Curriculum Vitae
Dr. Mladen Savov

Basic and Contact Details

Name:	Mladen Svetoslavov Savov
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Education

2005-2008	Ph.D. in Probability, University of Manchester, UK Thesis: "Small time behaviour of Lévy processes" Supervisor: Prof. R. Doney
2000-2004	First class Bachelor of Mathematics, University of Sofia, Bulgaria

Research Interests

Probability Theory and Stochastic Processes

Lévy and Markov Process; Fluctuation Theory of Lévy Processes

Spectral Theory for Markov Processes

Language and Computer Skills

Languages:	English - **fluent written and spoken**; Spanish- **basic**; French- **basic**;
Programming Skills:	Java- **good**; MatLab- **good**; Python- **very basic**

Employment

2015-present	Marie Sklodowska-Curie Individiual Fellow and Associate Professor at the Bulgarian Academy of Sciences
2014-2015	Associate Professor at the Bulgarian Academy of Sciences
2012-2014	Lecturer in Probability and Statistics, University of Reading, UK
2009-2012	Esmee Fairbairn Junior Research Fellow in Mathematics, New College, Oxford
2008-2009	Postdoc with Prof. J. Bertoin, University Pierre and Marie Curie, Paris, France

Awards

2011	UK Scopus Young Researcher Award 2011 - Mathematics

2007	Faculty of Engineering and Physical Sciences' Postgraduate Student of the year, University of Manchester, UK
2004	"Sv. Sv. Kiril i Methodii" Student Award for Excellence in Mathematical Studies,University of Sofia, Bulgaria

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Grants and Scholarships

2015-2017	Marie Sklodowska-Curie Individual Fellowship funded from the European Union's Horizon 2020 research and innovation programme - H2020-MSCA-IF-2014
2014	Joint grant from "National Science Fund"-99000 BGN
2012	Grant from *FNRS subsidy pour Mission Scientifique*
2011	Grant from *"Fondation Phillipe Wiener-Maurice Aanspach"* for a visit to ULB, Brussels
2005-2008	Overseas Research Scholarship for my PhD studies, UK

Projects

2015-2017	Project MOCT on topic "Spectral Theory of Non-Selfadjoint Markov processes with Applications in Self-Similarity, Branching Processes and Financial Mathematics" (H2020-MSCA-IF-2014)
2009-2012	Individual project on topic "Small time behaviour of Lévy processes", funded by *Esmee Fairbairn Junior Research Fellowship* at New College, Oxford
2011-2012	Project with Pierre Patie, Universite Libre de Brussels on "Exponential functionals and spectral theory", funded by *FNRS subsidy pour Mission Scientifique* and *Fondation Phillipe Wiener-Maurice Aanspach*, Brussels

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Published and accepted papers

[24] Patie, P. and Savov,M. (2016+) "*Cauchy problem of the non-self-adjoint Gauss-Laguerre semigroups and uniform bounds of generalized Laguerre polynomials*", *Journal of Spectral Theory*, **accepted**, **IF: 1.21**

[23] Kolb, M and Savov, M. (2017) "*Conditional survival distributions of Brownian trajectories in a one dimensional Poissonian environment in the critical case*", *Electron. J. of Probab.*, **22**, No:14, 1–22, **IF:0.95**

[22] Kolb, M. and Savov, M. (2016) "*Transience and recurrence of a Brownian path with limited local time*", *Annals of Probability*, **44**, No. 6, 4083–4132, **IF: 1.79**

[21] Savov, M. and Wang, S.(2015) "*Fluctuation limits of a locally regulated population and generalized Langevin equations*", *Infin. Dimens. Anal. Quantum*

Probab. Relat. Top., **18**, No. 02, 27 pages, DOI: 10.1142/S0219025715500095, **IF: 0.65**

[20] Savov, M. (2014) "*On the range of subordinators*", *Electron. Commun. Probab.*, **19**, No: 84, 1–10

[19] Aurzada, F., Kramm, T. and Savov, M. (2014) "*First passage times of Lévy processes over a one-sided moving boundary*", *Markov Process. Related Fields*, **accepted**

[18] Kolb, M. and Savov, M. (2014) "*Exponential ergodicity of killed completely asymmetric Lévy processes in a finite interval*", *Electron. Commun. Probab.* **14**, No.1, 1–9, DOI: 10.1214/ECP.v19-3006, ISSN: 1083-589X

[17] Patie, P. and Savov, M. (2013) "*Exponential functional of Lévy processes: Generalized Weierstrass products and WienerHopf factorization*", *Comptes Rendus Mathematique* **351**, No.9-10, 393–396,

[16] Aurzada, F., Doering, L. and Savov, M. (2013) "*Chung LIL for Lévy processes at small times*", *Bernoulli* **19**, No.1, 115–136,

[15] Kolb, M., Savov, M. and Wübcker, A. (2013) "*Geometric ergodicity of a hypoelliptic diffusion modelling the melt-spinning process of nonwoven materials*", *SIAM J. Math. Anal.* **45** No.1, 1–13

[14] Patie, P. and Savov, M. (2012) "*Extended factorizations of exponential functionals of Lévy processes*", *Electron. J. of Probab.* **17**, No.38, 1–22

[13] Pardo, J.C., Patie, P. and Savov, M. (2012) "*A Wiener-Hopf type of factorization for the exponential functional of Lévy processes*", *J. of London Math. Soc.* **96** (2), 930–956

[12] Kuznetsov A., Pardo J.C. and Savov, M. (2012) "*Distributional properties of exponential functionals of Lévy processes*", *Electron. J. of Probab.* **17**, No.8, 1–35

[11] Doering, L. and Savov, M. (2011) "*(Non) Differentiability and asymptotics for renewal densities of subordinators*", *Electron. J. of Probab.* **16**, No.17, 470–503

[10] Chan, T., Kyprianou A. and Savov, M. (2011) "*Smoothness of scale functions for spectrally negative Lévy processes*", *Probab. Theory and Related*

Fields **150**, 691–708

[9] Savov, M. and Winkel, M. (2010) "*Right inverses of Levy processes: the excursion measure in the general case*", *Electron. Comm. in Probab.* **38**, No. 15, 572–584

[8] Savov, M. (2010) "*Small time one-sided LIL behaviour for Lévy processes at zero*", *J. of Theoret. Probab.* **23**, No.1, 209–236

[7] Bertoin, J. and Savov, M. (2010) "*Some applications of duality for Lévy processes in a half-line*", *Bull. of London Math. Soc.* **43**, 97–111

[6] Doering, L. and Savov, M. (2010) "*Application of renewal theorems to exponential moments of local times*", *Electron. Comm. in Probab.* **38**, No.15, 263–269

[5] Doney, R. and Savov, M. (2010) "*Right inverses of Lévy processes*", *Ann. of Probab.* **38**, No.4, 1390–1400

[4] Doney, R. and Savov, M. (2010) "*The asymptotic behavior of densities related to the supremum of a stable process*", *Ann. of Probab.* **38**, No.1, 316–326

[3] Doney, R., Maller, R. and Savov, M. (2009) "*Renewal theorems and stability for the reflected process*", *Stochastic Process. Appl.* **119**, No.4 , 1270–1297

[2] Savov, M. (2009) "*Small time two-sided LIL behavior for Lévy processes at zero*", *Probab. Theory and Related Fields* **144**, No.1-2, 79–98

[1] Savov, M. (2008) "*Curve crossing for the reflected Lévy process at zero and infinity*", *Electron. J. of Probab.* **13**, No.7, 157–172

Submitted papers

[1] Patie, P. and Savov,M. (2015+) "*Spectral expansions for generalized Laguerre semigroups*"

Recent Conferences | Talks

2016 "*Brownian motion* ", (invited educational talk), UCHIMI'16, Blagoevgrad, Bulgaria

2016 "*Bernstein-Gamma functions and exponential functionals of Lévy processes*", (invited talk), 4th Workshop on Fractional Calculus, Probability and Non-

Local Operators: Applications and Recent Developments FCPNLO 2016, Bilbao, Spain

2016 “*Bernstein-Gamma functions and exponential functionals of Lévy processes*“, (invited talk), 8th International Conference on Lévy processes, Angers, France

2016 “*Transience and recurrence of a Brownian path with limited local time*“, (invited talk), Stochastic processes under constraints, Augsburg, Germany

2016 “*Bernstein-Gamma functions and their applications in probability theory*“, (keynote lecture), 17th International Summer Conference on Probability and Statistics ISCPS’16, Pomorie, Bulgaria

2015 “The spectral theory of generalized Laguerre semigroups and its applications to positive self-similar Markov processes“, (plenary talk), International Congress of Mathematics MICOM-2015, Athens, Greece

2015 “The spectral theory of generalized Laguerre semigroups and its applications to positive self-similar Markov processes“, (plenary talk), Adventures in Self-Similarity, Cornell, USA

2015 “Recent developments in exponential functionals of Lvy processes“, 44 Spring Conference of the Society of Bulgarian Mathematicians, Camchia, Bulgaria

2015 “Some thoughts on spectral theory of non-self-adjoint Markov processes with emphasis on the class of Laguerre semigroups.“, Belgium Luxemburgh seminar in probability, Liege, Belgium

2014 “Brownian motion with limited local time”, invited speaker, Persistence probabilities and related fields, Darmstadt, Germany

2013 “Some spectral properties for a class of non-self-adjoint operators related to Markov processes”, From Spectral Gaps to Particle Filters, Reading, UK

2013 “Some spectral problems associated to non-self-adjoint selfsimilar semigroups”, invited speaker, 7th International Conference on Lévy Processes, Wroclaw, Poland

2012 “Eigenvalue expansions of invariant Feller-Lamperti semigroups generated by non-local, non-selfadjoint operators via intertwining approach ”, invited speaker, Workshop on Lévy processes and Their Applications, University of Zurich, Switzerland

2012 “Lévy perpetuities”, invited speaker, Workshop IPAS, Brussels, Belgium

2011 “Exponential functionals of Lévy processes”, invited speaker, Conference on Self-Similarity and Related Fields, Le Touquet, France

2011 “Exponential functionals of Lévy processes”, invited speaker to a contributed session, “ttl”, 35th Conference on Stochastic Processes and their applications, Oaxaca, Mexico.

2010 “Exponential functionals of Lévy processes”, invited speaker, Workshop on Lévy processes and Their Applications, University of Zurich, Switzerland

2010 “Lamperti representation of self-similar Markov processes”, invited speaker, 6th International Conference on Lévy Processes, Dresen, Germany

2009	“Right Inverses of Lévy processes”, invited speaker to a special session, 34th Conference on Stochastic Processes and their applications, Berlin, Germany
2008	“Laws of Iterated Logarithms for Lévy processes at small times”, invited speaker, Workshop on Risk Modeling and High Frequency Data, Munich, Germany

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Recent Seminars | Talks

2016	“Bernstein-Gamma functions and exponential functionals of Lévy processes“, National Stochastics Seminar
2015	“Spectral theory of the generalized semigroups of Laguerre and some applications in the theory of the positive self-similar Markov processes“, National Stochastics Seminar
2014	“ Recent developments for exponential functionals and some possible implications for pricing Asian options”, Vienna Seminar in Mathematical Finance and Probability, Vienna, Austria
2014	“Brownian motion with restricted local time at zero”, National Stochastic Seminar, BAS, Sofia, Bulgaria
2013	“Spectral Expansions and Intertwining of Semigroups”, London Mathematical Analysis Seminar, Imperial College, London, UK
2011	“Factorization of Exponential Functionals”, Probability Seminar of Paris 6, Paris, France
2011	“Factorizations of Exponential Functionals”, Probability Seminar of Fields Institute, Toronto, Canada
2010	“Some Results on Box Dimensions of Subordinators”, CIMAT Probability Seminar, Guanajuato, Mexico
2010	“Some Results on Box Dimensions of Subordinators”, UNAM Probability Seminar, Mexico city, Mexico
2010	“Some Applications of Duality for Lévy Processes in a Half-line”, Stochastic Analysis Seminar, Oxford, UK
2010	“Some Applications of Duality for Lévy Processes in a Half-line”, ULB Seminar Meeting, Brussels, Belgium
2010	“Right Inverses of Lévy Processes”, Seminar meeting, Oxford, UK
2010	“Right Inverses of Lévy Processes”, Seminar meeting, Braunschweig, Germany
2009	“Right Inverses of Lévy Processes”, Seminar meeting, Bath, UK
2008	“Laws of Iterated Logarithms for Lévy processes at small times”, Probability Seminar of Paris 6, Paris, France
2008	“Laws of Iterated Logarithms for Lévy processes at small times”, Seminar Meeting, TU-Vienna, Austria

2008	"Laws of Iterated Logarithms for Lévy processes at small times", EURANDOM, Eindhoven, Holland

February 15, 2017