CURRICULUM VITAE

DAMIR KINZEBULATOV

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Academic Positions

Since 2017	Assistant Professor (tenure-track), Université Laval, Quebec City
2016	Visiting Assistant Professor, Indiana University, Bloomington
Fall 2015	Postdoctoral Fellow, McGill University and the CRM, Montreal (with I. Polterovich, D. Jakobson, J. Toth)
2012 - 2015	Postdoctoral Fellow, The Fields Institute (NSERC) and the University of Toronto (with S. Jaimungal, E. Bierstone, I. Binder)
Spring 2012	Postdoctoral Fellow, University of Calgary (with A. Brudnyi)

Education

Ph.D,	University of Toronto, Canada, 2012 (with P. Milman)
M.Sc,	University of Calgary, Canada, 2006 (with E. Braverman)
B.Sc,	Izhevsk State Technical University, Russia, 2004

Publications

Analysis and PDEs

[1] (with K.R. Madou) "Stochastic equations with time-dependent singular drift", arxiv:2105.07312 (2021)

[2] (with Yu.A. Semenov) "Heat kernel bounds for parabolic equations with singular (form-bounded) vector fields", arxiv:2103.11482 (2021)

[3] (with Yu.A. Semenov and R. Song) "Stochastic transport equation with singular drift", arxiv:2102.10610 (2021)

[4] (with Yu.A. Semenov) "Kolmogorov operator with the vector field in Nash class", arxiv:2012.02843 (2020)

[5] (with Yu.A. Semenov) "Fractional Kolmogorov operator and desingularizing weights", **Publ. RIMS Kyoto**, to appear.

[6] (with K.R. Madou) "On admissible singular drifts of symmetric α-stable process", **Math. Nachr.**, to appear.

[7] (with Yu.A. Semenov and K. Szczypkowski) "Heat kernel of fractional Laplacian with Hardy drift via desingularizing weights", **J. London. Math. Soc.**, to appear.

[8] (with Yu.A. Semenov) "Stochastic differential equations with singular (form-bounded) drift", **Osaka J. Math.**, to appear.

[9] "Regularity theory of Kolmogorov operator revisited", **Canadian Math. Bull.**, to appear.

[10] (with Yu.A. Semenov) "$W^{1,p}$ regularity of solutions to Kolmogorov equation with Gilbarg-Serring matrix", Preprint, arXiv:1802.05167 (2018)

[11] (with Yu.A. Semenov) "Brownian motion with general drift", **Stoch. Proc. Appl.**, 130 (2020), p. 2737-2750.

[12] (with Yu.A. Semenov) "On the theory of the Kolmogorov operator in the spaces L^p and C_∞. ", **Ann. Sc. Norm. Super. Pisa Cl. Sci. (5)**, 21 (2020), 1573-1647.

[13] "Feller generators with measure-valued drifts", **Potential Anal.**, 48 (2018), p. 207-222

[14] (with I. Binder and M. Voda) "Non-perturbative localization with quasi-periodic potential in continuous time", **Comm. Math. Phys.**, 351 (2017), p. 1149-1175

[15] "A new approach to the L^p-theory of $-\Delta+b\cdot\nabla$, and its applications to Feller processes with general drifts", **Ann. Sc. Norm. Super. Pisa Cl. Sci. (5)**, 17 (2017), p. 685-711.

[16] "Feller evolution families and parabolic equations with form-bounded vector fields", **Osaka J. Math.**, 54 (2017), p. 499-516.

[17] (with A. Brudnyi) "Kohn decomposition for forms on coverings of complex manifolds constrained along the fibres", **Trans. Amer. Math. Soc.**, 369 (2017), p. 167-186.

[18] (with A. Brudnyi) "Towards Oka-Cartan theory for algebras of holomorphic functions on coverings of Stein manifolds II", **Revista Mat. Iberoamericana**, 31(4) (2015), p. 989-1032.

[19] (with A. Brudnyi) "Towards Oka-Cartan theory for algebras of holomorphic functions on coverings of Stein manifolds I", **Revista Mat. Iberoamericana**, 31(4) (2015), p. 1167-1230.

[20] (with A. Brudnyi) "Holomorphic almost periodic functions on coverings of complex manifolds", **New York J. Math.**, 17a (2011) p. 267-301.

[21] (with L. Shartser) "Schrödinger operators and unique continuation. Towards an optimal result", **J. Funct. Anal.**, 258 (2010) p. 2662-2681.

[22] (with A. Brudnyi) "Holomorphic semi-almost periodic functions", **Integral Equ. Operat. Theory**, 66 (2010) p. 293-325.

[23] (with A. Brudnyi) "On algebras of holomorphic functons with semi-almost periodic boundary values", **Comptes rendus math. Canada**, 32 (2010), p. 1-12.

[24] "A note on Gagliardo-Nirenberg type inequalities on analytic sets", **Comptes rendus math. Canada**, 30 (2009) p.97-105.

[25] (with A. Brudnyi) "On uniform subalgebras of L^∞ on the unit circle generated by almost periodic functions", **St. Petersburg Math. J.**, 19 (2008) p. 495-518.

Earlier research while studying for B. Sc and M. Sc:

[26] "Systems with distributions and viability theorem", **J. Math. Anal. Appl.**, 331 (2007) p. 1046-1067.

[27] (with V. Derr) "Dynamical generalized functions and the multiplication problem", **Russian Math.**, 51 (2007) p. 32-43.

I also have several papers in Applied Mathematics, see below.

Some recent talks (2017-2021)

– CMS Summer Meeting, Ottawa (June 2021)
– Seminar "Theory of Markov semigroups and Schrödinger operators", Wroclaw, Poland (January 2021)
– Probability seminar at the University of Illinois, Urbana-Champaign (March 2020)
– CMS Winter Meeting, Toronto (December 2019)
– Workshop on the theory and applications of SPDEs, The Fields Institute, Toronto (June 2019)
– CMS Summer Meeting, Regina (June 2019)
– "Probability and Analysis", Bedlewo, Poland (May 2019)
– Northeastern Analysis Meeting, SUNY New Paltz (October 2018)
– "Semigroups of operators: theory and applications", Kazimierz Donly, Poland (October 2018)
– Joint Meeting of the Italian and the Polish Mathematical Societies, Wroclaw, Poland (September 2018)
– CMS Summer Meeting, Fredericton (June 2018)
– AMS Sectional Meeting, Boston (April 2018)
– Congress of the Americas", Montréal (July 2017)
– AMS Sectional Meeting, CUNY, New York (May 2017)

Grants

– NSERC Discovery Grant (2017-2022)

– FRQNT Nouveaux chercheurs (2018-2020)

Postdocs

Ryan Gibara (2020 - present)

Ph.D. students

Raphaël Madou (2019 - present)

Reihaneh Vafadar (2020 - present)

Xiaoting Li (2018 - present), co-direction

Masters students

Aidan Fuhrer (2021 - present), co-direction

Wilson Fotsing (Jan 2020 - Dec 2020)

Thierry Kouontchou Tchemb (2017 - 2019), co-direction

Conferences and seminars organized

– "Analytic Function Spaces and Their Applications", a six-month program at the Fields Institute, Toronto, 2021 (with Ilia Binder and Javad Mashreghi)

– Special session "Recent Advances in Complex and Harmonic Analysis", CMS summer meeting, Ottawa, 2021 (with Ilia Binder and Javad Mashreghi)

– Special session "Recent Advances in Complex and Harmonic Analysis", CMS winter meeting, Montreal, 2020 (with Ilia Binder and Javad Mashreghi)

– Zoom seminar "Non-local operators, probability and singularities" (with Karol Szczypkowski)

– Special session "Complex Analysis and Operator Theory", CMS winter meeting, Toronto, 2019 (with Ilia Binder and Javad Mashreghi)

– "Complex Analysis and Spectral Theory. A conference in celebration of Thomas Ransford's 60th birthday", Université Laval, 2018

– Special session "Complex Analysis and Complex Geometry" at the CMS winter meeting, Ottawa, 2013 (with Rasul Shaikov)

Awards

– Malcolm Slingsby Robertson Prize in Mathematics (Best Thesis Award in Math Department, University of Toronto) (2013)

– University of Toronto Connaught Scholarship (2007-2011)

Applied Mathematics

[1] "Algorithmic trading with learning" (with A. Cartea, S. Jaimungal), Int. J. Applied and Theoretical Finance, 19, no.4, 1650028 (2016).
[2] Optimal accelerated share repurchase (with S. Jaimungal, D. Rubisov), Applied. Math. Finance, 24, no.3 (2017).
[3] "Nicholson's blowflies equation with a distributed delay" (with E. Braverman), Canadian Appl. Math. Q., 14 (2006) p. 107-128.
[4] "On linear perturbations of the Ricker model" (with E. Braverman), Math. Biosci., 202 (2006), p. 323-339.
[5] "On the extension of Schwartz distributions to the space of discontinuous test functions of several variables", Rocky Mountain J. Math, 39 (2009, accepted for publication in 2006), p. 32-43.

Memberships

– Board of directors of the Canadian Mathematical Society (2019-2022)

– Centre de recherche en mathématiques, Montréal

– Centre interdisciplinaire en modélisation mathématique de l'Université Laval