

## Stéphane Zaleski

Family name Zaleski  
Names Stéphane, Ludovic, Richard  
Birth date December 10, 1957  
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### Education

1985 PhD (Doctorat d'État), Université Pierre et Marie Curie, Paris 6. "Régime nonlinéaire dans les instabilités cellulaires", prepared at Laboratoire de Physique de l'École Normale Supérieure. Adviser: Yves Pomeau  
1981 Thèse de Troisième Cycle, Adviser: Yves Pomeau  
1980 DEA de physique théorique de l'École Normale Supérieure. (Equivalent to master degree in theoretical physics.)  
1979-1981 École Normale Supérieure, Paris  
1979 Maîtrise de Physique, Université de Paris 6  
1975-1977 Classe préparatoire, Lycée Louis Le Grand, Paris  
High School Lycée Claude Bernard, Paris

### Professional experience

2007-2018 Director of Institut Jean Le Rond *∂*'Alembert, Université Pierre et Marie Curie (UPMC), merged into Sorbonne Université on January 1, 2018  
1992-now Professor (Mechanics) at UPMC, now Sorbonne Université  
2004-2006 Vice-director of Laboratoire de Modélisation en Mécanique  
1988-1992 CNRS researcher at Laboratoire de Physique Statistique de l'E.N.S.  
1986-1988 Assistant Professor, Department of Mathematics, M.I.T.  
1985-1986 Instructor, Department of Mathematics, M.I.T.  
1981-1985 CNRS researcher at Groupe de Physique des Solides de l'E.N.S.  
1983 Post-doc, Department of Astronomy and Astrophysics, Columbia University, New York  
1977-1981 Fonctionnaire stagiaire, École Normale Supérieure, Paris

### Visiting positions

2020 ISA visiting fellow, Università di Bologna (postponed to 2022, due to covid)  
2019 Visiting professor, Royal Institute of Technology (KTH), Stockholm  
2019 Visiting scientist, Johns Hopkins University, Baltimore  
2016 Visiting scientist, Indian Institute of Science, Bangalore  
2015 Visiting scientist, Institute for Mathematical Sciences (IMS) of the National University of Singapore  
2015 Visiting scientist, National Center for the Theoretical Sciences (NCTS) of Taiwan  
1994 Visiting scientist, MSRI, Berkeley (04/94)  
1991 Visiting professor, Department of Mathematics, University of Chicago

## Honors and awards

2020	ERC (European Research Council) advanced grant
2020	Appointed Senior Member of “Institut Universitaire de France”
2005	CNRS silver medal (engineering sciences - secteur SPI)
2005	Fellow of the American Physical Society, Division of Fluid Dynamics
2002	Victor Noury Prize of the Paris Academy of Sciences
1995	Plumey Prize of the Academy of Sciences
1995	Appointed Junior Member of “Institut Universitaire de France”
1993	Spécial prize Seymour Cray France
1990	Junior prize of the Délégation Générale à l’Armement

## PROFESSIONAL ACTIVITIES

### Journal Editorships

2015 - now	Associate Editor, Computers and Fluids
1999 - now	Associate Editor, Journal of Computational Physics
1995	Member of the Advisory Board of Theoretical and Computational Fluid Mechanics
1995	Member of the Advisory Board of European J. of Mechanics B/Fluids

### Major committee Assignments

2008 - 2012	Member of the international relations directorate at Pierre and Marie Curie University
2007 - now	Creator and director (with Patrick Huerre then David Quéré) of the master’s level program in English in fluid mechanics at Pierre and Marie Curie University
2005	President of the visiting committee of the LFC (Pau)
2005	Ad-hoc committee on mechanics at the Université Pierre et Marie Curie
2003 - 2007	President of the scientific committee of the mechanics department of Université Pierre et Marie Curie
2002 - 2009	Head of the master program in mechanics
1998 - 2004	Member of the CoNRS (National committee for scientific research), section 10 (chemical engineering, fluid mechanics, combustion, plasma)
1998 - 2018	Member of the visiting committee of various french laboratories: IMFT (Toulouse), LEGI (Grenoble), CORIA (Rouen), LEMTA (Nancy), IMFS (Strasbourg)
1996 - 2004	Delegate to the general assembly of IUTAM
1992 - now	Member of numerous hiring committees at the Université Pierre et Marie Curie
1992 - now	Member of hiring committees at IMFT (Toulouse), Ecole Polytechnique (Palaiseau), Université de Paris Sud (Orsay), Université d’Aix-Marseille
1992-now	Member of numerous PhD dissertation committee in France
1992 - now	Evaluator for tenure or promotion in USA, South Africa and others
1985-now	Member of many PhD dissertation committees outside France

### Consulting

2002-now	Total (flow in porous media)
1997-2002	Innothera Laboratories (venous blood flow)
1996-1999	ONERA Toulouse (prefilming atomisation)
1994-1995	Centro per la Ricerca, Sviluppo e Studi Superiori in Sardegna (CRS4) (Volume of Fluid methods)
1988-1993	Total, La Defense, Paris (halokinesis, salt diapir formation)
1983-1986	Los Alamos National Laboratory, Center For Nonlinear Studies (Kuramoto-Shivashinsky equation)

### Member of professional societies

American Physical Society, Association Française de Mécanique, Association Universitaire de Mécanique, Euromech, Société Française de Physique, Society of Petroleum Engineers

### **TEACHING (2002-now)**

*Master level:* Introduction to Hydrodynamics instabilities, Hydrodynamics at low and high Reynolds numbers (Asymptotic methods for Fluid mechanics), Numerical methods for Fluid Mechanics, Suspensions and diphasic mixtures

*Undergraduate level:* Introduction to Fluid Mechanics, Introduction to strength of materials, Partial Differential Equations for Mechanics

### **RESEARCH**

Google Scholar profile [http://scholar.google.fr/citations?user=no1GX\\_QAAAAJ](http://scholar.google.fr/citations?user=no1GX_QAAAAJ)  
Researcher ID <http://www.researcherid.com/rid/N-8879-2017>  
ORCID <http://orcid.org/0000-0003-2004-9090>

### **Summary of journal publications (Scopus database)**

152 referenced papers, h-index: 45, 11959 citations

26 publications with more than 100 citations, 11 of them with more than 200 citations

### **Top 5 publications (Scopus database)**

1. Scardovelli R. and Zaleski S. (1999): Direct Numerical simulation of free-surface and interfacial flow, *Annu. Rev. Fluid Mech.*, 31, 567-603 (1501 citations)
2. Gunstensen A.K., Rothman D.H., Zaleski S. and Zanetti G. (1991): Lattice-Boltzmann model of immiscible fluids, *Phys. Rev A*. 43, 4320-4327 (1252 citations)
3. Bunks C., Saleck, F. M., Zaleski S. and Chavent G. (1995): Seismic waveform inversion by the multigrid method, *Geophysics* 60, 1457-1473 (1214 citations)
4. Lafaurie B., Nardone C., Scardovelli R., Zaleski S. and Zanetti, G. (1994): Modelling merging and fragmentation in multiphase flows with SURFER, *J. Comp. Phys.* 113, 134-147 (807 citations)
5. Gueyffier D., Li J., Nadim A., Scardovelli R. and Zaleski S. (1999): Volume of Fluid interface tracking with smoothed surface stress methods for three-dimensional flows, *J. Comput Phys.*, 152, 423-456 (758 citations)

### **Authored books (Google scholar database)**

Tryggvason G., Scardovelli R. and Zaleski S. (2011): *Direct Numerical Simulations of Gas-Liquid Multiphase Flows*, Cambridge University Press (862 citations)

Rothman, D. H. and S. Zaleski (2004): *Lattice-Gas Cellular Automata*, Cambridge University Press (892 citations)

### **Summary of conferences**

More than: 50 invited presentations at international conferences, 140 presentations in conference proceedings and 30 presentations in national conferences and symposia

### **Summary of international seminars**

More than 50 seminars in Europe, USA and Asia

**PhD and post-doctoral students**

More than 50 of them