

Paata Ivanisvili

Curriculum Vitae

Employment

- Spring 2017 **Postdoctoral Fellow**, *Mathematical Sciences Research Institute (MSRI)*.
Harmonic Analysis
- 2015-Present **Postdoctoral Researcher**, *Kent State University (KSU)*.
Mentor: Fedor Nazarov
- 2011-2013 **Research Engineer**, *Chebyshev Laboratory at Saint-Petersburg State University (SPbSU)*.

Education

- 2013-2015 **Ph.D.**, *Michigan State University (MSU)*, Mathematics.
Advisor: Alexander Volberg
- 2011-2014 **Ph.D.**, *Saint Petersburg State University (SPbSU)*, Mathematics.
Advisors: Sergei Kislyakov, Vasily Vasyunin
- 2006-2011 **M.S.**, *SPbSU*, Mathematics.

Research interests

Analysis, probability, PDE and geometry.

Publications

Published and accepted papers

- **Bellman function approach to the sharp constants in uniform convexity**, to appear in *Advances in Calculus of Variations*.
- **Lower bounds for uncentered maximal function in any dimensions**, with *B. Jaye and F. Nazarov*, *Int. Math. Res. Notices*, Vol. 2016, Issue 00 (2016).
- **Bellman function for extremal problems in BMO II: evolution**, with *D. Stolyarov, V. Vasyunin and P. Zatitskiy*, 127 pages, to appear in *Memoirs of the AMS*.
- **Bellman function for extremal problems in BMO**, with *N. N. Osipov, D. M. Stolyarov, V. I. Vasyunin and P. B. Zatitskiy*.
Trans. Amer. Math. Soc., Vol. 368, pp. 3415–3468 (2016)
- **Bellman VS Beurling: sharp estimates of uniform convexity for L_p spaces**, with *P. B. Zatitskiy and D. M. Stolyarov*.
St. Petersburg Math. J., Vol. 27, pp. 333–343 (2016)

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- **Inequality for Burkholder's martingale transform.**
Analysis & PDE, Vol. 8, No. 4, pp. 765–806 (2015)
- **Hessian of Bellman functions and uniqueness of Brascamp–Lieb inequality, with A. Volberg.**
J. London Math. Soc., Vol. 92, 3, pp. 657–674 (2015)
- **Sharp estimates of integral functionals on classes of functions with small mean oscillation, with N. N. Osipov, D. M. Stolyarov, V. I. Vasyunin and P. B. Zatitskiy.**
Comptes Rendus Mathematique, Vol. 353, 12, pp. 1081–1085 (2015)
- **J-closed finite collections of Hardy-type subspaces.**
Journal of Mathematical Sciences, Vol 194, 6, pp. 645–650 (2013)
- **On Bellman function for extremal problems in BMO, with N. N. Osipov, D. M. Stolyarov, V. I. Vasyunin and P. B. Zatitskiy.**
Comptes Rendus Mathematique, Vol. 350, 11-12, pp. 561–564 (2012)
- **Correction up to a function with sparse spectrum and uniformly convergent Fourier series, with S. Kislyakov.**
Journal of Mathematical Sciences, Vol 172, 2, pp. 195–206, (2011)

Submitted

- **Improving Beckner's bound via Hermite functions, with A. Volberg,** arXiv:1606.08500.
- **Boundary value problem and the Ehrhard inequality,** arXiv:1605.04840.
- **Bellman partial differential equation and the hill property for classical isoperimetric problems, with A. Volberg,** arXiv:1506.03409.
- **Isoperimetric functional inequalities via the maximum principle: the exterior differential systems approach, with A. Volberg,** arXiv:1511.06895.

Preprint

- **Poincaré inequality $3/2$ on the Hamming cube, with A. Volberg,** arXiv:1608.04021.
- **A bundling problem revisited,** arXiv:1602.00983.
- **On weak and strong sharp weighted estimates of square function, with F. Nazarov and A. Volberg.**

Teaching Experience

Spring 2016 Analytic Geometry and Calculus I, KSU
 Fall 2015 Linear Algebra with Applications, KSU
 2014-2015 Differential Equations, MSU
 2013-2014 Multivariable Calculus, MSU

Languages

English: Fluent
 Georgian: Native speaker

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Greek: Basic
Russian: Fluent