Ioan Manolescu

Personal Data

Birth:	Romania — 4^{th} of February 1984
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Work and Education

since 2018	**Professor** (PO) at the University of Fribourg (CH).
2015 – 2018	**Associate professor** (PA) at the University of Fribourg (CH).
2012 – 2015	**PostDoc**, supervisors S. Smirnov and H. Duminil-Copin – University of Geneva (CH).
2009 – 2012	**PhD in Mathematics**, supervisor G. Grimmett – University of Cambridge (UK).
2007 – 2008	**Masters in Probability (M2)** – Pierre et Marie Curie University, Paris (FR).
2005 – 2009	Student of the **Ecole Normale Supérieure** – department of mathematics and applications, Paris (FR).
2003 – 2005	**Preparatory classes MPSI / MP** – Louis Le Grand high school, Paris (FR).

Publications

Also available on Google Scholar and arXiv or at http://homeweb.unifr.ch/manolesc/Pub/#publications

[22] *Delocalization of the height function of the six-vertex model*,
with H. Duminil-Copin, A. Karrila and M. Oulamara, arXiv:2012.13750, Preprint (2020).

[21] *Rotational invariance in critical planar lattice models*,
with H. Duminil-Copin, K.K. Kozlowski, D. Krachun and M. Oulamara, arXiv:2012.11672, Preprint (2020)

[20] *On the six-vertex model's free energy*,
with H. Duminil-Copin, K.K. Kozlowski, D. Krachun and T. Tikhonovskaia, arXiv:2012.11675, Preprint (2020)

[19] *Planar random-cluster model: scaling relations*,
with H. Duminil-Copin, arXiv:2011.15090, Preprint (2020)

[18] *Planar random-cluster model: fractal properties of the critical phase*,
with H. Duminil-Copin and V. Tassion, arXiv:2007.14707, Preprint (2020)

[17] *Influence of the seed in affine preferential attachment trees*,
with D. Corlin Marchand, arXiv:1810.13275, to appear in the Bernoulli Journal (2018)

[16] *Exponential decay in the loop $O(n)$ model: $n > 1$, $x < \frac{1}{\sqrt{3}} + \varepsilon(n)$*,
with A. Glazman, arXiv:1810.11302, Preprint (2018)

[15] *Uniform Lipschitz functions on the triangular lattice have logarithmic variations*,
with A. Glazman, arXiv:1810.05592, Preprint (2018)

[14] *Bounding the number of self-avoiding walks: Hammersley-Welsh with polygon insertion*,
with H. Duminil-Copin, S. Gangulyand and A. Hammond, arXiv:1809.00760, to appear in the Annals of Probability (2018)

[13] *Universality for the random-cluster model on isoradial graphs*,
with H. Duminil-Copin and J.H Li, arXiv:1711.02338, Electronic Journal of Probability (2018)

[12] *Self-avoiding walk on $\mathbb{Z}^2$ with Yang-Baxter weights: universality of critical fugacity and 2-point function*,
with A. Glazman, arXiv:1708.00395, to appear in Annales de l'Institut Henri Poincar (2017)

[11] *Discontinuity of the phase transition for the planar random-cluster and Potts models with $q > 4$*,
with H. Duminil-Copin, M. Gagnebin, M. Harel, V. Tassion, arXiv:1611.09877, Preprint (2017)

[10] *The Bethe ansatz for the six-vertex and XXZ models: an exposition*,
with H. Duminil-Copin, M. Gagnebin, M. Harel, V. Tassion, arXiv:1611.09909, Probability Surveys (2018)

[9] *Expected depth of random walks on groups*,
with K. bou-Rabee and A. Myropolska, arXiv:1610.00198, Pacific Journal of Mathematics (2019)

[8] *The phase transitions of the random-cluster and Potts models on slabs with $q \geq 1$ are sharp*,
with A. Raoufi, arXiv:1604.01299, Electronic Journal of Probability (2018)

[7] *The phase transitions of the planar random-cluster and Potts models with $q \geq 1$ are sharp*,
with H. Duminil-Copin, arxiv:1409.3748, Probability Theory and Related Fields (2016)

[6] *Scaling limits and influence of the seed graph in preferential attachment trees*,
with N. Curien, T. Duquesne and I. Kortchemski, arXiv:1406.1758, Journal de l'École Polytechnique (2015)

[5] *Planar lattices do not recover from forest fires*,
with D. Kiss and V. Sidoravicius, arXiv:1312.7004, Annals of Probability (2015)

[4] *On the probability that self-avoiding walk ends at a given point*,
with H. Duminil-Copin, A. Glazman and A. Hammond, arXiv:1305.1257, Annals of Probability (2016)

[3] *Bond percolation on isoradial graphs: criticality and universality*,
with G. Grimmett, arXiv:1204.0505, Probability Theory and Related Fields (2014)

[2] *Universality for bond percolation in two dimensions*,
with G. Grimmett, arXiv:1108.2784, Annals of Probability (2013)

[1] *Inhomogeneous bond percolation on square, triangular and hexagonal lattices*,
with G. Grimmett, arXiv:1105.5535, Annals of Probability (2013)

Students and Postdocs

- **Sébastien Ott**: Postdoc (SNSF funded), started sept. 2021
- **Lucas D'Alimonte**: PhD student (state funded) started oct. 2020
- **Ulrik Thinggaard Hansen**: PhD student (SNSF funded) started oct. 2019
- **Paul Melotti**: Postdoc (SNSF funded), sept. 2019 - jan. 2021
- **Alexander Glazman**: Postdoc (advanced mobility), sept. 2019 - feb. 2020
- **David Corlin-Marchand**: PhD student since sept. 2017, co-supervision with Prof. Nicolas Curien (Paris - Orsay). Topic: *Preferential attachement model.*
- **Santoro Leonardo**: master student since sept. 2019 (ETH).
  Topic: *Gap size in 2D critical boolean percolation.*
- **Ho Fu-Hsuan**: master student since march 2019 (ETH).
  Topic: *Chemical distance in 2D critical percolation.*
- **Robin-Pierre Kaufmann**: master student 2017-2018.
  Topic: *Influence of boundary conditions in random-cluster model.*
  Prize for best master thesis of the faculty in theoretical sciences 2018.
- **Mathilde Tissieres**: master student 2017-2018.
  Topic: *Loop $O(n)$ model with large n.*

- **Laura Tudisco**: master student 2017-2018.
  Topic: *Pattern theorem for self-avoiding walks.*

Awards and Grants

2021	Rollo Davidson Prize
Sept 2019	SCNAT and SMS support of CHF 5,000 and CHF 4,000, respectively, for the organisation of the autumn meeting of the SMS
Feb 2019	SNSF project grant "Universality and Statistical Mechanics without Monotonicity": CHF 679,943 for a period of 4 years
Since 2014	Member of NCCR SwissMAP
2009 – 2012	PhD Scholarships: EPSRC grant, Cambridge European trust grant, departmental grant from the Mathematics department of the University of Cambrdige
2012	Grant of the Peter Whittle Fund
2009 – 2012	Jesus college travel grants
2010	First place in the Smith-Knight and Rayleigh-Knight competitions for essays in Mathematics and its application — competitions for Cambridge PhD students in mathematics and related topics
2003	Bronze medal at the International Mathematical Olympiads

Teaching

2015 – present Teaching activities at the University of Fribourg
- Linear algebra (service course; lecure notes available on webpage)
- Introduction to probability (2nd year course; lecure notes available on webpage)
- Introduction to numerical analysis (2nd year course; lecure notes available on webpage)
- Measure theory and integration (3rd year course; lecure notes available on webpage)
- Seminar on statistical mechanics (student presentations)
- Probability (3rd/4th year course)
- Probability (3rd/4th year course)
- Free seminars (3rd/4th year reading & presentation)

Supervised WINS workshop directed towards high-school female students (2 days in 2019)

2012 – 2015 Teaching activities at the University of Geneva
- Teaching assistant for Theory of Percolation (master class)
- Teaching assistant for Brownian Motion and Stochastic Calculus (master class)
- Teaching assistant for Analysis III (3rd year class)
- Teaching assistant for Probability and Statistics (2nd year class)
- Teaching assistant for Analysis I (1st year class)
- Tutoring for first year students
- Substitute teaching of Brownian Motion and Stochastic Calculus and Analysis III

2009 – 2012 Teaching activities at the University of Cambridge
- Supervisor for Probability I (1st year class)
- Supervisor for Analysis II (2nd year class)
- Supervisor for Advanced Probability (master class)
- Teaching assistant for Percolation (master class)
- Marking STEP examination (for undergraduate admission process)

Organisational activities

Sept. 2019	Part of the organising committee of the MatheFest day, Fribourg (CH)
Sept. 2019	Organiser of the autumn meeting of the Swiss Mathematical Society *Recent advances in loop models and height functions*, Fribourg (CH)
Feb. 2015 - Sept. 2015	Co-organiser of the mathematical physics seminar of the University of Geneva (CH)
Feb. 2015	Co-organiser for the conference Topics in low dimensional statistical mechanics, Les Diablerets (CH)
Sept. 2014	Co-organiser for the stochastic processes session of the 12th Franco-Romanian colloquium in Applied Mathematics, Lyon (FR)
Feb. 2014	Co-organiser for the conference Two-Dimensional statistical mechanics, Les Diablerets (CH)

Scientific activities

Reviewer for:	Annals of Applied Probability; Annals of Probability; Communications in Mathematical Physics; Electronic Journal of Probability; Electronic Communications in Probability; Journal of Statistical Physics; Probability Surveys; Random Structures and Algorithms; Stochastic Processes and Applications; Journal of Algebraic Combinatorics
June 2019	Jury member for the PhD defence of Paul Melotti - LPSM: Sorbonne Université (FR)
Dec. 2018	Jury member for the PhD defence of Daria Smirnova - University of Geneva (CH)
Apr. 2018	Jury member for the PhD defence of Mikhail Khristoforov - University of Geneva (CH)