

# Konstantin Matetski

*Given name as in passport: Kanstantsin*

Columbia University

Joseph F. Ritt Assistant Professor

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## Education

University of Warwick, United Kingdom <i>Thesis advisor: Martin Hairer</i>	Mathematics	Ph.D.	2016
University of Bonn, Germany <i>Thesis advisor: Anton Bovier</i>	Mathematics	M.Sc.	2012
Belarusian State University, Belarus <i>Diploma advisor: Yuriy Kharin</i>	Applied Mathematics	Diploma	2010

## Professional appointments

Joseph F. Ritt Assistant Professor	Columbia University, USA	2018 - present
Postdoctoral Fellow	University of Toronto, Canada	2016 - 2018
Research Assistant	Institute for Applied Problems of Mathematics, Belarus	2006 - 2010

## Research grants

NSF research grant DMS-1953859: *The Kardar-Parisi-Zhang universality of random growing interfaces*,  
Start date: July 1, 2020; Estimated end date: June 30, 2023; Amount: \$149,043

## Honors and awards

1. Chancellor's International Scholarship, University of Warwick, 2012 - 2016
2. Scholarship of the state North Rhine-Westphalia, University of Bonn, 2010 - 2012
3. Research grant of the Belarusian State University for the project "*Statistical analysis and forecasting of Markov stochastic sequences*", 2009
4. Scholarship of Priorbank for the best students in Mathematics and Economics, Belarus, 2008

## Professional activities

- ◇ Project leader for Columbia Math Undergraduate Summer Research Program:  
*Critical fluctuations of the one-dimensional Ising model* (2021)
- ◇ Organization of the Columbia and Courant-Columbia probability seminars (2018 - 2020)
- ◇ Organization of the Integrable probability FRG conference at Columbia University (2020)
- ◇ Co-supervision of Ph.D. students: Paolo Grazieschi (University of Bath), Shalin Parekh (Columbia University), and mentoring a high school student Sameer Pai (2019)
- ◇ Teaching a graduate course on Stochastic PDEs at Columbia University (2019)
- ◇ Being a TA at the Graduate Summer School on Random Matrices, Park City Mathematics Institute, USA (2017)

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## Selected publications

1. *The KPZ fixed point*, K.Matetski, J.Quastel, D.Remenik, to appear in *Acta Mathematica*, 2021
2. *Characterization of Brownian Gibbsian line ensembles*, E.Dimitrov, K.Matetski, to appear in *Annals of Probability*, 2021
3. *Exceptional times when the KPZ fixed point violates Johansson's conjecture on maximizer uniqueness*, I.Corwin, A.Hammond, M.Hegde, K.Matetski, arXiv:2101.04205, 2021
4. *Stochastic PDE limit of the dynamic ASEP*, I.Corwin, P.Ghosal, K.Matetski, *Communications in Mathematical Physics*, 2020
5. *From the totally asymmetric simple exclusion process to the KPZ fixed point*, J.Quastel, K.Matetski, *Random matrices*, Vol. 26, IAS/Park City Mathematical Series, American Mathematical Society, 2019
6. *Martingale-driven approximations of singular stochastic PDEs*, K.Matetski, arXiv:1808.09429, 2018
7. *Space-time discrete KPZ equation*, G.Cannizzaro, K.Matetski, *Communications in Mathematical Physics*, 358(2), 2018
8. *Discretisations of rough stochastic PDEs*, M.Hairer, K.Matetski, *Annals of Probability*, 46(3), 2018
9. *Optimal rate of convergence of the stochastic Burgers-type equations*, M.Hairer, K.Matetski, *Stochastic PDEs: Analysis and Computations*, 3, no. 4, 2015

## Work in progress

1. *Directed mean curvature flow in noisy environment*, with A.Gerasimovičs, M.Hairer
2. *TASEP and generalizations: Method for exact solution*, with J.Quastel, D.Remenik
3. *The stochastic Cahn-Hilliard equation arising from a two-dimensional Kawasaki dynamics*, with S.Parekh

## Invited Talks and Lectures

- ◇ Columbia-Princeton Probability Seminar (Over Zoom, May 2021)
- ◇ Columbia Probability Seminar (Over Zoom, May 2021)
- ◇ Kansas University, probability seminar (Over Zoom, Oct 2020)
- ◇ Bernoulli-IMS One World Symposium (Over Zoom, Aug 2020)
- ◇ Columbia University, Junior integrable probability seminar, (Over Zoom, May 2020)
- ◇ Temple and Penn joint probability seminar (Temple University, PA, Jan 2020)
- ◇ Workshop: Singular SPDEs and Related Topics (University of Bonn, Germany, Oct 2019)
- ◇ AMS Special Session on Analysis and Applications of Deterministic and Stochastic Evolution Equations (Binghamton University, Binghamton, NY, Oct 2019)

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- ◇ AMS Special Session on Large Scale Properties of Interacting Stochastic Systems (University of Wisconsin-Madison, Madison, WI, Sep 2019)
  - ◇ Carnegie Mellon University, PA, probability seminar (Apr 2019)
  - ◇ University of Rochester, NY, probability seminar (Apr 2019)
  - ◇ University of Virginia, VA, probability seminar (Nov 2018)
  - ◇ Columbia-Courant probability seminar, New York, NY (Oct 2018)
  - ◇ Mini-course: *The KPZ fixed point*, International Program on Regularity Structures and Stochastic Systems, Academy of Mathematics and Systems Science, Beijing, China (Jul 2018)
  - ◇ Fields Medal Symposium (Toronto, Oct 2017)
  - ◇ University of Wisconsin-Madison, probability seminar (Oct 2017)
  - ◇ Princeton University, probability seminar (Sep 2017)
  - ◇ Columbia University, probability seminar (Sep 2017)
  - ◇ Mathematical Congress of the Americas (Montreal, Canada, Jul 2017)
  - ◇ University of Pisa, probability seminar (Italy, May 2017)
  - ◇ Workshop: Qualitative Methods in KPZ Universality (Marseille, Italy, Apr 2017)
  - ◇ EPSRC Symposium: Stochastic PDEs. Analysis and Computation (Warwick, UK, Mar 2017)
  - ◇ Workshop: Stochastic Partial Differential Equations (Stony Brook, May 2016)
  - ◇ Workshop: Rough Paths, Regularity Structures and Related Topics (Oberwolfach, May 2016)
  - ◇ Berlin-Oxford Young Researchers Meeting on Applied Stochastic Analysis (Oxford, Dec 2016)
  - ◇ Berlin-Oxford Young Researchers Meeting on Applied Stochastic Analysis (Oxford, Jul 2014)