Dr. Pierre HOUDEBERT

Post-Doc fellow, Universität Potsdam, Germany

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Personal Informations

French, born February 2nd 1990 in Tours, France.

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Professional address Institut für Mathematik, Universität Potsdam
Campus Golm, Haus 9,
Karl-Liebknecht-Str. 24-25,
D-14476 Potsdam OT Golm, Deutschland

Professional background

Since Sep 2018	Post-Doc position at the *Institüt für Mathematik* of the University of Potsdam, Germany. Working under the supervision of Prof. Dr. Sylvie Roelly and Prof. Dr. Gilles Blanchard. Funded by the SFB 1294 - Data Assimilation.
Winter semester 2018-2019	Organizer of the *research seminar* of the probability team, University of Potsdam, Germany.
Sep 2017 - Aug 2018	Post-Doc position at the *Institut de Mathématiques de Marseille* of the Aix-Marseille University, France. Working under the supervision of Prof. Bruno Schapira, Aix-Marseille University, France. Funded by the ANR Project MALIN (ANR-16-CE93-0003).
May 2017	Ph.D in *mathematics and their interactions*, Lille 1 University, France. Thesis : Continuum Random Cluster Model. Advisor : Prof. David Dereudre, Lille 1 University, France.
2016 - 2017	Co-organizer of *Phd seminar* of the Laboratoire Paul Painlevé, Lille 1 University, France.

Research Interests

- Statistical mechanics and Gibbs point processes.

- Continuum Random Cluster Model.

- Fortuin-Kasteleyn representation.

- Percolation theory.

- Phase transition.

Publications

2018+ D. DEREUDRE and P. HOUDEBERT, *Sharp phase transition for the continuum Widom-Rowlinson model*,
arXiv:1807.04988.

2019 D. DEREUDRE and P. HOUDEBERT, *Phase transition for continuum Widom-Rowlinson model with random radii*, Journal of Statistical Physics.
doi:10.1007/s10955-018-2173-z.

2018 C. HOFER-TEMMEL and P. HOUDEBERT, *Disagreement percolation for marked Gibbs point processes*, Stochastic Processes and their Applications.
doi: 10.1016/j.spa.2018.11.003.

2018 P. HOUDEBERT, *Percolation results for the continuum random cluster model*, Advances in Applied Probability 50.1.
doi: 10.1017/apr.201811.

2015 D. DEREUDRE et P. HOUDEBERT, *Infinite volume continuum random cluster model*, Electronic Journal of Probability 20 no. 125.
doi:10.1214/EJP.v20-4718.

Scientific Talks

March 2019	*Sharp phase-transition of the Area-interaction process.* Probability and statistics seminar, Charles University, Prague, Czech Republic.
December 2018	*Ising model on an infinite lattice: when and why a phase transition occurs?* International workshop on Random and Spectral Analysis with Application in Statistical Physics, Universidad de los Andes, Bogotá, Colombie.
September 2018	*Sharp phase-transition of the Area-interaction process.* Probability and statistics seminar, Universität Potsdam, Germany.
September 2018	*Sharp phase-transition of the Area-interaction process.* Probability seminar, Université de Poitiers, France.
June 2018	*Uniqueness of Gibbs point processes.* 9th International Workshop on Applied Probability (IWAP 2018), Budapest, Hongrie.
January 2018	*Uniqueness of Gibbs point processes.* Workshop on Transformations and phase transitions, Bochum, Germany.
October 2017	*Existence et unicité de mesures de Gibbs.* Probability seminar, Université de Rennes 1, France.
September 2017	*Existence et unicité de mesures de Gibbs.* Probability seminar, Université Aix-Marseille, France.
December 2016	*Percolation of the Continuum Random Cluster Model.* Probability and statistics seminar, CWI, Amsterdam, Pays-Bas.
June 2016	*Continuum Random Cluster Model.* AU Workshop on stochastic geometry, stereology and their applications, Sandbjerg, Danemark.
January 2016	*Continuum Random Cluster Model.* Workshop on Continuum Percolation, Lille, France.
January 2016	*Continuum Random Cluster Model.* Probability seminar, Institut Fourier, Grenoble, France.
November 2015	*Continuum Random Cluster Model.* Statistical mechanics seminar, University of Warwick, England.
August 2015	*Continuum Random Cluster Model.* Stochastic Geometry Days, Poitiers, France.
October 2014	*Widom-Rowlinson Model.* Berlin-Padova Workshop, Berlin.

Teaching

01-04 2018	Supervision of 3 Master students on their first year of Master thesis (T.E.R). Aix-Marseille University, France.
01-04 2017	Series and probabilities (24 hours). L2 PEIP, Polytech Lille, France.
09-12 2016	Differential and integral calculus (40 hours). First year biology students, Lille 1 university, France.
09-12 2016	Programming in R for statistics (24 hours). Fourth year biology students, Lille 1 university, France.
01-04 2016	Probability and statistics, exercises and programming (36 hours). Second year informatics students, Lille 1 university, France.
09-12 2015	Differential and integral calculus (30 hours). Second year engineer students, Polytech Lille, France.
01-04 2015	Series, power series, Fourier series (30 hours). Second year physics students, Lille 1 university, France.
01-04 2015	Matrix, exercises (15 hours). Second year economics students, Lille 1 university, France.
09-12 2014	Differential and integral calculus, exercises (15 hours). Second year economics students, Lille 1 university, France.

Other Skills

Languages	French : Native Language. English : Fluent. German : A2 and learning!
Computer	Scilab, Matlab, Latex, R, Git.