Curriculum Vitae de Patricio Cordero

Datos personales

Nombre:	Patricio Cordero S.
Grado:	Ph.D., University of London, UK
Cargo:	Profesor Titular
	Departamento de Física
	Facultad de Ciencias Físicas y Matemáticas
	Universidad de Chile
Dirección:	Casilla 487-3, Santiago, Chile
Tel:	2978 4348
e-mail:	pcordero@ing.uchile.cl

Profesor en la Facultad de Ciencias Físicas y Matemáticas de la Universidad de Chile desde fines de 1968. Profesor Titular desde 1987. Muchos cargos de responsabilidad, entre ellos director del Programa de Doctorado (Física) en dos períodos.

Profesor visitante en diversos lugares y fechas: • International Center for Theoretical Physics en varias ocasiones entre 1968 y 1981; • U. of California, Los Angeles; • Princeton University; • Institute for Advanced Study, Princeton; • Universidad de Buenos Aires, Argentina; • Universidad Simón Bolívar, Caracas; • Universitè de Bordeaux; • Cecam (Centre européen de calcul atomique et moléculaire), Lyon; • University of New Mexico, NM, EE.UU.

Libros

- Nonlinear Phenomena in Fluids, Solids and other Complex Systems
  Proceedings of: Second Latinamerican Workshop on Nonlinear Phenomena
  P. Cordero y B. Nachtergale (editors)
  North Holland, Elsevier, 1991.

- Electromagnetismo
  P. Cordero S
  Editorial Universitaria, 2015.

- Mecánica: la física del movimiento
  P. Cordero S
  Editorial Universitaria, 2017.

Proyectos desde 1988

- P. Cordero estuvo asociado al proyecto Dynamics of disordered and heterogeneous media, ACT127 que dirigió N. Mujica
- Fondecyt 1120775, Dynamics of confined granular fluids (2012 - 2015)
- Fondecyt 1070958, Collective description of granular fluids (2007 - 2011)
- Fondecyt 1030993, Continuum description of fluids under extreme non-equilibrium conditions (2003 - 2007)
- Fondecyt 1000884, Conservative and dissipative kinetic systems. Este proyecto tiene asociada la colaboración internacional Fondecyt 7000884 (2000-2003)
- Fondecyt 1970786, Kinetic theory of cool gases: analytic studies and simulations (1997-2000)
- Fundación Andes C12971, Dinámica molecular y dinámica de fluidos (1996-98)
- Fondecyt 1931105, Estudio de convección térmica en fluidos compresibles usando dinámica molecular (1993-96)
- Fondecyt 901240, Transiciones de fase y fenómenos de transporte (1990-93)
- Fondecyt 880532, Transiciones de fase y renormalización analítica (1988-89)

Tesis y memorias dirigidas desde 1986

Nombre del candidato, grado o título obtenido y año de graduación. Doctorado en Física quiere decir Doctorado en Ciencias con mención Física. Nótese que antiguamente los licenciados (física) debían escribir una tesis.

- Javier Baeza, Magíster en Física, 2015
  Estudio de ecuaciones tipo hidrodinámica para sistemas granulares densos
- Nicolás Rivas, Magíster en Física, 2010
  Segregation in a vibrated granular monolayer

- Sergio Godoy, Magíster en Física, 2007
  Simulaciones en medios granulares 2D: la nuez brasileña
- Hideaki Ugawa, Doctorado en Física, 2005
  Estudio de gases densos fuera del equilibrio, extensiones de hidrodinámica y aplicaciones
- José Miguel Pasini, Doctorado en Física, 2001
  Efectos de borde en medios granulares
- Rosa Ramírez, Doctorado en Física, 1999
  Estados estacionarios en gases granulares
- Rodrigo Soto, Doctorado en Física, 1998
  Propiedades estadísticas y dinámicas de un vapor de clusters
- Juan Claudio Reyes, Ingeniero Civil en Computación, 1996
- Hernán E. Vargas M., Ingeniero Civil en Computación, 1996
- Héctor M. Abarca L. Ingeniero Civil en Computación, 1995
  Desarrollo de un ambiente grafico de visualización para analisis de datos científicos
- Dino E. Risso, Doctorado en Física, 1994
  Convección en sistemas finitos
- Ricardo J. Bouyer, Ingeniero Civil en Computación, - 1994
  Diseño y construcción de un lenguaje de simulación especializado en dinámica molecular conducida por eventos
- Mauricio Marín, Magister en Ciencias, mención Computación 1992
  Ambiente de simulación conducida por eventos para dinámica molecular de partículas duras
- Guillermo Palma, Magister en Física, 1987
- Mario Molina, Magister en Física, 1986

Responsabilidades administrativas

2006-2010
- Miembro del Senado Universitario
- Presidente de la Comisión de Asuntos Internos
- Presidente de la Comisión pro Reglamento Consejo de Evaluación
- Coordinador de la subcomisión Carrera Académica

2004
- Miembro Comisión de Calificación (Facultad)
- Miembro Comisión Desarrollo Docente (Depto)

2003
- Miembro Comisión de Calificación
- Presidente Comisión Evaluación Departamental
- Miembro Comisión AAD (Facultad)

2002
- Coordinador de Postgrado (Dep. Física)
- Miembro del Comité Académico del Doctorado (Física)
- Miembro Comisión de Calificación (Facultad)
- Miembro Comisión AAD (Facultad)
- Dirección Comisión ah hoc Departamental de Docencia
- Presidente Comisión Evaluación Departamental
- Miembro Comisión de Facultad pro Encuentro Docente 2002

2001
- Miembro Consejo Departamento
- Coordinador de Postgrado
- Miembro del Comité Académico del Doctorado
- Miembro Comisión de Calificación
- Miembro Comisión AAD
- Dirección Comisión ah hoc Departamental de Docencia
- Presidente Comisión Evaluación Departamental
- Miembro Comisión ``Estrategias'' (o de los 12) de Facultad

2000
- Miembro Consejo Departamento
- Coordinador de Postgrado
- Miembro del Comité Académico del Doctorado
- Presidente Comisión Evaluación Departamental
- Miembro Comisión AAD

1999
- Miembro Consejo Departamental
- Director Programa Doctorado (Física)
- Grupo de Estudio Física y Astronomía de Fondecyt
- Presidente Comisión Evaluación Departamental

1998
- Miembro Comisión Central de Evaluación (FCFM)
- Miembro Grupo de Estudio Física y Astronomía de Fondecyt
- Miembro Consejo Departamental
- Director Programa de Doctorado (Física)

1997
- Miembro Comisión Central Evaluación (FCFM)
- Grupo de Estudio Fis Astron Fondecyt de Fondecyt
- Miembro Consejo Departamento

Publicaciones científicas

1. Use of the Cutkovsky rules for finding the analytic structure of the free, two particle propagator
   P. Cordero, H. Osborne, S. Zienau
   Nuclear Physics 87 321 1966
2. Conditions for compositeness in field theory
   P Cordero
   Il Nuovo Cimento B Series 10 60 (1), 217-227, 3, 1969
3. Theory of the Heavy Electron
   AO Barut, P Cordero, GC Ghirardi
   Physical Review 182 (5), 1844, 29, 1969
4. Crossing Symmetry in the O (4, 2) Formulation of the Dirac Theory
   AO Barut, P Cordero, GC Ghirardi
   Physical Review D 1, 536-541, 8, 1970
5. A unified treatment of leptons
   AO Barut, P Cordero, GC Ghirardi
   Il Nuovo Cimento A 66 (1), 36-46, 8, 1970
6. On the algebraic treatment of the H-atom and harmonic oscillator with an extra cubic force
   P Cordero
   Lettere al Nuovo Cimento 4 (4), 164-166, 10, 1970
7. Algebraic solution of a short-range potential problem
   P Cordero, S Hojman
   Lettere Al Nuovo Cimento (1969-1970) 4 (24), 1123-1124, 33, 1970
8. Search for quantum systems with a given spectrum-generating algebra: detailed study of the case of SO(2,1)
   P Cordero, GC Ghirardi
   Il Nuovo Cimento A Series 11 2 (1), 217-236, 22, 1971
9. Algebraic treatment of nonrelativistic and relativistic quantum equations and its relation to the theory of differential equations
   P Cordero, S Hojman, P Furlan, GC Ghirardi
   Il Nuovo Cimento A 3 (3), 807-821, 24, 1971
10. Realizations of Lie algebras and the algebraic treatment of quantum problems
    P Cordero, GC Ghirardi
    Fortschritte der Physik 20 (2), 105-133, 28, 1972
11. Dynamics for classical relativistic particles: Circular orbit solutions and the nonrelativistic limit
    P Cordero, GC Ghirardi
    Journal of Mathematical Physics 14, 815, 5, 1973
12. A spectrum-generating algebra for particles of spin 1/2
    P Cordero, S Salamó
    International Journal of Theoretical Physics 13 (4), 265-269, 3 1975
13. Hamiltonian treatment of the spherically symmetric Einstein-Yang-Mills system

P Cordero, C Teitelboim
Annals of Physics 100 (1), 607-631, 18, 1976

14. Rotationally invariant solutions of the Yang-Mills-Higgs system for a general gauge group: Magnetic monopoles
P Cordero
Nuclear Physics B 131 (4), 525-546, 1977
15. Remark on the Cabibbo-Ferrari two-potential approach to electric and magnetic charges
P Cordero, D Villarroel
Il Nuovo Cimento B Series 11 40 (1), 90-98, 2, 1977
16. Canonical formulation of the spherically symmetric Einstein-Yang-Mills-Higgs system for a general gauge group
P Cordero
Annals of Physics 108 (1), 79-98, 11, 1977
17. Aspects of the Hamiltonian dynamics of interacting gravitational gauge and Higgs fields with applications to spherical symmetry
R Benguria, P Cordero, C Teitelboim
Nuclear Physics B 122 (1), 61-99, 91, 1977
18. Remarks on supersymmetric black holes
P Cordero, C Teitelboim
Physics Letters B 78 (1), 80-83, 33, 1978
19. No-hair conjecture in supergravity
P Cordero, C Teitelboim
Relativity and Gravitation 1, 77-90 1982
20. Symmetry transformations in quantum mechanics
P Cordero, S Hojman
Il Nuovo Cimento B 100 (1), 1-15 1 1987
21. Optimal analytic second order real space renormalization
P Cordero, M Molina
Physica A: Statistical Mechanics and its Applications 151 (1), 139-143 4 1988
22. Real space renormalization, a strategy for accuracy
P Cordero
North Holland. Nonlinear phenomena in complex systems: proceedings of the Wor Nonlinear Phenomena in Complex Systems, Mar del Plata, Argentina, November 1-14, 1988.
23. Full Scaling and Real-Space Renormalization
P Cordero
Book: Springer Netherlands: Instabilities and Nonequilibrium Structures III, 95-99 1991
24. Algebraic solution for the Natanzon confluent potentials
P Cordero, S Salamó
Journal of Physics A: Mathematical and General 24 (22), 5299 30 1991
25. Compressible Rayleigh-Benard Convection in a Hard Disks System
D Risso, P Cordero
Condensed matter theories, 119-130 1992
26. Q2R + Q2R as a Universal Billiard

P Cordero, E Goles, G Hernandez
International Journal of Modern Physics C 3, 251-266 1 1992

27. Natanzon Potentials and Spectrum Generating Algebras
    P Cordero, S Salamo
    Condensed matter theories, 49-61 1 1992
28. Empirical Determination Of The Onset Of Convection For A Hard Disk System
    D Risso, P Cordero
    Book: Springer Netherlands. Instabilities and Nonequilibrium Structures IV, 199-211 1993
29. Algebraic methods for the Natanzon potentials
    P Cordero, S Salamó
    Foundations of physics 23 (4), 675-690 13 1993
30. Efficient algorithms for many-body hard particle molecular dynamics
    M Marín, D Risso, P Cordero
    Journal of Computational Physics 109, 306-306 101 1993
31. Algebraic solution for the Natanzon hypergeometric potentials
    P Cordero, S Salamo
    Journal of Mathematical Physics 35, 3301 20 1994
32. Free thermal convection driven by nonlocal effects
    J Ibsen, R Soto, P Cordero
    Phys. Rev. E 52 4533 (1995)
33. Momentum-dependent potentials: Towards the molecular dynamics of fermionlike classical particles
    P Cordero, ES Hernández
    Physical Review E 51 (3), 2573 2 1995
34. An object oriented C++ approach for discrete event simulation of complex an large systems of many moving objects
    M Marin, P Cordero
    SCS 28th Annual Simulation Symposium (ASS 1995), Phoenix, Arizona, pages 288-295, Editors: G. Chiola, A. Ferscha, E. Kortright (IEEE-CS Press), April 1995
35. Efficient simulations of microscopic fluids: Algorithm and experiments
    P Cordero, M Marín, D Risso
    Chaos, Solitons & Fractals 6, 95-104 6 1995
36. On a class of solvable Pauli-Schrodinger hamiltonians
    S Codriansky, P Cordero, S Salamo
    Zeitschrift fur Physik A Hadrons and Nuclei 353 (3), 341-343 8 1995
37. An empirical assessment of priority queues in event-driven molecular dynamics simulation
    M Marín, P Cordero
    Computer physics communications 92 (2), 214-224 37 1995
38. Poiseuille Flux of Hard Particles: Theory and Simulations
    D Risso, P Cordero
    Book: Springer Netherlands ``Instabilities and Nonequilibrium Structures V'' 111-118 1996

39. Hashing-Cells Combination for Boundless Space Event Driven Molecular Dynamics
    M Marín, P Cordero 3 1996
    8th Joint EPS-APS International Conference on Physics Computing, Krakow, Poland, Sept. 1996, pages 315-318, Editors: P. Borcherds, M. Bubak (World Scientific, 1996)
40. Two-dimensional gas of disks: Thermal conductivity
    D Risso, P Cordero
    Journal of statistical physics 82 (5-6), 1453-1466 14 1996
41. SO(2,1) Description of Supersymmetric Neutral Spin 1/2 Systems
    S Codriansky, P Cordero, S Salamo
    Turkish Journal of Physics 21, 340-347 1997
42. Analytic Nonlinear Constitutive Equations for Gases
    P Cordero, D Risso
    APS Meeting Abstracts 1997
43. An algebraic description of supersymmetric neutral spin-(1/2) systems
    S Codriansky, P Cordero, S Salamo
    Nuovo Cimento-B 112 (9), 1299-1312 1 1997
44. Hard rods in the presence of a uniform external field
    J Ibsen, P Cordero, R Tabensky
    The Journal of chemical physics 107, 5515 3 1997
45. Microscopic computer simulation of fluids
    P Cordero, D Risso
    Fourth Granada Lectures in Computational Physics, 83-134 5 1997
46. Nonideal gas of clusters at equilibrium
    R Soto, P Cordero
    Physical Review E 56 (3), 2851 10 1997
47. Dilute gas Couette flow: Theory and molecular dynamics simulation
    D Risso, P Cordero
    Physical Review E 56 (1), 489 38 1997
48. Kinetic effects in a non-ideal gas of clusters
    R Soto, P Cordero
    Physica A: Statistical Mechanics and its Applications 257 (1), 521-525 4 1998
49. Cluster velocity distributions in a vapor at equilibrium
    R Soto, P Cordero
    Journal of Chemical Physics 108 (21) 6 1998
50. Nonlinear transport laws for low density fluids
    P Cordero, D Risso
    Physica A: Statistical Mechanics and its Applications 257 (1), 36-44 10 1998
51. Generalized hydrodynamics for a Poiseuille flow: theory and simulations
    D Risso, P Cordero
    Physical Review E 58 (1), 546 36 1998
52. Dynamics of sheared gases
    P Cordero, D Risso
    Computer physics communications 121, 225-230 1999
53. On the generalized Morse potential

S Codriansky, P Cordero, S Salamó
Journal of Physics A: Mathematical and General 32 (35), 6287 15 1999

54. Cluster birth-death processes in a vapor at equilibrium
R Soto, P Cordero
The Journal of chemical physics 110, 7316 9 1999
55. Kinetic description of a fluidized one-dimensional granular system
R Ramirez, P Cordero
Physical Review E 59 (1), 656 19 1999
56. Hydrodynamic theory for granular gases
R Ramirez, D Risso, R Soto, P Cordero
Physical Review E 62 (2), 2521 26 2000
57. Thermal convection in fluidized granular systems
R Ramírez, D Risso, P Cordero
Physical review letters 85 (6), 1230-1233 65 2000
58. Clustering and fluidization in a 1-D granular system
JM Pasini, P Cordero
Phys. Rev. E 63 041302 (2001)
59. A 1-D granular gas as a Knudsen gas
P Cordero, JM Pasini, R Ramirez
Rarefied Gas Dynamics, (22nd International Symposium), T.J. Bartel, M.A. Gallis (Editors), AIP Conference Proceedings, Vol. 585, NY, 2001
60. Kinetic Theory for 1D Granular Gases
R Ramírez, P Cordero
Granular Gases, 195-202 2001
61. Granular materials-Clustering and fluidization in a one-dimensional granular system: Molecular dynamics and direct-simulation Monte Carlo method
J Miguel Pasini, P Cordero
Phys. Rev. E 63 041302 (2001)
62. Nonlinear effects in gases due to strong gradients
P Cordero, D Risso
AIP Conference Proceedings 585, 44 3 2001
63. General hydrodynamics for a Poiseuille flow: Theory and simulations
D Risso, P Cordero
Phys. Rev. E 58 (1), 546-553 2002
64. Dynamics of Excited Granular Systems
P Cordero, D Risso
APS Meeting Abstracts 1, 2007 2002
65. Dynamics of rarefied granular gases
D Risso, P Cordero
Physical Review E 65 (2), 021304 18 2002
66. Buoyancy driven convection and hysteresis in granular gases: numerical solution
P Cordero, R Ramírez, D Risso
Physica A: Statistical Mechanics and its Applications 327 (1), 82-87 9 2003
67. Dynamics that trigger/inhibit cluster formation in a one-dimensional granular gas

JM Pasini, P Cordero
Physica A: Statistical Mechanics and its Applications 342 (1), 62-68 2004

68. Temperature anomalies of hypersound velocity and specific heat ratio in liquid Quinoline
L Letamendia, M Belkadi, O Eloutassi, J Rouch, D Risso, P Cordero, AZ ...
Physica A: Statistical Mechanics and its Applications 354, 34-48 3 2005
69. Analysis of the spectrum generating algebra method for obtaining energy spectra
P Cordero, J Daboul
Journal of mathematical physics 46, 053507 6 2005
70. Friction and convection in a vertically vibrated granular system
D Risso, R Soto, S Godoy, P Cordero
Physical Review E 72 (1), 011305 17 2005
71. Tiny reversible rearrangement transitions in granular systems
P Cordero, D Risso
Physica A: Statistical Mechanics and its Applications 371 (1), 37-40 2006
72. Extended hydrodynamics from Enskog's equation for a two-dimensional system general formalism
H Ugawa, P Cordero
Journal of Statistical Physics 127 (2), 339-358 4 2007
73. Liquid-solid like transition in quasi-one-dimensional driven granular media
MG Clerc, P Cordero, J Dunstan, K Huff, N Mujica, D Risso, G Varas
Nature physics 4 (3), 249-254 36 2008
74. Rise of a Brazil nut: A transition line
S Godoy, D Risso, R Soto, P Cordero
Physical Review E 78 (3), 031301 9 2008
75. Brazil nut effect: Influence of friction and jamming on the transition line
P Cordero, S Godoy, D Risso, R Soto
American Institute of Physics Conference Series 1091, 124-133 2009
76. Energy bursts in shallow granular systems
N Mujica, N Rivas, S Ponce, B Gallet, D Risso, R Soto, P Cordero
Bulletin of the American Physical Society 55 2010
77. Sudden Chain Energy Transfer Events in Vibrated Granular Media
R Soto, N Rivas, S Ponce, B Gallet, D Risso, P Cordero, N Mujica
Bulletin of the American Physical Society 56 2011
78. The degeneracy coefficients of the finite lattice Ising model
P Cordero
Physica A: Statistical Mechanics and its Applications 139 (2), 629-635 1 2011
79. Energy bursts in vibrated shallow granular systems
N Rivas, D Risso, R Soto, P Cordero
AIP Conference Proceedings 1332, 184 2 2011
80. Segregation in quasi-two-dimensional granular systems
N Rivas, P Cordero, D Risso, R Soto
New Journal of Physics 13 (5), 055018 5 2011
81. Sudden chain energy transfer events in vibrated granular media

N Rivas, S Ponce, B Gallet, D Risso, R Soto, P Cordero, N Mujica
Physical Review Letters 106 (8), 088001 15 2011

82. Characterization of the energy bursts in vibrated shallow granular systems
N Rivas, P Cordero, D Risso, R Soto
Granular matter 14 (2), 157-162 2012
83. Effect of the vibration profile on shallow granular systems
P.Cordero, D. Risso and R. Soto
Philosophical Transactions R. Soc. A 2015 373 20150116, 2015

Seminarios y charlas

- "Granular systems in a vibrated box", XVIII Conference on Nonequlibrium Statistical Mechanics and Nolinear Physics, Maceió, Alagoas, Brazil, 13-17 october 2014
- "Granular systems in shallow boxes", XIII Latin American Workshop on Nonlinear Phenomena, octubre 2013, Villa Carlos Paz, Córdoba, Argentina
- "Segregation in a vertically vibrated binary granular system", Southern workshop of granular matter 2012, diciembre 2012 Puerto Varas, Chile
- "Clustering in a binary vertically vibrated granular shallow system" en XXIII Sitges conference on statistical mechanics, Sitges, España, junio 2012
- Charla invitada: "Energy bursts in granular systems confined to a vibrating shallow box" en "Granular and Active Fluids", Zaragoza, España, Sept 2011
- "Energy bursts in shallow vibrated granular systems", 11th Granada Seminar on Computational and Statistical Physics, La Herradura, España, Sept 2010
- Seminario "The mechanism for phase separation in shallow granular systems", en la École Normale Supérieure, Lyon, Francia, Sept 10, 2009
- Serie de cinco clases bajo el título "Computational Methods in Physics: a primer", en la École Normale Supérieure, Lyon, Francia, Sept 7-11, 2009
- Charla invitada: "Brazil nut effect: friction versus topology" en "4th Latin American SCAT workshop", Santiago, Sept 29 - Oct 3, 2008.
- Charla invitada: "Transition line associated to the Brazil nut effect" en "10th Granada Seminar on Computational and Statistical Physics", Granada Sept 15-19, 2008.
- Charla invitada: "The mechanism for phase separation in shallow granular systems" en "GRANFL07: Granular Fluids - A Proving Ground for Nonequilibrium Statistical Mechanics" September 26-29, 2007, Sevilla, Espana.
- Mural "Phase coexistence in shallow granular systems: MD approach" en "Statics and dynamics of granular media and colloidal suspensions" July 4-6, 2007, Napoli (Italy)
- Charla invitada: "The mechanism for phase separation in shallow granular systems" en "First Latin American SCAT Workshop and Summer School", Federico Santa Maria Technical University Valparaiso, 4-12 January 2007.
- Charla invitada: "Phase transition in an excited thin granular system" MEDYFINOL'06, (XV Conference on Nonequilibrium Statistical Mechanics), Mar del Plata, Argentina, 4-8 Diciembre 2006

- Charla invitada "Dense granular systems: phase transitions" en "Stochastic and complex systems: new trends and expectations", Santander, Espana, 5-6 junio, 2006.
- Seminario "Excited dense granular system: phase transitions" Physics and Astronomy Department, University of New Mexico, February 15, 2006
- Charla Invitada: "Granular systems excited from the base" en "IX Latin American Workshop on Nonlinear Phenomena" Bariloche, Argentina, 23-28 octubre 2005
- Charla invitada "The role of friction in buoyancy driven convection" in "Workshop on Pattern Formation and Transport Phenomena" Joa Pessoa, Brazil, 7-11 August, 2005.
- Charla invitada "Flows and transport in fluids" en "Workshop on Transport and Self Organization in Complex Systems, (TSOCS)" Porto Alegre, Brazil, from August 8 to 12, 2004.
- Seminario "On the non Newtonian nature of granular fluids", Julio 2004, en el Physics and Astronomy Department, Univertisy of New Mexico,
- Charla invitada, "The one-dimensional granular gas as an integrodifferential nonlinear problem" en "Instabilities and Nonequilibrium Structures, Valpara'iso, Chile, 15-19 diciembre 2003
- Charla invitada en "Southern Workshop on Granlar Materials", Puc'on, Chile, 10-13 diciembre 2003, "Dynamics of Granular Gases"
- Charla invitada "The 1D dissipative Boltzmann equation: fluid and clustering regimes" en "VIII Latin American Workshop on Nonlinear Phenomena" Salvador, Bahia, Brazil, Sept. 28 - Oct. 3, 2003
- Charla invitada "The 1D dissipative Boltzmann equation for point particles. Fluid and clustering regimes." en "Direct Simulation Monte Carlo: The Past 40 Years and the Future", Milano, Italia, June 2-5, 2003
- Seminario "Buoyancy driven convection and hysteresis in granular gases" en el Institute for Advanced Studies, University of New Mexico, Feb 23, 2003,
- Charla "Steady quasi-homogeneous granular gas state: theory and Newtonian MD simulations" en el Workshop "Granular Hydrodynamics and Related Topics", 21 febrero 2003, Univ of New Mexico.
- Seminario "Dynamics of granular gases. Simple states." 13 de febrero, 2003 en Los Alamos National Laboratories, New Mexico, EEUU.
- Charla "Dynamics of granular gases" en, Medyfinol'02, XIII Nonequilibrium Statistical Mechanics and Nonlinear Physics, 9-13 Dic 2002, Colonia, Uruguay.
- 2002 Charla, "Dynamics of excited granular systems", en Conference on Computational Physics, CCP02, San Diego, California, EEUU.
- Enero 2002, Seminario, `Dynamics of granular systems'', International Center for Theoretical Physics, Trieste, Italia