

## Curriculum Vitae – CANDELLERO ELISABETTA

---

**Personal**      *Name:* **Elisabetta Candellero**

**Information**   *Address:* Università degli Studi Roma Tre, Dipartimento di Matematica e Fisica,  
Largo S. Leonardo Murialdo 1, 00146 Roma Italy

*Homepage:* [sites.google.com/site/candelleroelisabetta/](https://sites.google.com/site/candelleroelisabetta/)

*E-mail:* [ecandellero@mat.uniroma3.it](mailto:ecandellero@mat.uniroma3.it).

**Current**      *Since July 2019 :* I am an *Assistant Professor* (tenure track) at the University of  
**Position**      Roma Tre (Rome, Italy). This position has been awarded to me within the project  
*Programma per Giovani Ricercatori* “Rita Levi Montalcini”. (Success rate of the  
award: about 6%.)

**Academic**      *September 2018–June 2019 :* Research Fellow at the University of Roma Tre (Rome,  
**History**      Italy).

*September 2015–August 2018 :* “Harrison Early Career Assistant Professor” (a fixed-term assistant professor) in the Dept of Statistics, University of Warwick (UK).

*September 2013–August 2015 :* Research Fellow in the Department of Statistics, University of Warwick (UK).

*September 2012–August 2013 :* Research Fellow in the School of Mathematics, University of Birmingham (UK), working with Nikolaos Fountoulakis.

*July, 2012 :* PhD in Mathematics, with distinction, at Graz University of Technology (Austria), advised by Wolfgang Woess, with title *Limit Behaviors of Random Walks and Branching Random Walks on some Products of Groups*.

*November, 2008 – March, 2009:* short-time researcher (*Forschungsstipendiatin*) at the TU Graz (funded by the Büro für Forschung und Technologie).

*October, 2008 :* Master degree (Turin University, Italy): **110/110** with *Honors* (cum Laude) and *Distinction*. Title: *Branching Random Walks on homogeneous Trees*. Advisors: Laura Sacerdote (Turin) and Wolfgang Woess (Graz).

*July, 2006 :* Bachelor Degree (Turin): **110/110** with *Honors* (cum Laude). Title: *Proprietà delle soluzioni dei sistemi di reazione-diffusione* (Properties of solutions of reaction-diffusion systems). Advisor: Paolo Cermelli.

**Publications**

- Elisabetta Candellero, Alexandre Stauffer and Lorenzo Taggi, [Abelian oil and water dynamics does not have an absorbing-state phase transition](#), *submitted*. Preprint: [Arxiv.org/abs/1901.08425](https://arxiv.org/abs/1901.08425).
- Elisabetta Candellero and Alexandre Stauffer, [Coexistence of competing first passage percolation on hyperbolic graphs](#), *submitted*. Preprint: [Arxiv.org/abs/1810.04593](https://arxiv.org/abs/1810.04593).
- Elisabetta Candellero and Wilfrid S. Kendall, [Coupling of Brownian motions in Banach spaces](#), *Electronic Communication in Probability*, Volume 23, no. 1 (2018), pp. 1-13. Preprint at: [Arxiv.org/abs/1705.08300](https://arxiv.org/abs/1705.08300).

- Elisabetta Candellero and Augusto Teixeira, [Percolation and isoperimetry on roughly transitive graphs](#), *Annales de l'Institut Henri Poincaré (B) Probability and Statistics*, Volume 54, no. 4, 1819-1847 (2018). Preprint at: [Arxiv.org/abs/1507.07765](https://arxiv.org/abs/1507.07765).
- Elisabetta Candellero, Shirshendu Ganguly, Christopher Hoffman, and Lionel Levine, [Oil and water: a two-type internal aggregation model](#), *Annals of Probability*, Volume 45, Number 6A, 4019-4070 (2017). Preprint at [Arxiv.org/abs/1408.0776](https://arxiv.org/abs/1408.0776).
- Elisabetta Candellero and Nikolaos Fountoulakis, [Bootstrap percolation and the geometry of complex networks](#), *Stochastic Processes and their Applications* 126, pp. 234-264 (2016). Preprint available at [Arxiv.org/abs/1412.1301](https://arxiv.org/abs/1412.1301).
- Elisabetta Candellero and Nikolaos Fountoulakis, [Clustering and the hyperbolic geometry of complex networks](#), *Internet Mathematics* Vol. 12, no. 1-2, pp. 2–53 (2016). Preprint available at [Arxiv.org/abs/1309.0459](https://arxiv.org/abs/1309.0459).
- Elisabetta Candellero and Matthew Roberts, [The number of ends of critical branching random walks](#), *Latin American Journal of Probability and Mathematical Statistics (ALEA)*, 12 (1), pp. 55–67 (2015). Preprint available at [Arxiv.org/abs/1401.0429](https://arxiv.org/abs/1401.0429).
- Elisabetta Candellero and Nikolaos Fountoulakis, [Clustering and the hyperbolic geometry of complex networks](#), (extended abstract) *Proceedings of the 11th International Workshop on Algorithms and Models for the Web graph (WAW'14) (A. Bonato et al. Eds.), LNCS 8882, pp. 1-12* (2014). Preprint available at [www2.warwick.ac.uk/fac/sci/statistics/staff/academic-research/candellero/](http://www2.warwick.ac.uk/fac/sci/statistics/staff/academic-research/candellero/).
- Elisabetta Candellero, Lorenz Gilch and Sebastian Müller, [Branching Random Walks on Free Products of Groups](#), *Proceedings of the London Mathematical Society*, Vol. 104, Issue 6, pp. 1085–1120, 2012. Preprint available at [Arxiv.org/abs/1104.4576](https://arxiv.org/abs/1104.4576).
- Elisabetta Candellero and Lorenz Gilch, [Phase Transitions for Random Walk Asymptotics on Free Products of Groups](#), *Random Structures & Algorithms*, Vol. 40, Issue 2, pp. 150–181, 2012. Preprint: [Arxiv.org/abs/0909.1893](https://arxiv.org/abs/0909.1893).

## Awarded Research Funding

2019: I have been awarded a prestigious fellowship by the Italian Ministry of Education (MIUR) within the project *Progetto per Giovani Ricercatori “Rita Levi Montalcini”*. Amount of the grant: 192,873.66 Euros. Success rate: about 6%. Website: <https://bandomontalcini.cineca.it/>.

2019: I have been awarded a travel grant by the INdAM (Istituto Nazionale di Alta Matematica) with the project *Sistemi di particelle su grafi aleatori e deterministici e loro applicazioni*. Amount of the grant: 3,000 Euros.

2010: I was awarded a prestigious grant to support my PhD studies (a **DOC-ffORTE fellowship**) by the ÖAW (Austrian Academy of Sciences). Success rate: about 30%. Amount of the grant: 61,000 €.

2010: I was accepted as an “associated PhD student” within the project *DK-Plus* funded by FWF (Austrian Science Foundation). I was awarded 10,000 € to use for research purposes.

In November 2010 the travel expenses of my research visit in Switzerland were covered by a *Short visit grant*, awarded by the ESF (European Science Foundation) within the project “Random Geometry of Large Interacting Systems and Statistical Physics (RGLIS)”. Amount of the grant: about 1,000 €.

In November 2008, before the start of my PhD, I was awarded a short term research grant (*Forschungsstipendium*) by the Büro für Forschung und Technologie, TU Graz. Amount of the grant: about 3,000 €.

**Supervision of students** *Academic year 2018/19*: I am supervising two Masters theses. Topics: *Game Theory* and *Generalized Linear Models: un’applicazione alla sicurezza aerea*.

*Academic year 2017/18*: I was the the project leader of a Research Study Group for first-year PhD students in Warwick (joint program between Mathematics and Statistics). Topic: *The frog model*.

*Academic year 2016/17*: Supervision of a 4th-year (masters) thesis on the topic “*Random walk in random environment*”.

**Teaching duties** *Academic year 2019/20*: I am giving the course “Stochastic calculus” for Masters students in mathematics.

I am giving exercise sessions for the course “Calcolo delle Probabilità 2”, the second course in probability for mathematics students.

*Academic year 2018/19*: I am giving exercise sessions for the course “Calcolo delle Probabilità”, a first course in probability for mathematics students.

I gave tutorials for the course “Introduction to Statistics”, Department of Mathematics and Physics, University of Roma Tre.

*Academic year 2017/18*: I taught the masters course “Dynamic Stochastic Control”, Department of Statistics, University of Warwick. Link to course: <http://www2.warwick.ac.uk/fac/sci/statistics/modules/st4/st411/>.

I taught example classes and gave tutorials for the first-year course “Introduction to Probability”, Department of Statistics, University of Warwick. Link to course: <https://warwick.ac.uk/fac/sci/statistics/modules/st1/st115/>.

*Academic year 2016/17*: I taught the masters course “Dynamic Stochastic Control”, Department of Statistics, University of Warwick.

*Academic year 2015/16*: I taught the masters course “Dynamic Stochastic Control”, Department of Statistics, University of Warwick.

*Academic year 2014/15*: I taught a module as part of the masters course “Advanced Topics in Statistics”, Department of Statistics, University of Warwick. Link to course: <http://www2.warwick.ac.uk/fac/sci/statistics/modules/st4/st414/>.

*August 2013*: I was chosen to give exercise sessions (tutorials) during the summer school for postgraduate students “[Random Graphs, Geometry and Asymptotic Structure](#)”, organized at the University of Birmingham.

*Winter term 2012*: I gave mathematical tutorials for first-year mathematicians at the University of Birmingham.

*October 2009–January 2012*: I gave mathematical tutorials/exercises for first-year Engineering students at Graz University of Technology (in German).

**Teaching for graduate students** *Academic year 2017/18*: I organized the two *Probability Reading Groups* on “Processes with reinforcement” (term 2), and on “First-passage percolation” (term 1).  
*Academic year 2016/17*: I organized three Probability Reading Groups on “Percolation and Unimodularity”, “Random Interlacements” and “Random Maps”.  
*Academic year 2015/16*: I organized the Probability Reading Group on “Percolation and Unimodularity” (Warwick).

**Organization** *30/08–02/09/2016*: Together with Alexandre Stauffer (Bath) I organized the Workshop **Random processes in discrete structures**, which took place at Warwick (UK). More information available at:  
[www2.warwick.ac.uk/fac/sci/statistics/crism/workshops/randomprocesses](http://www2.warwick.ac.uk/fac/sci/statistics/crism/workshops/randomprocesses).

*July 2014*: **Open Problem Workshop** (for about 25 participants), which I co-organized as part of the Strategic Alliance in Discrete Mathematics between the University of Warwick and Queen Mary University of London. This took place in Moreton in Marsh (UK).

*Winter term 2010*: I organized tutorials and exercises sessions of the first-year mathematics course for electrical engineers at the TU Graz, available at:  
[https://sites.google.com/site/candelleroelisabetta/mathe\\_a\\_10\\_ue](https://sites.google.com/site/candelleroelisabetta/mathe_a_10_ue) (exercises) and  
[https://sites.google.com/site/candelleroelisabetta/mathe\\_a\\_10\\_kv](https://sites.google.com/site/candelleroelisabetta/mathe_a_10_kv) (tutorial).

**Selected Research Visits** *7–14/11/2018*: University of Lyon 1 (France). Host: Dieter Mitsche.  
*20–24/02/2018*: University of Tours (France). Hosts: Kilian Raschel and Marc Peigné.  
*01/03–01/04/2016*: short-term visitor to New York University Shanghai (China). Host: Vladas Sidoravicius.  
*09–14/11/2014*: IMPA, Rio de Janeiro (Brazil). Host: Augusto Teixeira.  
*14–18/10/2013*: Prob-L@b, University of Bath (UK). Host: Matthew Roberts.  
*01–06/07/2013*: Ludwig-Maximilian University of Munich, Munich (Germany). Host: Konstantinos Panagiotou.  
*30/03–07/04/2012*: McGill University, Montréal (Canada). Host: Matthew Roberts.  
*15–30/03/2012*: University of Michigan, Ann Arbor (USA). Host: Lionel Levine.  
*30/01–15/03/2012*: visiting student at Microsoft Research, Redmond (USA). Host: Yuval Peres.

**Mentor / Admin** • *Academic year 2017/18*: I mentored about 30 students (tutees), 10 of which are first-year students. I marked of their assignments and gave them feedback. I met all of them *individually* at least twice a term, to discuss their progress and course choices. Furthermore, I am required to write *reference letters* for their applications to internships, or postgraduate studies.

I participated in several panels to evaluate PhD students in the department: I read their reports, gave them feedback, and evaluated their corresponding presentations. I was part of the “Publicity group” (as responsible for the PhD departmental webpage and for the general outreach of PhD courses). I also coordinated with the local organizers to put together four TEDx events, which took place at Warwick in 2018. I was the academic correspondent for the departmental newsletter.

- *Academic year 2016/17*: I mentored 24 students (tutees), 10 of which were first-year students. I mark some of their assignments and give them feedback. I meet all of them *individually* at least twice a term, to discuss their progress and course choices. I am also required to write reference letters for their applications.

I organized the Midlands Probability Theory Seminar (Warwick).

I was part of the “Publicity group” (responsible for the PhD departmental webpage). I was part of the Welfare and Communication Committee and I was the academic correspondent for the departmental newsletter.

- *Academic year 2015/16*: I was mentoring 20 students (tutees), 5 of which were first-year students. I marked some of their assignments and gave them feedback. I met all of them individually at least twice a term, to discuss their progress and course choices. I am also required to write reference letters for their applications.

I organized the Midlands Probability Theory Seminar (Warwick).

**Selected Upcoming events:**

**invited talks in workshops** *20-21/01/2020*: Invited speaker at the workshop “Random graph theory”, University of Turin (Italy). Organizers: Tamas Makai and Federico Polito.

*9-10/12/2019*: Invited speaker at the workshop “Probabilistic Coupling and Geometry Workshop”, University of Warwick (UK). Organizers: Stephen Connor and Elke Thonnes.

**Past events:**

*3-4/10/2019*: Invited talk at the workshop “Geometric Random Graphs”, Saint-Etienne (France). Organizer: Dieter Mitsche.

*10-11/07/2019*: Invited talk at the “Third workshop on Large Scale Random Structures”, Milan (Italy). Organizer: Francesco Caravenna.

*20-24/05/2019*: Invited speaker at the workshop “Probability and Analysis 2019”, Bedlewo (Poland). Organizers: Dariusz Buraczewski and Kilian Raschel.

*3-7/06/2019*: Invited speaker at the “20th Workshop on Stochastic Geometry, Stereology and Image Analysis (SGSIA)”, Sandbjerg (Denmark). Organizers: Eva Jensen, Ute Hahn, Markus Kiderlen, Oddbjørg Wethelund.

*14-15/03/2019*: Invited speaker at the Symposium “Preharmonic functions and boundaries”, University of Tours, Tours (France).

*9-13/04/2018*: Plenary speaker at the workshop “UK Easter Probability meeting”, University of Sheffield (UK).

*6-10/02/2018*: Plenary speaker at the “Rhein-Main Kolloquium Stochastik”, joint Kolloquium organized by TU Darmstadt & Goethe-Universität Frankfurt & Gutenberg-Universität Mainz.

*28/01–03/02/2018*: Plenary speaker at the workshop “Strongly Correlated Random Interacting Processes”, Oberwolfach (Germany).  
*23–27/10/2017*: Plenary speaker at the workshop “Dynamics on random graphs and planar maps”, CIRM, Marseille (France).  
*11–15/09/2017*: Plenary speaker at the workshop “Randomness and graphs: processes and structures”, Eurandom, Eindhoven (The Netherlands).  
*26/07–05/08/2017*: Plenary speaker at the LMS-EPSRC Durham Symposium “Markov Processes, Mixing Times and Cutoff”, University of Durham (UK).  
*19–22/06/2017*: Invited talk in the session “Stochastic processes in discrete structures and their limit behavior”, at the “First Italian Meeting on Probability and Mathematical Statistics”, University of Turin (Italy).  
*19–24/06/2016*: Plenary speaker at the “School and Workshop on Random Interacting Systems”, University of Bath (UK).  
*25–27/03/2016*: Plenary speaker at the “International conference on Probability Theory and Statistical Physics”, New York University Shanghai (China).  
*18/01/2016*: Plenary speaker at the workshop “Dynamical Networks and Networks Dynamics”, ICMS Edinburgh, UK.  
*14/12/2015*: Plenary speaker at the “Davis-Warwick Probability Workshop”, University of California Davis, -CA- USA.  
*18/11/2014*: Plenary speaker at the “Workshop in First Passage Percolation” in Cabo Frio, organized by IMPA, Rio de Janeiro (Brazil).  
*10/06/2014*: Plenary speaker at the “3rd Bath-Paris Branching Structures meeting”, University of Bath (UK).  
*3/06/2014*: Invited talk given during the conference in honor of Wolfgang Woess’ 60th birthday: ”Groups, Graphs, and Random Walks”, Cortona (Italy).  
*16/04/2014*: Plenary speaker at the workshop “New Frontiers in Random Geometric Graphs”, Lorentz Center, Leiden (The Netherlands).  
*26/09/2013*: Invited talk at the “ÖMG-DMV congress”, held at the University of Innsbruck, Innsbruck (Austria).  
*08–12/03/2010*: Invited speaker at the “YEP VII Workshop” organized at EURANDOM, Eindhoven (The Netherlands).

**Further  
(selected)  
Talks**

*29/07/2014*: at the “37th Conference in Stochastic Processes and their Applications” (SPA 2014), University of Buenos Aires (Argentina).  
*31/07/2013*: at the “36th Conference on Stochastic Processes and their Applications” (SPA 2013), held at the University of Colorado Boulder, Boulder (USA).  
*25/07/2013*: at the Probability summer School, University of Cornell, Ithaca (USA).  
*05/03/2013*: at the “DSSA Workshop (Discrete structures and related methods from stochastic analysis)”, held at Technion, Haifa (Israel).  
*3–16/07/2011*: at the “41st Probability Summer School”, Saint Flour (France).

**Selected  
Seminars**

*08/11/2018*: Probability seminar, Université Lyon 1, France.  
*08/05/2018*: Probability seminar, University of Cambridge, UK.

26/04/2018: Probability seminar, University of Sussex, UK.  
 25/04/2018: Probability seminar, University of Manchester, UK.  
 15/04/2016: Probability and Statistics Seminar, University of Bristol, UK.  
 14/01/2016: Seminar on Discrete Mathematics and Game Theory, London School of Economics, UK.  
 11/01/2016: Mathematical Finance and Stochastic Analysis Seminar, University of York, UK.  
 27/01/2014: Probability Workshops, University of Oxford, UK.  
 14/10/2013: Prob-L@b Seminar, University of Bath, UK.  
 18/06/2013: University of Turin, Turin, Italy.  
 21/03/2013: Selected Topics in Mathematics, University of Liverpool, UK.

**Selected Schools, Workshops, Conferences**    07–11/11/2016: I participated in the workshop “Random Geometric Graphs and Their Applications to Complex Networks”, at the BIRS in Banff (Canada).  
 06/2015: I participated in the workshop “Groups, Graphs and Stochastic Processes”, organized by BIRS, Banff (Canada).  
 17–29/06/2012: I attended the “St. Petersburg School in Probability and Statistical Physics”, St. Petersburg (Russia).  
 20–24/02/2012: I attended the Workshop “Percolation and Interacting Systems”, at MSRI, Berkeley (USA).  
 19–24/06/2011: I attended the workshop “Groups, graphs and stochastic processes”, held at the BIRS center, Banff (Canada).

**Referee Work**    I served as referee for several highly-recognized international mathematical journals, including *Annales de l’Institut Henri Poincaré*, *Stochastic Processes and their Applications* (SPA), *Random Structures and Algorithms* (RSA), the *Electronic Journal of Probability* (EJP), *Electronic Communication in Probability* (ECP), *Algorithmica*, and *London Mathematical Society Lecture Note Series*. I also served as referee for the following conferences: *AofA 2014*, *ICNAAM 2015*, *SODA 2016*, *STOC 2017*.

**Languages**    Mother tongue: Italian  
*English*: very good  
*German*: good (Level B2)  
*Spanish*: good