

*Curriculum Vitae*

**Alain PUMIR**

*date of birth* : June 6, 1959 in Paris (France)  
*citizenship* : French  
*Family situation* : Married, two children.

**Home address** :  
137, rue Bugeaud, 69006, Lyon.

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**Degrees** :

1977 : Baccalauréat C (mention Très Bien)  
1979 : Admitted at the Ecole Normale Supérieure, Paris.  
1980 : Licence et Maîtrise de Physique, Université Paris 6  
1981 : DEA de Physique Théorique (mention Très Bien)  
1982 : Thèse de Troisième Cycle, supervised by Yves Pomeau  
Title : *Structures localisées et turbulence* (Localized structures and turbulence)  
1983 : Agrégation de Physique  
1987 : Thèse d'Etat,  
Title : *Tourbillons à trois dimensions et interfaces dans les cellules de Hele-Shaw*  
(3d vortices and interfaces in Hele-Shaw cells).

**Professional experience** :

1983 : Hired at CNRS as "Attaché de Recherches" at the "Service de Physique Théorique" (Theoretical physics group) in Saclay.  
1987 : Promotion as "Chargé de Recherche de 1<sup>ere</sup> classe."  
1989 : Moved to Laboratoire de Physique Statistique (Laboratory of Statistical Physics) at Ecole Normale Supérieure  
1992 : Promotion "Directeur de Recherche de 2<sup>eme</sup> classe; move to the "Institut Non Linéaire de Nice".  
Sept. to December 1992 : Stay at Cornell University  
2002 : Promotion "Directeur de Recherche de 1<sup>ere</sup> classe."  
2007-2008 : Move to the Laboratoire J. A. Dieudonné, Université de Nice (mathematics laboratory).  
2008-present : Laboratoire de Physique de l'Ecole Normale Supérieure de Lyon.  
2010-present : Adjunct faculty, Institute for Mathematical Sciences, Chennai, India.

### **Long time visits (longer than 1 month) :**

June 1984 - August 1986 : Postdoctoral stay at Cornell University (USA)  
Laboratory of Atomic and Solid State Physics  
September 1987- November 1987 : Postdoctoral Stay at the University of California,  
San Diego  
February 1987- May 1987 : Postdoctoral Stay at Cornell University (USA)  
August 1990 - August 1991 : Stay at Cornell University  
July to August 1994 : Stay at Cornell University  
July to August 1996 : Stay at Cornell University  
January to February 1999 : Stay at the Newton Institute in Cambridge, UK.  
March to mid. July 2005 : Stay at Kavli Institute for Theoretical Physics, Univer-  
sity of California, Santa Barbara.  
Mar. 2006 : University of Hokkaido, Sapporo, Japan (1 month, invited professor).

### **Short term visits (longer than 2 weeks) since 2000 :**

Jan. 2000 : KITP, Santa Barbara (3 weeks, program on turbulence).  
Jul. 2002 : Conference on nonlinear waves, Saint Petersburg, Russia.  
Aug. 2002 : Los Alamos National Lab, Los Alamos, USA (2 weeks, collaboration  
M. Chertkov).  
Aug. 2003 : Los Alamos National Lab, Los Alamos, USA (2 weeks, collaboration  
M. Chertkov).  
Oct. 2003 : KITP, Santa Barbara (3 weeks, program on pattern formation).  
Jul. 2005 : Los Alamos National Laboratory, Los Alamos (USA) (2 weeks, collab-  
oration M. Chertkov).  
Nov. 2005 : KITP, Santa Barbara (3 weeks, collaboration B. Shraiman).  
Aug. 2006 : The Lorenz Center for Physics, Leiden, Netherlands (2 weeks, program  
on turbulence).  
Feb. 2007 : Institut of Mathematical Sciences, Chennai, India (3 weeks, collabora-  
tion S. Sinha).  
Apr. 2007 : KITP, Santa Barbara (3 weeks, collaboration B. Shraiman).  
Feb. 2008 : Institut of Mathematical Sciences, Chennai, India (3 weeks, collabora-  
tion S. Sinha).  
May. 2008 : KITP, Santa Barbara (3 weeks, program on the physics of climate  
change).  
Nov. 2008 : KITP, Santa Barbara (3 weeks, program on population genetics).  
Jan. 2010 : Institute for Mathematical Sciences, Chennai, India (3 weeks, collabora-  
tion S. Sinha and participation in the school on complex systems).

### **Professional Services :**

#### *Membership of national committees :*

1996-2000 : member of the Comité National du CNRS, Theoretical Physics division  
(review, promotion and hiring of cnrs researchers).

2000-2003 : member of the Conseil National des Universités, Mechanics division (promotion of the Professors and review of the candidates to a professor job in French universities).

2005-2008 : member of the Comité National du CNRS, Theoretical Physics division (review, promotion and hiring of cnrs researchers).

*Editorial activity :*

1996-present : Nonlinearity (member of the editorial committee).

2009-present : Physical Review E (member of the editorial committee).

2008 : Recognized as an "Outstanding referee" by the American Physical Society.

*Organisation of schools and conferences :*

Sep. 2003 : Co-organizer of the meeting of the regular conference of the "Congrès Français de Mécanique"

Oct. 2004 : Organizer of the meeting of the European network "Stirring and mixing" in Nice, France.

Aug. 2006 : co-organizer of the meeting on turbulence in Leiden (Netherlands)

Dec. 2007 : co-organizer of the meeting on "Particle acceleration in fluids" in Imperial College, London. Mar. 2009 : member of the scientific committee of the Winter School in Les Houches on Turbulence.

May 2009 : member of the scientific committee of the Conference "Solving the riddle of turbulence : what, why and how" in Goettingen.

Dec. 2009 : co-organiser of the COST workshop on numerics, Rome.

**Main contracts (since 2000) :**

1998-2002 : European Union Contract : "Intermittency" (collorative contract with 9 groups in Europe; main coordinator : Patrick Tabeling, Paris, France).

2002-2006 : European Union Contract : "Turbulence and Mixing" (collorative contract with 12 groups in Europe, Israel and the USA; main coordinator : Alain Pumir).

2005-2007 : NATO Science for Peace Contract with V. V. Barelko, Moscow.

2006-2009 : CEFIPRA/IFCPAR collaboration contract with S. Sinha (IMSc, Chennai).

2007-present : ANR contract "Dynamique et Statistics des Particules en turbulence" (collaborative contract between 4 laboratories in France; scientific coordinator : Alain Pumir)

2009-present : COST action on "Particles in Turbulence" (European program).

**Invitation to conferences and workshops (since 2000) :**

Feb. 2000 : Conference on the Physics of Turbulence, KITP, Santa Barbara.

Jan. 2001 : Plenary talk at the "Journées de Physique Statistique" in Paris, France.

Apr. 2001 : Workshop of the European networks "Intermittency" and "Nonideal turbulence", Porto, Portugal.

Jun. 2001 : Workshop on "Fronts", NCAR, Boulder, Colorado (USA).

Jan. 2002 : Statphys Conference in Kolkata, India.

Jan. 2002 : Workshop "dynamics of extended systems", Kolkata, India.

Feb. 2002 : Conference on Turbulence, Los Alamos National Lab., USA.

Mar. 2003 : Conference on Turbulence, the Institute for Advanced Studies, Princeton (USA).

Jun. 2003 : Workshop on turbulence, Rome (Italy).

Jun. 2003 : Workshop on physics of non equilibrium systems, Barcelona, Spain.

Sep. 2003 : Conference "Kolmogorov legacy in physics", ICTP, Trieste (Italy)

Nov. 2003 : International Colloquium in honour of Jean-Jacques Moreau, Montpellier (France).

Mar. 2004 : Invited talk, "Rencontres du Nonlinéaire", Paris

Apr. 2004 : School on "Electromechanical behavior of the heart", Versailles, France.

May 2004 : Conference on "Oscillations and waves in cells and networks", Cargèse, France.

Jul. 2004 : "Perspective in Nonlinear dynamics", (satellite conference of the Stat Phys conference), Chennai, India.

Oct. 2004 : Workshop on turbulence in Eilat, Israel.

Jul. 2005 : Workshop on "Multiscale interactions in turbulent flows", Santa Fe, USA

Sep. 2005 : "Challenging turbulence dynamics", workshop, Rome, Italy.

Sep. 2005 : School on patterns in biology, St Etienne de Tinée, France.

Jan. 2006 : Conference on "Dissipative solitons", Dresden, Germany.

Feb. 2006 : The 8th Minerva School, The Weizmann Institute of Science, Rehovot, Israel.

Jun. 2006 : Workshop on "Particle-laden flows : from geophysical to Kolmogorov scales", Enschede, Netherlands.

Jul. 2006 : "Cardiac dynamics", KITP Santa Barbara, USA.

Jul. 2006 : "Non-equilibrium statistical mechanics and turbulence", University of Warwick, UK.

Sep. 2006 : Dynamics Days Europe, Heraklion, Greece.

Feb. 2007 : "International workshop on complex dynamics of physiological systems", Kolkata, India.

Mar. 2007 : "Turbulence" workshop, Imperial College, London, UK.

Mar. 2007 : Plenary talk on "phototransduction", Rencontre du Non Linéaire, Paris.

Aug. 2007 : Summer school on "Small scale turbulence : theory, phenomenology and applications", Cargèse, France.

Nov. 2007 : "Turbulence" workshop in Eilat, Israel.

Dec. 2007 : workshop "Acceleration in turbulence", Imperial College, London, UK.

Sep. 2008 : Workshop "Dynamics of inertial particles : from ocean and atmosphere to planets, Dresden, Germany.

Oct. 2008 : Rencontres de Dautreppe, Grenoble, France.

May. 2009 : Workshop "Solving the riddle of turbulence : what, why and how" held in Goettingen for the opening of the wind tunnel of the Max-Planck-Institute for Dynamics and Self-Organisation".

Sep. 2009 : Meeting on Turbulence in Beijing, China.  
Dec. 2009 : Workgroup "theory" of the COST action on inertial particles, Nice.  
Jan. 2010 : Conference on "Evolution of Network", Indian Institute of Science, Bangalore, India.  
Jan. 2010 : School on "complex systems" at the Institute of Mathematical Sciences, Chennai, India.

## **Supervision of students : :**

### *Supervision of PhD thesis :*

Muriel Hooghe, thesis on wave dynamics in far wakes. Thesis defended in Sept. 1996.  
Cédric Brun, thesis on intermittency in turbulent flows. Thesis defended in Dec. 2000.  
Aurore Naso, thesis on "semiclassical solutions for a model of turbulence". Thesis defended in Nov. 2005.  
Lauris Ducasse, thesis on "particle motion and collisions in models of turbulent flows", defended in Dec. 2009.  
Jinshan Xu, thesis on "synchronisation of contraction in biological tissue.

### *Supervision of Masters student :*

Domnic Merkt, Lagrangian turbulence, 1999.

### *co-supervisions of PhD students :*

S. Kanani, student of Prof. V. Krinsky. Thesis on electrophysiology of stem cells, defended in Nov. 2005.

### *supervision of postdocs :*

Georg Gottwald, 2000-2002.  
Seiji Takagi, 2002-2004.  
Diego Pazo, 2003-2004.  
Thomas Gilbert, 2004-2006.