxford)".
- 76** **Title of the work:** Momentum transport in a dilute binary mixture.  
**Name of the conference:** 19th International Symposium on Rarefied Gas Dynamics.  
**Type of participation:** Participatory - poster  
**City of event:** Oxford, United Kingdom



**Date of event:** 25/07/1994  
**End date:** 29/07/1994  
**Organising entity:** Rarefied Gas Dynamics  
C. Marín and V. Garzó. "Proceedings (Oxford University Press, Oxford)."

**77 Title of the work:** Mutual diffusion tensor of a dilute gas in a thermostatted shear flow state.

**Name of the conference:** 19th International Symposium on Rarefied Gas Dynamics.

**Type of participation:** Participatory - oral communication

**City of event:** Oxford, United Kingdom

**Date of event:** 25/07/1994

**End date:** 29/07/1994

**Organising entity:** Rarefied Gas Dynamics

V. Garzó and M. López de Haro. "Proceedings (Oxford University Press, Oxford)."

**78 Title of the work:** Absence of a normal solution to the Boltzmann equation far from equilibrium.

**Name of the conference:** 25 Years of Non-Equilibrium Statistical Mechanics.

**Type of participation:** 'Participatory - poster

**City of event:** Sitges,

**Date of event:** 13/06/1994

**End date:** 17/06/1994

**Organising entity:** Universitat de Barcelona

**Type of entity:** University

A. Santos; V. Garzó and J. M. Montanero. "Book of Abstracts."

**79 Title of the work:** An exact solution from the Boltzmann equation for a binary mixture in the color conductivity problem.

**Name of the conference:** International Summer School on Fundamental Problems in Statistical Mechanics VIII.

**Type of participation:** 'Participatory - poster

**City of event:** Altenberg, Germany

**Date of event:** 28/06/1993

**End date:** 10/07/1993

**Organising entity:** Rockefeller University (NY)

C. Marín and V. Garzó. "Book of Abstracts."

**80 Title of the work:** Conductividad de color en una mezcla binaria diluída.

**Name of the conference:** Física Estadística'93.

**Type of participation:** 'Participatory - poster

**City of event:** San Lorenzo de El Escorial,

**Date of event:** 05/05/1993

**End date:** 07/05/1993

**Organising entity:** Grupo FENOL

C. Marín y V. Garzó. "Libro de resúmenes."

**81 Title of the work:** Ecuaciones hidrodinámicas de Burnett para un gas denso de esferas duras.

**Name of the conference:** Física Estadística'93.

**Type of participation:** 'Participatory - poster

**City of event:** San Lorenzo de El Escorial,

**Date of event:** 05/05/1993

**End date:** 07/05/1993

**Organising entity:** Grupo FENOL

V. Garzó. "Libro de resúmenes."





- 82** **Title of the work:** Diffusion in far from equilibrium states.  
**Name of the conference:** 18th IUPAP International Conference on Statistical Physics.  
**Type of participation:** Participatory - oral communication  
**City of event:** Berlín, Germany  
**Date of event:** 02/08/1992  
**End date:** 08/08/1992  
**Organising entity:** IUPAP  
V. Garzó and A. Santos."Book of Abstracts."
- 83** **Title of the work:** Effect of force law dependence in tracer diffusion in shear flow.  
**Name of the conference:** 18th IUPAP International Conference on Statistical Physics.  
**Type of participation:** 'Participatory - poster  
**City of event:** Berlín, Germany  
**Date of event:** 02/08/1992  
**End date:** 08/08/1992  
**Organising entity:** IUPAP  
V. Garzó and M. López de Haro. "Book of Abstracts."
- 84** **Title of the work:** An exact solution of the Boltzmann equation for a binary mixture.  
**Name of the conference:** Fourth International Workshop on Mathematical Aspects of Fluid and Plasma Dynamics.  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Kyoto, Japan  
**Date of event:** 02/10/1991  
**End date:** 05/10/1991  
**Organising entity:** University of Kyoto  
A. Santos and V. Garzó."Transport Theory and Statistical Physics 21."
- 85** **Title of the work:** Difusión de trazadores en flujo de Couette uniforme.  
**Name of the conference:** Física Estadística'91.  
**Type of participation:** Participatory - oral communication  
**City of event:** Gijón,  
**Date of event:** 18/09/1991  
**End date:** 20/09/1991  
**Organising entity:** Grupo FENOL  
V. Garzó."Libro de Resúmenes."
- 86** **Title of the work:** Exact solution of the Boltzmann equation in the homogeneous color conductivity problem.  
**Name of the conference:** ETB'90 Rheological Modelling: Thermodynamics and Statistical Approaches.  
**Type of participation:** 'Participatory - poster  
**City of event:** Sitges,  
**Date of event:** 24/09/1990  
**End date:** 28/09/1990  
**Organising entity:** Universitat de Barcelona  
**Type of entity:** University  
V. Garzó and A.. Santos."Book of Abstracts."
- 87** **Title of the work:** Self-diffusion in steady Couette flows.  
**Name of the conference:** 17th International Symposium on Rarefied Gas Dynamics.  
**Type of participation:** Participatory - oral communication  
**City of event:** Aachen, Germany



**Date of event:** 08/07/1990  
**End date:** 14/07/1990  
**Organising entity:** Rarefied Gas Dynamics  
V. Garzó."Proceedings (VCH)". s, Weinheim).,

**88 Title of the work:** Autodifusión en el flujo tangencial uniforme y en presencia de fuerzas externas no conservativas.

**Name of the conference:** Física Estadística'90.

**Type of participation:** 'Participatory - poster

**City of event:** Badajoz,

**Date of event:** 04/04/1990

**End date:** 06/04/1990

**Organising entity:** Grupo FENOL

V. Garzó. "Libro de resúmenes."

**89 Title of the work:** Modelo cinético para el estudio de la autodifusión.

**Name of the conference:** I Reunión Nacional de Física Estadística.

**Type of participation:** 'Participatory - poster

**City of event:** Barcelona,

**Date of event:** 21/04/1987

**End date:** 23/04/1987

**Organising entity:** Grupo FENOL

V. Garzó y A. Santos. "Libro de resúmenes."

**90 Title of the work:** Sobre el desarrollo de Hilbert a la ecuación BGK.

**Name of the conference:** I Reunión Nacional de Física Estadística.

**Type of participation:** 'Participatory - poster

**City of event:** Barcelona,

**Date of event:** 21/04/1987

**End date:** 23/04/1987

**Organising entity:** Grupo FENOL

V. Garzó y J. De la Rubia. "Libro de resúmenes."

**91 Title of the work:** Cálculo de la viscosidad de un gas en presencia de un gradiente lineal de temperatura.

**Name of the conference:** XX Reunión Bienal de la R.S.E.F.

**Type of participation:** 'Participatory - poster

**City of event:** Sitges,

**Date of event:** 30/09/1985

**End date:** 04/10/1985

**Organising entity:** RSEF

V. Garzó y J. De la Rubia. "Libro de resúmenes."



## R&D management and participation in scientific committees

### Scientific, technical and/or assessment committees

- 1** **Committee title:** Comité editor de la revista Entropy  
**Affiliation entity:** MDPI  
**Start date:** 08/06/2020
- 2** **Committee title:** Comité editor de la revista Granular Matter  
**Affiliation entity:** Springer  
**City affiliation entity:** Germany  
**Start date:** 01/01/2012

### R&D management

- 1** **Name of the activity:** Computación avanzada en física de los sistemas complejos, química teórica y modelos estocásticos  
**Performed tasks:** Investigador principal del proyecto IB16013 (Junta de Extremadura)  
**Entity:** Instituto de Computación Científica Avanzada de Extremadura (ICCAEX)  
**Start date:** 03/06/2017 **Duration:** 4 years  
**Geographical area:** Regional
- 2** **Name of the activity:** Una aproximación físico-estadística a los sistemas desordenados y complejos  
**Performed tasks:** Investigador principal IP-2 del proyecto FIS2016-76359-P  
**Entity:** Dpto. de Física de la UEx  
**Start date:** 30/12/2016 **Duration:** 4 years  
**Geographical area:** National
- 3** **Name of the activity:** Dirección de instituto de investigación  
**Type of management:** Management of body  
**Performed tasks:** Dirección del ICCAEX  
**Entity:** Instituto de Computación Científica Avanzada de Extremadura (ICCAEX)  
**Start date:** 19/10/2016
- 4** **Name of the activity:** Nuevos retos en las propiedades estáticas y dinámicas de los medios desordenados  
**Performed tasks:** Investigador principal IP-2 del proyecto FIS2013-42840-P (Ministerio de Economía y Competitividad)  
**Entity:** Dpto de Física de la UEx  
**Start date:** 01/01/2014 **Duration:** 3 years  
**Geographical area:** National
- 5** **Name of the activity:** Coordinador para la evaluación de becas FPU en ANECA dentro del campo " Física y Ciencias del Espacio"  
**Type of management:** Management of R&D&I actions and projects  
**Performed tasks:** Coordinador del programa de becas FPU en el campo "Física y Ciencias del Espacio"  
**Entity:** ANECA  
**Start date:** 01/01/2012 **Duration:** 2 years



- 6** **Name of the activity:** Mecánica estadística de fluidos, medios granulares y sistemas desordenados  
**Type of management:** Management of R&D&I actions and projects  
**Performed tasks:** Investigador principal del proyecto BFM2001-0718 (Secretaría de Estado de Política Científica y Tecnológica)  
**Entity:** Dpto. de Física de la UEx  
**Start date:** 28/12/2001 **Duration:** 3 years  
**Geographical area:** National  
**Identify key words:** Physics chemical and mathematical
- 7** **Name of the activity:** Teoría cinética de fluidos, medios granulares y sistemas reticulares  
**Type of management:** Management of R&D&I actions and projects  
**Performed tasks:** Investigador principal del proyecto PB97-1501 (DGES)  
**Entity:** Dpto. de Física de la UEx  
**Start date:** 01/10/1998 **Duration:** 3 years  
**Geographical area:** National
- 8** **Name of the activity:** Descripción cinética de gases, líquidos y medios granulares  
**Type of management:** Management of R&D&I actions and projects  
**Performed tasks:** Investigador principal del proyecto 14/97 del Programa de Cooperación Interuniversitaria Hispano-Marroquí, Ministerio de Asuntos Exteriores.  
**Entity:** Dpto. de Física de la UEx  
**Start date:** 01/01/1998 **Duration:** 2 years  
**Geographical area:** National
- 9** **Name of the activity:** Sistema de cómputo paralelo con un modelo de memoria mixto para una red de 8 grupos catalogados de investigación de la UEx  
**Type of management:** Group management  
**Performed tasks:** Coordinador científico del proyecto  
**Entity:** Instituto de Computación Científica Avanzada de Extremadura (ICCAEX)  
**Geographical area:** National

## Other achievements

### Stays in public or private R&D centres

- 1** **Entity:** Yukawa Institute for Theoretical Physics (Kyoto University)  
**Faculty, institute or centre:** Kyoto University  
**City of entity:** Kyoto, Japan  
**Start-End date:** 01/06/2018 - 30/06/2018  
**Goals of the stay:** Guest
- 2** **Entity:** Departamento de Física (Universidad de Chile)  
**Start-End date:** 04/03/2017 - 24/03/2017 **Duration:** 21 days  
**Goals of the stay:** Guest
- 3** **Entity:** Laboratoire de Physique Théorique et Modèles Statistiques (Université Paris-Sud)  
**City of entity:** ORSAY (Paris), France  
**Start-End date:** 11/05/2015 - 29/05/2015 **Duration:** 21 days  
**Name of programme:** Mezclas granulares con coeficientes de restitución estocásticos

**Goals of the stay:** Guest

- 4** **Entity:** Department of Chemical and Biological Engineering (University of Colorado)  
**City of entity:** Boulder (Colorado), United States of America  
**Start-End date:** 18/09/2014 - 28/09/2014 **Duration:** 12 days  
**Name of programme:** Inestabilidades en suspensiones gas-sólido  
**Goals of the stay:** Guest
- 5** **Entity:** Laboratoire de Physique Théorique et Modèles Statistiques (Université Paris-Sud)  
**City of entity:** Orsay (Paris), France  
**Start-End date:** 28/05/2012 - 13/06/2012 **Duration:** 15 days  
**Name of programme:** Transporte anómalo en un gas granular  
**Goals of the stay:** Guest
- 6** **Entity:** Department of Chemical and Biological Engineering (University of Colorado)  
**City of entity:** Boulder (Colorado), United States of America  
**Start-End date:** 01/06/2011 - 30/06/2011 **Duration:** 1 month  
**Name of programme:** Teoría cinética de suspensiones gas-sólido  
**Goals of the stay:** Guest
- 7** **Entity:** Laboratoire de Physique Théorique et Modèles Statistiques (Université Paris-Sud)  
**City of entity:** ORSAY (Paris), France  
**Start-End date:** 14/06/2010 - 25/06/2010 **Duration:** 15 days  
**Name of programme:** Intruso en un gas de Maxwell inelástico  
**Goals of the stay:** Guest
- 8** **Entity:** Laboratoire de Physique Théorique et Modèles Statistiques (Université Paris-Sud)  
**City of entity:** Orsay (Paris), France  
**Start-End date:** 01/05/2009 - 30/05/2009 **Duration:** 1 month  
**Name of programme:** Modelos de Maxwell inelásticos  
**Goals of the stay:** Guest
- 9** **Entity:** Department of Physics (University of Florida)  
**City of entity:** GAINESVILLE (FL), United States of America  
**Start-End date:** 01/05/2006 - 31/05/2006 **Duration:** 1 month  
**Name of programme:** Ecuación de Enskog para mezclas polidispersas granulares  
**Goals of the stay:** Guest
- 10** **Entity:** Department of Physics (University of Florida)  
**City of entity:** Gainesville (FL), United States of America  
**Start-End date:** 01/09/1998 - 31/05/1999 **Duration:** 10 months  
**Name of programme:** Teoría cinética de medios granulares  
**Goals of the stay:** Sabático
- 11** **Entity:** Instituto de Investigaciones en Materiales (UNAM).  
**City of entity:** TEMIXCO, Mexico  
**Start-End date:** 15/05/1994 - 15/06/1994 **Duration:** 1 month  
**Name of programme:** Difusión en presencia de flujo tangencial uniforme.  
**Goals of the stay:** Guest



- 12** **Entity:** Instituto de Investigaciones en Materiales (UNAM).  
**City of entity:** TEMIXCO, Mexico  
**Start-End date:** 01/10/1990 - 30/06/1991      **Duration:** 9 months  
**Name of programme:** Transporte no lineal en mezclas. Teoría de Enskog  
**Goals of the stay:**  
(Sabático)\_\_\_\_\_