

# Curriculum Vitae

Iulian Cîmpean

*Simion Stoilow Institute of  
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## Personal information

Name Iulian Cîmpean  
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Place/ Date of birth Mangalia/ October 19<sup>th</sup> 1987  
Nationality Romanian

Research Interests Stochastic Analysis: Stochastic Processes, Stochastic  
Differential Equations, Potential Theory.

## Educational Background

2015-Present Researcher at Simion Stoilow Institute of Mathematics of the Romanian  
Academy.  
2014-2015: Junior Researcher at Simion Stoilow Institute of Mathematics of the  
Romanian Academy.  
2011-Present: PhD Student at Simion Stoilow Institute of Mathematics of the Romanian  
Academy, supervized by Prof. Lucian Beznea.  
2009-2011: Master Degree at Faculty of Mathematics and Computer Science,  
University of Bucharest, Specialization in Mathematical Analysis.  
Graduation Thesis: "Classical Potential Theory and Probabilities" supervized  
by Prof. Gheorghe Bucur.  
2006-2009 Bachelor Degree at Faculty of Mathematics and Computer Science,  
University of Bucharest, Specialization in Mathematics.  
Graduation Thesis:"Trigonometric Series" supervized by Prof. Gheorghe  
Bucur.  
2002-2006 "Callatis" Theoretical High School, Mathematics and Informatics Profile,  
Mangalia, Romania.

## Conferences/Workshops

- 2016
- XIII-eme colloque Franco-Roumaine de mathematique appliquees August 25-29, Iasi, Romania. Talk: From excessive functions to semimartingales on Dirichlet spaces.
- 4<sup>th</sup> Summer school on Levy processes, July 18-22, Universite de Lille 1, France. Talk: Semimartingale functionals of Markov processes: a semigroup approach.
- The 14<sup>th</sup> Romanian-Finnish Seminar, June 20-24, Bucharest, Romania. Talk: Semimartingales associated to Markov processes: a semigroup approach.
- Stochastic Analysis and Applications, July 25-26, Brasov, Romania. Talk: Semimartingale functionals of Markov processes: a semigroup approach.
- Workshop for Young Researchers in Mathematics 6<sup>th</sup> edition, May 19-22, Constanta. Talk: Semimartingale functionals associated to Dirichlet forms.
- 2015
- Colloque Franco-Roumain en Théorie des Probabilités 30 Octobre – 1 Novembre 2015, Bucarest, Roumanie . Talk: “Irreducible recurrence, ergodicity, and extremality of invariant measures for resolvents”.
- Bielefeld Stochastic Summer School, August 12 – August 28, 2015, Bielefeld, Germany. Talk: “Irreducible recurrence, ergodicity, and extremality of invariant measures for resolvents”.
- The Eighth Congress of the Romanian Mathematicians, June 26 – July 1, 2015, Iasi, Romania. Talk: "A new approach to existence of invariant measures for Markovian semigroups".
- Workshop for Young Researchers in Mathematics, May 21-24, Constanta. Talk: "A new approach to existence of invariant measures for Markovian semigroups"
- 2014
- "Dirichlet Form Theory and its Applications", October, 19-25, Oberwolfach, Germany
- Colloque franco-roumain de mathematiques appliquees, August 25-30, Lyon, France. Talk: "Quasimartingales of Markov processes"
- Workshop for Young Researchers in Mathematics, May 22-23, Constanta. Talk: "Bochner-Kolmogorov theorem"
- The 17th Conference of the Romanian Society of Probability and Statistics, April 25, Bucharest. Talk: "On Bochner-Kolmogorov theorem".
- 2013
- "Stochastics and Real World Models 2013", July 15-19, Bielefeld, Germany
- "Joint International Meeting of the American Mathematical Society and the Romanian Mathematical Society", June 27-30 Alba Iulia, Romania

- 2012 "Probability and Related Aspects ", May 22-26, Alba Iulia, Romania
- "The 13th Romanian-Finnish Seminar", June 26-30, Ploiesti, Romania
- "PDEs and Stochastic Processes", October 12-14, Pitesti, Romania

## Talks in Scientific Seminars

- Talks in the "Potential Theory Scientific Seminar" jointly organized by Simion Stoilow Institute of Mathematics of the Romanian Academy and Faculty of Mathematics and Computer Science, University of Bucharest:

- October 2015 One talk on the topic: Stochastic differential equations with jumps.
- May-June 2015 Two talks on the topic: A new approach to the existence of invariant measures for Markovian semigroups
- October 2014 Two talks on the topic: Lower bound technique for existence of invariant measures for Markov-Feller semigroups
- April 2014 One talk on the topic: A short proof of Doob-Meyer Theorem
- February-March 2014 Three talks on the topic: Local times; Meyer-Tanaka Theorem
- October 2013 One talk on the topic: Existence of invariant measures for positivity preserving operators.
- January-February 2013 Two talks on the topic: Stochastic Integral on Hilbert space
- October-December 2012 Four talks on the topic: Gaussian measures on Hilbert space
- March-June 2012 Four talks on the topic: The Martingale Problem.
- January-February 2012 Three talks on the topic: The Bichteler-Dellacherie Theorem describing the space of semimartingales.
- November 2013 One talk in the IGK Seminar organized at Bielefeld University entitled: Existence of invariant measures for positivity preserving operators.
  - July 2014 One talk in the IGK Seminar organized at Bielefeld University entitled: Quasimartingales of Markov processes.
  - February 2015 One talk in the IGK Seminar organized at Bielefeld University entitled: Existence of invariant measures for Markovian operators

## Teaching activities

During the academic year 2015-2016 I held seminars on PDEs for 3<sup>rd</sup> year students, at the Faculty of Mathematics and Informatics, University of Bucharest.

During the first semester of the academic year 2014-2015 I organized (in collaboration with Prof. L. Beznea) a scientific seminar for students on "Monte Carlo methods for simulation of Markov processes", based on the

monograph [ C. Graham, D. Talay, Stochastic Simulation and Monte Carlo Methods, Springer 2014], FMI & IMAR.

## Publications

1. Irreducible recurrence, ergodicity, and extremality of invariant measures for  $L^p$ -resolvents, *submitted for publication* 2014 (joint work with Lucian Beznea and Michael Roeckner), [arXiv:1409.6492v2](https://arxiv.org/abs/1409.6492v2).
2. A new approach to the existence of invariant measures for Markovian semigroups, *submitted for publication* 2015 (joint work with Lucian Beznea and Michael Roeckner), [arXiv:1508.06863v3](https://arxiv.org/abs/1508.06863v3).
3. Quasimartingales associated to Markov processes, *to be submitted* 2016 (joint work with Lucian Beznea).
4. On Bochner-Kolmogorov theorem (joint work with Lucian Beznea), *Seminaire des Probabilites*, Springer, Volume 46, 61-70, 2014.
5. A remark on the proof of Cobzas-Mustata theorem concerning norm preserving extension of convex Lipschitz functions, *Studia Universitatis Babes-Bolyai Mathematica*, Volume 57, Number 3, September 2012

## Scholarships

Three months DAAD Scholarship, Bielefeld University, (01.07.13 - 30.09.13). Supervisors: Prof. Lucian Beznea (Bucharest) and Prof. Michael Roeckner (Bielefeld)

## Scientific Visits

- 19.11.13 - 20.12.13 scientific visit at Bielefeld University, invited by Prof. Dr. Michael Roeckner, supported from Collaborative Research Centre (SFB 701)
- 19.01.2014 - 26.01.2014 scientific visit at Bielefeld University, invited by Prof. Dr. Michael Roeckner.
- 26.07.2014-01.08.2014 scientific visit at Bielefeld University, invited by Prof. Dr. Michael Roeckner.
- 08.12.2014 – 19.12.2014 scientific visit at Bielefeld University, invited by Prof. Dr. Michael Roeckner.
- 03.02.2015 – 23.02.2015 scientific visit at Bielefeld University, invited by Prof. Dr. Michael Roeckner.
- 06.08.2015 – 05.09.2015 scientific visit at Bielefeld University, invited by Prof. Dr. Michael Roeckner.

## Language skill

English (advanced), French (basic).