

Damien Vandembroucq

CNRS RESEARCH DIRECTOR

Laboratoire Physique et Mécanique des Milieux Hétérogènes, ESPCI
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Research interests : Physics and Mechanics of complex matter

- Plasticity of glasses and amorphous materials
- Fracture of disordered materials
- Interface growth, coarsening phenomena
- Rough surfaces

Scientific production

- 40 peer-reviewed articles
- 20 peer-reviewed conference papers
- 15 invited talks at international conferences
- 3 co-organizations of international workshopss

Administrative responsibilities

- Secretary of the CNRS committee for Physics of condensed matter – national evaluation and recruitment of CNRS researchers (2008-2012)
- Member of the council of the physics department of University Pierre et Marie Curie – Paris 6 (2005-2008)
- Secretary of the french research network “amorphous materials” (2005-2008)

Diplomas

- May 08 Habilitation thesis, Université Pierre et Marie Curie,
Title : “Interfaces, disorder and mechanics of glasses”
Committee : H. Arribart, M. Benamar, E. Bouchaud, Y. Bréchet,
S. Ciliberto, A. Hansen, W. Kob, S. Roux
- June 96 Ph.D. Thesis, ESPCI
Title : “Conduction and diffusion in the vicinity of rough interfaces”
Committee : A.C. Boccara, E. Bouchaud, F. Creuzet, J.-F. Gouyet,
J.-J. Greffet, E. Guyon, S. Roux
- June 92 Thermal Engineering graduate at Ecole Centrale Paris
Master of Physics of Fluids and Transfers

Curriculum

- from April 08 CNRS Research associate then Research Director at laboratoire PMMH (Physique et Mécanique des Milieux Hétérogènes), ESPCI, Paris, France
- Oct. 98-March 08 CNRS Research associate at the joint research unit CNRS/Saint-Gobain, Aubervilliers, France
- May 97-Sept 98 Post-doctoral fellow at Weizmann Institute of Science, Israël
Department of chemical physics (I. Procaccia)
- Jan 97-April 97 Research engineer at Saint-Gobain Recherche, Aubervilliers, France
- July 96-Oct 96 Post-doctoral fellow at Cambridge University, UK
Department of Applied Mathematics and Theoretical Physics (J.R. Willis)
- Oct 92-June 96 Doctoral student at ESPCI, Paris, France (A.C. Boccara and S. Roux)

Contracts and distinctions

- Feinberg postdoctoral fellowship 1997/1998 at Weizmann Institute of Science, Israel
- ANR Contract 2006-2008, Plastiglass : Modeling and experimental characterization of plasticity of amorphous silica, 110 k€
- ANR Contract 2010-2012, Mephystar : Mechanics and Statistical Physics of Fracture in Heterogeneous media, 120 k€
- FP7 European Contract 2010-2013, ModeGap : Roughness characterization of photonic band-gap optical fibres, 290 k€
- ANR Contract 2011-2013, EDDAM : Elaboration, Demixing and Deformation of Amorphous Materials followed by in-situ microtomography, 50 k€

Supervision

- POSTDOC :
 - Viljo Petäjä Nov. 06 – May 08 : modeling of amorphous plasticity
 - Sylvain Patinet April 10 – March 12 : modeling of interfacial crack growth
 - Coralie Brun, Nov. 11 – Oct. 13 : Roughness characterization of photonic band-gap optical fibres
 - Reinaldo Garcia Garcia, Nov 13 – Oct. 14 : Fluctuations in plasticity
- PH.D. THESIS :
 - Antoine Perriot 2002-2005 : Experimental characterization of silica glass plasticity
 - Mehdi Talamali 2004-2009 : Mesoscopic modeling of amorphous plasticity
 - David Bouttes 2010-2014 : X-ray 3D-in-situ imaging of phase-separation in glasses
 - Botond Tyukodi 2012-2016 : Depinning models for dewetting and amorphous plasticity
 - Jean-Thomas Fonné : Phase separation on glass surfaces