

## CURRICULUM VITAE

### EVESQUE Pierre

Born on décembre 26, 1951 , in Neuilly-sur-Seine (92) France

Married, no Child

Private Address: 1, rue Jean Longuet, 92290 Châtenay-Malabry, France

Professional address:

Laboratoire de Mécanique: sols, structures, matériaux, UMR 8579 CNRS

Ecole Centrale Paris ; 92295 Châtenay-Malabry Cedex

Tel: 01 41 13 12 18 & 01 43 50 12 22 ; Fax : 01 41 13 14 37

✉ pierre.evesque@ecp.fr

### DIPLOMA

1969 : Baccalauréat section C

1976 : Diplôme d'Ingénieur ESPCI (Ecole Supérieure de Physique et Chimie Industrielles de la ville de Paris)

1979 : Doctorat de 3<sup>ème</sup> cycle, Université Paris VI

"Transfert d'énergie dans  $\text{CaF}_2$ :  $\text{Pr}^{3+}$  : étude par excitation sélective et spectroscopie en temps résolu".

Jury : MM A. Zarembowitch, P.G. de Gennes, Y. Merle d'Aubigné, J. Badoz et J. Duran

1984 : Doctorat ès sciences, Université Paris VI : "Diffusion de l'énergie dans les systèmes désordonnés : application aux cristaux mixtes de naphthalène".

Jury : MM P.G. de Gennes, S. Alexander, A.C. Boccara, J. Duran, Y. Merle d'Aubigné, M. Moreau et M. Schott

### POSITIONS

before 1976 : Student

1976-1977 : Allocataire D.G.R.S.T.

1977-1978 : Assistant professor, à l'Ecole sup. de physique et chimie industrielles de la ville de Paris

1978-1979 : National Service

1980-1983 : Chargé de recherche de 2<sup>ème</sup> classe au CNRS, (Laboratoire d'Optique Physique , ESPCI, Paris)

1983-1984 : Chargé de recherche de 1<sup>ère</sup> classe, (Laboratoire d'Optique Physique, ESPCI, Paris)

1984-1985 : postdoc at UCLA, los Angeles, Professeur M.A. El-Sayed, Department of Chemistry and Biochemistry, UCLA, USA

1985-1990 : Laboratoire d'Optique de la Matière Condensée, Université Paris VI

1991-1993: Laboratoire de Mécanique: sols-structures-matériaux, Ecole Centrale Paris

since 1993: Directeur de Recherche de 2<sup>ème</sup> classe (Laboratoire de Mécanique: sols-structures-matériaux, Ecole Centrale Paris)

### *International positions:*

1990-1993 : Coordinator of the expert working group on « Granular Matter » at ESA

1993- : Editor : *Poudres & Grains*

1997-2005 : Président de l'AEMMG (Association pour l'Etude de la Micro-Mécanique des Milieux Granulaires) which runs the Congress « Powders & grains »

Sept 1997 : Invited scholar at ITP (Institute of Theoretical physics) of UCSB

2000- : Coordinator of the ESA Topical Team on "Vibrational Phenomena"

June 2006 : Invited scholar at KITP of UCSB

## FIELDS OF PROFESSIONAL EXPERTISE:

Physics of disordered materials  
Percolation, Phase transition and critical phenomena.  
Mechanics and Physics of Granular materials  
Fluids under vibration and in micro-gravity

## SELECTED LIST OF RECENT PUBLICATIONS:

- C. Ancey & P. Evesque, Frictional-collisional regime for granular suspension down an inclined channel, *Phys. Rev. E* **62**, 8349-8360, (2000)
- A.A. Ivanova, V.G. Kozlov, and P. Evesque, Fluidization of a granular medium in a viscous fluid under vertical vibration, *Fluid Dynamics*, **Vol.35**, No.3, pp. 406-413, (2000)
- N. Sommier, P. Porion, P. Evesque, B. Leclerc, P. Tchoreloff, G. Couarraze, Magnetic resonance imaging investigation of the mixing-segregation process in a pharmaceutical blender, *International Journal of Pharmaceutics* **222**, 243-258 (2001)
- P. Evesque, D. Beysens & Y. Garrabos, Mechanical behaviour of granular-gas and heterogeneous-fluid systems submitted to vibrations in micro-gravity, *J. de Physique IV/France* **11**, Pr6-49 to 56 (2001)
- P. Porion, N. Sommier, A.M. Faugere & P. Evesque, Dynamics of size-segregation and mixing of granular materials in a 3d-blender by NMR Imaging, *Powder Technology* **141**, 55-68, (2004)
- A.A. Ivanova, V.G. Kozlov & P. Evesque, Interface dynamics of immiscible fluids under horizontal vibrations, *Fluid Dynamics* **36** (3), 362-368 (2001)
- F. Adjemian & P. Evesque, Experimental study of stick-slip behaviour, *International Journal for Numerical and Analytical methods in geomechanics [Int. J. Numer. Anal. Meth. Geomech.]* **28**, 501-530 (2004) 10:1002/nag350
- P. Evesque, F. Adjemian, Stress fluctuations and macroscopic stick-slip in granular materials, *Eur. Phys. J. E* **9**, 253-259 (2002) DOI: 10.1140/epje/i2002-10082-4
- P. Evesque, Macroscopic Continuous Approach versus Discrete Approach, Fluctuations, criticality and SOC. A state of the question based on articles in *Powders & Grains 2001*, *Poudres & Grains* **12** (7), 122-150 (Novembre 2001), ISSN 1257-3957
- P. Evesque, Are Temperature and other Thermodynamics Variables efficient Concepts for describing Granular Gases and/or Flows?, *Poudres & Grains* **13** (2), 20-26 (Mars- Avril 2002) ISSN 1257-3957
- P. Jean, H. Bellenger, P. Burban, L. Ponson & P. Evesque, Phase transition or Maxwell's demon in Granular gas?, *Poudres & Grains* **13** (3), 27-39 (Juillet-Aout 2002) ISSN 1257-3957, [http://www.mssmat.ecp.fr/html\\_petg/rubrique.php3?id\\_rubrique=1](http://www.mssmat.ecp.fr/html_petg/rubrique.php3?id_rubrique=1)
- D. Beysens, D. Chatain, P. Evesque, Y. Garrabos, High-frequency driven capillary flows speed up the gas-liquid phase transition in zero-gravity conditions, *Phys. Rev. Lett.* **95**, 034502 (2005) (LN8973)
- E. Falcon, S. Aumaître, P. Evesque, F. Palencia, C. Lecoutre-Chabot, S. Fauve, D. Beysens & Y. Garrabo, Collision statistics in a dilute granular gas fluidized by vibrations in low gravity, *Europhys. Lett* **74**, 830- (2006)
- V. Busignies, B. Leclerc, P. Porion, P. Evesque, G. Couarraze and P. Tchoreloff, Compaction behaviour and new predictive approach to the compressibility of binary mixtures of pharmaceutical excipients, *Eur. J. Pharm. Biopharm.* **XX**, pp. XXX-XXX (2006) in press
- V. Busignies, B. Leclerc, P. Porion, P. Evesque, G. Couarraze and P. Tchoreloff Investigation and modelling approach of the mechanical properties of compacts made with binary mixtures of pharmaceutical excipients., *Eur. J. Pharm. Biopharm.* **XX**, pp. XXX-XXX (2006) in press
- V. Busignies, B. Leclerc, P. Porion, P. Evesque, G. Couarraze and P. Tchoreloff, Quantitative measurements of localized density variations in cylindrical tablets using x-ray microtomography, *European Journal of Pharmaceutics and Biopharmaceutics (17/2/06)* in press
- P. Evesque, Snapshots on Some Granular States of Matter: Billiard, Gas, Clustering, Liquid, Plastic, Solid, In *GRANULAR MATERIALS: fundamentals and applications.* pp. 29-62 (Ed by S. Antony, ed. Royal Society of Chemistry, 15 FEB 2004), 99.95 €, IS(01): 0854045864
- D. Beysens & P. Evesque, "Vibrational phenomena in near-critical fluids and granular matter", In "*Topical Teams in the Life & physical Sciences, Towards new research applications in space*", SP 1281, ESA publication division, co ESTEC, PO Box 299, 2200 Noordwijk, The Netherlands

## And always:

- P. Evesque, Eléments de mécanique quasistatique des milieux granulaires mouillés ou secs, *Poudres & Grains NS-1* 1-155 (décembre 2000)
- P. Evesque, Energy migration in randomly doped crystals: geometrical properties of space and kinetic laws. *J. de Phys. France* **44**, 1217-1224, (1983)