Prof. Dr. Sylvie Roelly

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Born 02.10.1960 in Paris, 5 children, 8 grandchildren.

Academic education

1979–1984	Student in Mathematics at the Ecole Normale Supérieure, Paris
1984	Ph.D. in Probability Theory, Université Paris 6 (Supervisor: N. El Karoui)
1991	Habilitation, Université Paris 6

Professional career

1985–	Researcher at Centre National de la Recherche Scientifique (France)
1990–1994	Post-doctoral research fellow from *Alexander von Humboldt Stiftung* and *European fellowship* in Bielefeld (Germany)
2003–	Professor for Probability Theory, Universität Potsdam

Organisational activities and awards (selection)

- Member of the Scientific Advisory Council of the Deutsch-Französische Hochschule, 2021-2024
- Vice-Dean of the Faculty of Science, Universität Potsdam, 2016-2019
- Head of the Institute of Mathematics, Universität Potsdam, 2011–2015
- Mathemacherin des Monats April 2015 (DMV-Prize)
- Itô prize 2007

Research areas

Probability Theory and Statistical Mechanics, in particular: Random dynamics with strong interactions and their equilibrium, Gibbs random fields, diffusion processes in infinite dimensional spaces, branching processes

Scientific collaborators (last eight years)

O. Aryasova (Kyiv), P. Cattiaux (Toulouse), G. Conforti (Paris), P. Dai Pra (Padova), D. Dereudre (Lille), M. Fradon (Lille), A. Kulik (Kyiv), C. Léonard (Paris), S. Méléard (Paris), S. Mazzonetto (Essen), A. Pilipenko (Kyiv), W. Ruszel (Delft), S. Sindayigaya (Ruhengeri), P. Vallois (Nancy), J.-C. Zambrini (Lisboa)

Most important externally funded recent projects

- German Speaker of the Research Group Linkage between the Institutes of Mathematics of Universität Potsdam and the National Academy of Sciences of Ukraine, founded by the Alexander von Humboldt Foundation, 2018-2021
- German initiator and Speaker of the Toulouse-Potsdam doctoral college *Stochastic processes and statistical machine learning* founded by the Deutsch-Französische Hochschule, 2018-2021.

PhD (○) and postdoc (●) supervision, *with next affiliations* (na) (last 10 years)

- ○ S. Pénisson (Potsdam and Uni Paris-Sud, 07-10), na: Université Paris-Est Créteil, Assistant Professor
- ○ R. Murr (Potsdam and Uni Paris Ouest-Nanterre, 08-12), na: Quant Institute, DB Risk-Center
- ○ P. Keller (Potsdam and MPI, 09-12), na: Universität Potsdam (Assistant Professor)
- ○ B. Nehring (Potsdam, 09-12)
- ○ G. Conforti (Potsdam and Uni Padova, 12-15), na: Palaiseau (Assistant Professor)
- ○ S. Mazzonetto (Potsdam and Uni Lille, 13-16), na: Nancy (Assistant Professor)
- ○ L. Pédèches (Potsdam and Uni Toulouse, 14-17) na: Toulouse (Assistant Professor)
- ○ A. Zass (Potsdam, 17-21) na: WIAS Berlin (Researcher)
- ○ J. Fischer (Potsdam and Uni Toulouse, 19-22) na: Zürich (Researcher)

- ● M. Högele (Potsdam 09-14), na: Universidad de los Andes, Bogotá (Assistant Professor)
- ● T. Kosenkova (Potsdam 15-), na: Universität Potsdam (Assistant Professor)
- ● A. Oliveira Gomes (Potsdam 18)
- ● S. Sindayigaya (Potsdam 18)

List of most important publications

- Roelly, S. (1986). Criterion of convergence of measure-valued processes and Application to measure-branching processes. *Stochastics*, 17:43–65
- El Karoui, N. and Roelly, S. (1991). Propriétés de martingales, explosion et représentation de Lévy-Khintchine d'une classe de processus de branchement à valeurs mesures. *Stochastic Processes and their Applications*, 38:239–266.
- Roelly, S. and Zessin, H. (1993). The equivalence of equilibrium principles in statistical mechanics and some applications to large particle systems. *Expositiones Mathematicae*, 11:385–405.
- Minlos, R., Roelly, S. and Zessin, H. (2000). Gibbs states on space-time. *Potential Analysis*, 13:367–408.
- Fradon, M. and Roelly, S. (2010). Infinitely many Brownian globules with Brownian radii. *Stochastics and Dynamics*, 10:591–612.
- Méléard, S. and Roelly, S. (2013). Evolutive two-level population process and large population approximations. *Ann. Univ. Bucharest*, 4:37–70. *Electron. Commun. Probab.*, 20 (18):1–12.
- Léonard, C., Roelly, S. and Zambrini, J.-C. (2014). Reciprocal processes: A measure-theoretical point of view. *Probability Surveys*, 11:237–269.
- Cattiaux, P., Fradon, M., Kulik, A. and Roelly, S. (2016). Long time behavior of stochastic hard ball systems. *Bernoulli Journal*, 22(2):681–710.
- Dereudre D. and Roelly, S. (2017). Path-dependent infinite-dimensional SDE with non-regular drift: an existence result. *Annales IHP*, 53(2):641–657.
- Conforti, G., Kosenkova, T. and Roelly, S. (2019). Conditioned point processes with application to Lévy bridges *Journal of Theoretical Probability*, 32:2111-2134
- Roelly, S. and Zass A. (2020). Marked Gibbs point processes with unbounded interaction: an existence result *Journal of Statistical Physics*, 179:972–996