

Curriculum Vitae – Oana-Valeria Lupășcu

Address: *Gheorghe Mihoc-Caius Iacob Institute of Mathematical Statistics and Applied Mathematics of the Romanian Academy, Calea 13 Septembrie 13, Bucharest, Romania*

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Research Interests: finite and infinite dimensional stochastic analysis with applications to stochastic fragmentation equations; mathematical modeling of the rupture phenomena, numerical approaches.

Education

PhD in Mathematics (September 2010 - November 2013) *Probabilistic and deterministic models for fracture type phenomena*, in the frame of a cotutelle agreement between Paris 13 University, France, and Simion Stoilow Institute of Mathematics of the Romanian Academy (IMAR) in Bucharest, Romania; under the joint supervision of Prof. Dr. Ioan R. Ionescu (University Paris 13) and Prof. Dr. Lucian Beznea (Simion Stoilow Institute of Mathematics of the Romanian Academy).

Master in Mathematics at Școala Normală Superioară București, 2011–2013.

Master in Applied Mathematics at the Faculty of Mathematics and Informatics, University of Pitești, Romania, 2011–2013.

BS in Mathematics at University of Pitești, Romania, 2008–2011.

Professional positions

- Current position, since April 2014: Junior research position at Gheorghe Mihoc-Caius Iacob Institute of Mathematical Statistics and Applied Mathematics of the Romanian Academy, Bucharest, Romania
- December 2013–April 2015: Postdoctoral research position at INRIA Nancy, France (in the Tosca team, with an INRIA fellowship)
- October 2011–April 2014: Assistant Professor at POLITEHNICA University of Bucharest, Department of Mathematics

Teaching activities

- Seminars on real analysis (license L1), University of Lorraine, Nancy, France, 2014.

- Seminars on probability (license L1), University of Lorraine, Nancy, France, 2014.
- Seminars on rigid solid mechanics (license L2), University Paris 13, France, 2013.
- Seminars on linear algebra and geometry (license L1), real analysis (license L1), probability and statistics (license L2), POLITEHNICA University Bucharest, 2010-2012.

Publications

- L. Beznea, M. Deaconu, and O. Lupaşcu, Stochastic equation of fragmentation and branching processes related to avalanches, *Journal of Statistical Physics* **162** (2016), 824–841.
- L. Beznea and O. Lupaşcu, Measure-valued discrete branching Markov processes. *Trans. Amer. Math. Soc.* **368** (2016), 5153–5176.
- I. R. Ionescu and O. Lupaşcu, Modeling shallow avalanche onset over complex basal topography, *Advances in Computational Math.* **42** (2016), 5–26.
- I. R. Ionescu and O. Lupaşcu, Onset of a dense avalanche on a plane slope, *Proc. Romanian Academy-Series A* **16** (2015), 405–412.
- L. Beznea, M. Deaconu, and O. Lupaşcu Branching processes for the fragmentation equation, *Stochastic Processes and their Applications* **125** (2015), 1861–1885.
- O. Lupaşcu, Subordination in the sense of Bochner of L^p -semigroups and associated Markov processes. *Acta Mathematica Sinica, English Series* **30** (2014), 187–196.
- L. Beznea, O. Lupaşcu, and A.-G. Oprina, A unifying construction for measure-valued continuous and discrete branching processes. In: *Complex Analysis and Potential Theory*, CRM Proceedings and Lecture Notes, vol. **55**, Amer. Math. Soc., Providence, RI, 2012, pp. 47–59.

Talks at Conferences

- *Colloque Franco-Roumain en Théorie des Probabilités*, Bucharest, November 2015, (invited talk).
- *The 36-th Conference Caius Iacob of Fluid Mechanics and its Technical Applications*, Bucharest, October 2015.
- *The Eighth Congress of Romanian Mathematicians*, invited talk in the Special Session "Probability, Stochastic Analysis, and Mathematical Statistics", Iaşi, July 2015.
- *Le Congres de la Societe de Mathematiques Appliquees et Industrielles (SMAI)*, Les Karellis, Franţa, June 2015, (invited talk).

- *Avalanches and Rupture Phenomena*, Nancy, France, February 2015, (invited talk).
- *Journées Modélisation Aléatoire Statistique*, Toulouse, France, August 2014.
- *Colloque Franco-Roumain de Mathématiques Appliquées*, Lyon, France, August 2014.
- *Journées de Probabilités*, Marseille, France, May 2014.
- *TOSCA Seminar*, La Petite Pierre, France, November 2013.
- *Joint International Meeting of the AMS and the Romanian Mathematical Society*, Alba Iulia, Romania, June 2013.
- *PDEs and Stochastic Processes, The 5th Workshop Series on Mathematics*, Pitești, Romania, October 2012.
- *International Conference on Controlled Deterministic and Stochastic Systems*, Iassy, Romania, July 2012.
- *International Conference on Complex Analysis and Related Topics, The 13th Romanian-Finnish Seminar*, Ploiești, Romania, June 2012.
- *Probability and Related Aspects*, Alba Iulia, Romania, May 2012.
- *Spring School in Probability*, Dubrovnik, Croatia, April 2012.

Talks in Scientific Seminars

- *Potential Theory Seminar*, organized by IMAR and University of Bucharest, Faculty of Mathematics and Computer Science, September 2013, April 2015, October 2015, and January 2016.
- *Séminaire de l'équipe de Statistique, Probabilités, Optimisation et Contrôle*, Université de Dijon, France, invited by Prof. Dr. Samuel Hermann, March 2015.
- *Séminaire de l'équipe EDPs²*, Laboratoire de mathématiques de l'Université de Savoie, Chambéry, invited by Prof. Dr. Marguerite Gisclon, April 2014.
- *Groupe de travail, Équipe de Probabilités et Statistiques*, Université de Lorraine and Institut Élie Cartan de Lorraine, Nancy, April 2014.
- *Analysis and Stochastics Seminars* of Technical University Dresden, Germany, invited by Prof. Dr. René Schilling, June 2012.

Fellowships

- Postdoctoral fellowship of the Research Institute of the University of Bucharest (ICUB), Romania: 9 months (April-December 2015).
- Joint research project with Prof. Dr. Ioan R. Ionescu (Univ. Paris-Nord), entitled *Modeling of snow avalanches and stochastic aspects*, funded by the Laboratoire Européen Associé CNRS Franco-Roumain, May–November 2015.
- PhD fellowship of the Cultural Service of the French Embassy in Bucharest: support for 12 months, during two academic years (2011-2013).
- PhD fellowship in a POSDRU project, co-founded by EU and the Romanian Government, 2011-2013.
- BITDEFENDER Junior Research fellowship at IMAR: 6 months in 2010.

Participation at research grants

- Member of the research team of the national research project entitled *Analysis of Schroedinger equations*, funded by the Romanian Ministry of Education and Research, 2015-2017.
- Member of the research team of the national research project entitled *Mathematical Modeling of Ductile Rupture*, funded by the Romanian Ministry of Education and Research, 2011-2016.

Scientific collaborations, visits abroad

- Scientific visit of three months in 2015 at University Paris 13, France, invited by Prof. Dr. Ioan R. Ionescu.
- Two scientific visits of one week in 2012 at Institut Elie Cartan de Lorraine, France, invited by Prof. Dr. Madalina Deaconu.
- Scientific visit of one week at Technical Univ. Dresden, Germany, invited by Prof. Dr. René Schilling, June 2012.

Member of the local organizing committee of the following international conferences:

- *Colloque Franco-Roumain en Théorie des Probabilités*, Bucharest, November 2015.
- *The Eighth Congress of Romanian Mathematicians*, Iași, Romania, June 2015.
- *Joint International Meeting of the AMS and the Romanian Mathematical Society*, Alba Iulia, Romania, June 2013.

- *International Conference on Complex Analysis and Related Topics, The 13th Romanian-Finnish Seminar*, Ploiești, Romania, June 2012.
- *Probability and Related Aspects*, Alba Iulia, Romania, May 2012.
- *The Seventh Congress of Romanian Mathematicians*, Brașov, Romania, June 2011.

Participation at conferences, workshops, and summer schools

- *Regional Romanian-French Summer School in Applied Mathematics*, Sinaia, July 2015.
- *Brussels Summer School of Mathematics*, Brussels, August 2013.
- *XI-ème Colloque Franco-Roumain de Mathématiques Appliquées*, Bucharest, August 2012.
- *Partial differential equations, optimal design and numeric*, Benasque, Spain, August 2011.
- *The first NIMS Probability Summer School*, Daejeon, South Korea, August 2011.
- *Partial Differential Equation*, Summer School from Cortona, Italy, August 2010.
- *Evolution equation and numerical analysis*, SIMUMAT Summer School from Castro Urdiales, Cantabria, Spain, July 2009.

PC Skills: Matlab, LaTeX.

Foreign Languages: French, English.