

**Gregory Falkovich**

Physics of Complex Systems, Weizmann Institute of Science, Rehovot 76100 Israel

**PERSONAL DATA**

Born June 15, 1958, Tomsk, Russia. Married +3. Citizenship: Israel, Russia.  
 Webpage: <http://www.weizmann.ac.il/complex/falkovich/>

**RESEARCH INTERESTS**

Statistical physics, fluid mechanics, cloud physics.

**EDUCATION**

1984: Ph.D in Physics and Mathematics, Nuclear Physics Inst., Novosibirsk  
 Thesis: Nonlinear Phenomena due to Interaction of Acoustic and Spin Waves  
 with Thermal Waves

1981: M.Sc. in Physics cum laude, Novosibirsk State University  
 Thesis: Stability of Nonlinear Waves in Weakly Dispersive Media

**EMPLOYMENT HISTORY**

2004-2010: Department Head, Physics of Complex Systems, WIS.

2002-pres: Professor, 1996-2002: Associate Professor, 1992-1996: Senior Scientist, WIS.

1991-1992: Visiting Scientist, WIS.

1987-1992: Senior Research Fellow, 1985-1987: Research Associate,

1982-1985: Junior Research Associate, 1981-1982: Postgraduate,

Institute of Automation and Electrometry, USSR Ac. Sci., Novosibirsk.

sabbatical leaves:

1997: Institute for Advanced Study (IAS), Princeton, USA

2000, 2011: Institute of Theoretical Physics, UC Santa Barbara, USA

2002-2003: Scholar in residence, IAS, Princeton, USA

2011: Kavli Institute of Theoretical Physics, UC Santa Barbara, USA

month-long visiting professorships:

1998: Ecole Normale superieure, Paris, France; 1999: Nice observatory and IHES, France;

2000: Rutgers University, USA; 2001: Max Planck Institute, Dresden, Germany;

2005, 2006: Aston University, UK

2008: Joint theory Institute, University of Chicago and Argonne National Lab. USA

2010, 2011: Ecole Normale Superieure, Lyon, France

**OTHER APPOINTMENTS:**

Grant committee chairman of the Israel Science Foundation,

Section Editor of J. Phys. A; Editorial boards of J. Stat. Mechanics, J. Stat. Physics.

**Referee:** ANR (France), BSF (USA-Israel), EPSRC and NERC (UK), Europhysics Letters, FWF (Austria), Italian Committee of Research Evaluation, Journal of Atmospheric Science, Journal of Fluid Mechanics, Meteorologische Zeitschrift, NASA, Nature, Nature Physics, Nuclear Physics, NSF (USA), Physica D, Physical Review Letters, Physical Review, Physics of Fluids, Swiss NSF.

**Conference organization:** Wave Turbulence — scientific advisor (USA, 2000), Les Houches Summer School — co-director (France, 2000), Waves and Wave Turbulence — scientific advisor (Denmark, 2001), GEOMIX Summer School — program committee (France, 2001), Turbulence Workshop — program committee (USA, 2003), ICTP Summer School and Conference — co-director (Italy, 2003), "Turbulence and Mixing" Workshop — co-organizer (Eilat, 2004, 2007, 2010), Aspen program "Novel approaches to climate" — co-organizer (USA, 2005), EGU General Assembly — session convener (Vienna, 2007, 2008), KITP Program "Physics of Climate Change" — co-organizer (USA, 2008), Turbulence and Statistical Mechanics - Scientific Committee (Les Houches, 2009), International Symposium on Turbulence - Advisory Committee (Peking, 2009), ICTP Advanced Workshop on Anderson

localization and turbulence - co-director (Trieste, 2010), KITP Program "The nature of turbulence" — co-organizer (USA, 2011).

Teaching: Quantum Mechanics, Classical Mechanics, Fluid Mechanics, Statistical Physics.

**RESEARCH GRANTS** (last 5 years):

BSF: 2011-2015 Conformal geometry in non-equilibrium processes, 24,000\$.

Minerva Foundation: 2010-2013 Turbulence and condensates, 100,000\$.

Russian Ministry of Education: 2010-11 Droplets in flows, 100,000\$.

ISF: 2009-2013 Emerging and broken symmetries, 113,000\$;

2005-2008 Mixing and segregation by random flows, 110,000\$;

2004, 2007, 2010 Research workshops 15,000\$.

2009-2013 European COST Action MP0806 "Particles in turbulence" 400,000 euro

**INTERNATIONAL RECOGNITION:**

**Awards:**

1983: Excellence Prize of the USSR Ac. Sci.

1984: Award of the USSR Ac. Sci. Siberian Division.

1992: Guastalla Fellowship at the Weizmann Institute.

1994: Walter and Elise Hass Career Development Chair.

1996: Levinson Prize in Physics, Weizmann Institute.

2005: elected Fellow of the Institute of Physics, London.

2009: selected as an outstanding referee of APS.

**Competitive Scholarship:** Leverhulme Visiting Professorship (UK, 2005-2007).

**Advisor:** Hong Kong Research Grants Council, Grant review committee of Italian Ministry of Education, Universities and Research.

**Invited, memorial and plenary lectures, and courses** (last 4 years):

"SLE and percolation in turbulence", APS March meeting, Denver, USA 2007.

"Conformal invariance in turbulence", plenary lecture, BAMC, Bristol, UK, April 2007.

"Survey of turbulence", Fat Tails in Turbulence and Finance, Dublin, Ireland, May 2007.

"Conformal turbulence", Euler equations: 250 years on, Aussois, France, June 2007.

"Symmetries of turbulence", Rosenbluth Memorial Lecture, Festival de Theorie, Aix-en-Provence, France, July 2007.

"Inverse cascades and condensates", Landau 100 Congress, Russia, June 2008.

"Symmetries of turbulent state", Course, ICTP, Trieste, July 2008.

"Sling effect and caustics", Workshop on Inertial Particles, Dresden, September 2008.

"Condensate-turbulence interaction", "Turbulence inside vortex" Newton Institute Workshops, Cambridge, September, December 2008.

"Toy model of a warm cloud", IMS workshop on clouds, London, March 2009.

"Weather fronts and modern mathematics", Workshop on the mathematics of weather and climate prediction, Exeter, March 2009.

"What is the riddle of turbulence?", Göttingen, Germany, May 2009.

"Passive scalar turbulence", Kraichnan symposium, Santa Fe, USA, May 2009.

"New exact relations in turbulence", Symposium on Turbulence, Beijing, September 2009.

"Introduction to turbulence", course, Dresden Spring School, May 2010.

"Nonlinear Schrödinger equation", Workshop on Localization, Trieste, August 2010.

"Droplet collisions in clouds", course, Summer School, Porquerolles, September 2010.

"Modern fluid mechanics", course, ENS Lyon, September-October 2010.

"Emerging and broken symmetries of turbulence", JPhysA meeting, Chongqing, China, October 2010.

"Century of turbulence", Ehrenfest colloquium, Leiden, June 08, 2011.

"Turbulence in layers", ETC13, Warsaw, September 2011

**Supervision:** 3 PhD students, 7 MSc students, 6 postdocs.