

Pierre-François Rodriguez

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Academic Employment History (since end of Ph.D.)

Mar 20 – now **Imperial College London,**
Lecturer, Department of Mathematics.
Sep 18 – Feb 20 **Institut des Hautes Études Scientifiques (IHÉS),**
Bures-sur-Yvette, France.
Sep 15 – Aug 18 **University of California, Los Angeles,**
E. R. Hedrick Assistant Professor, Department of Mathematics.

Education

Sep 11 – Aug 15 **Ph.D. Student,** Department of Mathematics, ETH Zurich.
Advised by: Alain-Sol Sznitman.
Oct 06 – Jul 11 **B.Sc. and M.Sc. in Physics,** *with distinction*, ETH Zurich.
Jul 06 **Abitur,** Humanistisches Görres-Gymnasium Düsseldorf, Germany.

Selected Publications (recent)

- [1] *Critical exponents for a percolation model on transient graphs.* With A. Drewitz and A. Prévost. **Preprint, submitted to *Inventiones Mathematicae***, available at arXiv:2101.05801, 2021.
- [2] *On the radius of Gaussian free field excursion clusters.* With S. Goswami and F. Severo. ***Annals of Probability*** (to appear), available at arXiv:2101.02200, 2021.
- [3] *Equality of critical parameters for percolation of Gaussian free field level-sets.* With H. Duminil-Copin, S. Goswami and F. Severo. ***Duke Mathematical Journal*** (to appear), available at arXiv:2002.07735, 2020.
- [4] *On pinned fields, interacements, and random walk on $(\mathbb{Z}/N\mathbb{Z})^2$.* ***Probability Theory and Related Fields* 173:1265–1299, 2019.**
- [5] *The sign clusters of the massless free field percolate on \mathbb{Z}^d , $d \geq 3$ (and more).* With A. Drewitz and A. Prévost. ***Communications in Mathematical Physics* 362(2): 513–546, 2018.**

Awards and Honors

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| Fall 19 | August-Wilhelm-Scheer Visiting Professorship , TU Munich |
| May 18 | Two invited lectures at the Institute for Advanced Study, Princeton
videos at: https://www.youtube.com/watch?v=Uc6nRdrEz90 . |
| Sep 15 - now | Invited lecturer at leading international conferences + over 60 research seminars |

Students

Ph.D. theses advised:

- I am currently supervising the Ph.D. thesis of Yuriy Shulzhenko (Sep. 20 – now) at Imperial. His research is sponsored by EPSRC Centre for Doctoral Training for Mathematics of Random Systems.
- I have supervised (jointly with Alexander Drewitz, U. Köln) the Ph.D. thesis of Alexis Prévost (Sep. 2016 – May 2020), now a Postdoc at Cambridge University.

Undergraduate/MSc projects:

- at Imperial (Mar. 2020 – now): I have been actively involved in M2R/M4R/MSc/UROP undergraduate and graduate research projects. This includes design, supervision and evaluation of projects.
- (before Mar. 2020): I have supervised various undergraduate research projects at UCLA, 2016–2018.

I currently serve as personal tutor of 10 students at Imperial (5 Yr.1, 2 Yr.2, 2 Yr.3, 1 M.Sc. student).

Teaching (since 2019)

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| Mar 20 – now | <i>Lebesgue measure and Integration</i> (MATH 50006); design of a brand new module comprising 20 lectures and 7 exercise classes (Spring 21, 22); Problems classes Analysis I (Fall 20, 21) and II (Spring 21). Inspirational lecture series (Fall 20). |
| Dec 19 | Minicourse on <i>Strongly correlated fields and percolation</i> (6 lectures); TU Munich. |
| Fall 19 | Université Paris-Saclay (Orsay) and École Normale Supérieure: Master 2 Mathématique et Applications, cursus Probabilités: Advanced Topics Course. |

Talks (since 2018)

- 2022 Invited Speaker, SPA Conference (Wuhan, China); IMS Annual meeting (London, UK). Seminar on Stochastic Processes, ETH Zurich (18/05); One World Probability Seminar (OWPS) online (05/05); Mathematical Physics Seminar, University of Geneva (11/04); Random Geometry Colloquium, Tata Institute for Fundamental Research (TIFR), Mumbai 28/03; Probability and the City Seminar (NYU Courant Institute) 25/03; Durham Probability Seminar 14/02.

- 2021: Probability Colloquium, National University of Singapore (01/12); Stochastic Analysis Seminar, Oxford University (29/11). Probability Seminar, University of Bath (01/11). London Analysis and Probability Seminar, University College London (07/10); Berlin Probability Colloquium, International Research Training Group (IRTG) 2544:“Stochastic Analysis in Interaction” 14/07. CIRM conference: *Recent progress in random walks*, Luminy 12/04–16/04; Percolation today seminar 09/03 (online); Oberwolfach workshop: *Spatial Networks and Percolation* 17/01–23/01.
- 2020: Séminaire de Probabilités, Université Lyon 1 et ENS Lyon 26/11; Percolation today seminar 05/05 (online seminar).
- 2019: Probability seminar, University of Basel 13/11; Conference: *Random Walks, Random Graphs and Random Media* 09/09–13/09, LMU Munich; RIMS, Kyoto University, 10/08–22/08 (host: Takashi Kumagai). 12th Mathematical Society of Japan, Seasonal Institute (MSJ-SI): *Stochastic Analysis, Random Fields and Integrable Probability* 31/07 – 09/08, Kyushu University, Fukuoka, Japan; SPA Conference, Evanston USA (session on homogenization); Conference *Probability and quantum field theory: discrete models, CFT, SLE and constructive aspects*, Porquerolles 10/06–21/06; Seminar, Universität Tübingen. Cambridge University, Probability Seminar 24/05; Séminaire de Probabilités, Université Paris-Sud (Orsay) 04/04; Probability Seminar, University of Warwick.
- 2018: Probability seminar (two lectures), Institute for Advanced Study, Princeton; Conference in honor of J.-D. Deuschel, WIAS Berlin; Oberseminar Stochastik, TU Berlin; Workshop on Correlated and Dynamical Random Walks in Random Environment, Texas A&M University; Workshop on High-dimensional critical phenomena in random environments, University of Bristol; Séminaire de Probabilités, Université Paris VI (Jussieu); Colloquium, Institut Henri Poincaré; Probability seminar, ETH Zurich.

Organizational Activities and Community Service

Sep 21 – now Organizer of the London Analysis and Probability Seminar (LANPS).

Sep 20 – now Organizer of Stochastic Analysis Seminar at Imperial.

Regular refereeing responsibilities for leading math. journals: *Jour. of the Europ. Math. Society (JEMS)*, *Inventiones Math. (Inv. Math.)*, *Annals of Probability (AoP)*, *Probab. Theory and Related Fields (PTRF)*, *Commun. in Math. Physics (CMP)*, *Elec. J./Commun. in Probability (EJP/ECP)*, *Probab. and Math. Physics (PMP)*, *Internat. Math. Research Not. (IMRN)*.

Languages

- fluent (written and spoken) in English, French, German and Spanish.
- Graecum (4 years of Ancient Greek studies), Grosses Latinum (6 years of Latin studies).

Leisure

- Piano, books, long-distance running (PR: 10,000m 36:52, Marathon 2:57:57).