

## Curriculum Vitae for Eugenia Malinnikova, June 2014

**Contact information:** Department of Mathematical Sciences

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**Date and place of birth** 23.04.1974, St.Petersburg, Russia (Leningrad, USSR)

**Personal** Citizenship: Russia; Residency: Norway; Gender: Female; Civil status: Married, two children

**Education** 1999 Ph.D. in Mathematics, St.Petersburg State University

**Current position** Associate Professor, Department of Mathematical Sciences, NTNU

**Experience, including visiting positions**

January 2004- now	Associate Professor	NTNU
Fall 2012-Spring 2013	Research fellow	Norwegian Center for Advanced Study, Oslo, Norway
Fall 2008-Spring 2009	Visiting scholar	UC Berkeley, USA
Spring 2008	Visiting Scholar	University of Marseille, France
Fall 2003	Visiting Lecturer	UCDavis, USA
2001-2003	Postdoctoral Fellow	NTNU, Norway
Fall 2000	Postdoctoral Fellow	University of Missouri-Columbia, USA

### Co-organizer of conferences

Workshop on Uncertainty and Time-Frequency Analysis, Oslo, February, 2013; CADEA Conference (Complex Analysis, Differential Equations and Applications), 2010, Trondheim; Workshop on PDE and Harmonic Analysis, 2005, Trondheim

### Conferences and seminar talks

More than 30 seminar and more than 20 conference talks, including invited talks at: Congreso de la Real Sociedad Matemática Española, Avila, 2011; Hilbert spaces of entire functions and Operator Theory, Barcelona, 2011; Operator related Function Theory, ESI Workshop, Vienna, 2012; Harmonic Analysis Meeting, Toulouse, 2012; Oberwolfach Workshop, Structured families of functions; Oberwolfach, 2013; 26th Nordic and 1st European Congress of Mathematicians, Lund, 2013; CIMPA-2013, New Trends in Applied Harmonic Analysis, Mar del Plata, Argentina, 2013; Winter School of Chebyshev Laboratory, St. Petersburg State University, 2013, mini-course.

### Administrative duties

2009-2012 Coordinator of Bachelor and Master in Mathematics program, NTNU

2006-2012 Norwegian mathematical competition for high school students, Abelkonkurransen, (head of the problem selection committee)

**Teaching and student supervision** I teach at undergraduate and graduate levels at NTNU from 2002, the courses include Calculus, Linear Algebra, Geometry, Measure theory. I was also teaching undergraduate courses at University of Missouri, Columbia (Fall 2000) and University of California, Davis (Fall 2003).

I have supervised a number of master and bachelor projects at NTNU and Ph.D. theses for Kjersti Solberg Eikrem (defended September 2013) and Maru Alamirew Guadie (defended October 2013).

### Publication list

#### Peer-reviewed journal publications

- (1) (with S.E.Rukshin) *On one Steinhaus problem*, Vestnik St. Petersburg Univ. Math., **28** 1995, no. 1, 28–32.
- (2) (with V.P.Havin) *Uniform Approximation by Harmonic Differential Forms. A Constructive Approach*, St.Petersburg Math. J. **9** (1998), no. 6, 1149–1180.
- (3) *Uniform Approximation by Harmonic Differential Forms on Compact Subsets of Riemannian Manifolds*, St.Petersburg Math. J. **11** (2000), no. 4, 625–641.
- (4) (with Yu.Lyubarskii) *On approximation of subharmonic functions*, J. d'Anal. Math. **83** (2001), 121–149.
- (5) *Propagation of smallness for solutions of generalized Cauchy-Riemann systems*, Proc. Edinburgh Math. Soc. **47** (2004), no. 1, 191–204.
- (6) (with A.Borichev, Yu.Lyubaskii, and P.Thomas) *Radial growth of functions in the Korenblum space*. St. Petersburg Math. J., **21** (2010), no. 6, 877–891.
- (7) *Orthonormal sequences in  $L^2(\mathbb{R}^d)$  and time frequency localization*, Journal Fourier Anal. Appl, **16** (2010), 983–1006.
- (8) (with S.Vessella) *Quantitative uniqueness for elliptic equations with singular lower order terms*, Math. Ann. **353** (2012), no. 4, 1157–1181.
- (9) (with Yu.Lyubarskii) *Radial oscillation of harmonic functions in the Korenblum class*, Bull. London Math. Soc. **44** (2012), no. 1, 68–84.
- (10) (with K.S.Eikrem) *Radial growth of harmonic functions in the unit ball*, Math. Scand. **110** (2012), no. 2, 273–296.
- (11) (with K.Gröchenig) *Time-frequency localization of Riesz bases for  $L^2(\mathbb{R}^d)$* , Rev. Math. Iberoam. **29** (2013), no. 1, 115–134.
- (12) (with M. Guadie) *Stability and regularization for determining sets of discrete Laplacian*, Inverse Problems **29** (2013) no. 7, 075018.
- (13) (with K.S. Eikrem and P.Mozolyako) *Wavelet decomposition of harmonic functions in growth spaces*, J. Anal. Math. **122** (2014), 87–111.
- (14) (with M.Guadie) *On three balls theorem for discrete harmonic functions*, to appear in Comput. Methods Funct. Theory, DOI 10.1007/s40315-014-0076-9

#### Submitted articles

- (15) (with A. Aleman, Yu. Lyubarkii, K.-M. Perfekt) *Trace ideal criteria for embeddings and composition operators on model spaces*, 2013
- (16) (with A. Logunov) *On ratios of harmonic functions*, 2014
- (17) (with K. S. Eikrem) *Coefficient multipliers of growth spaces of harmonic functions*, 2014

#### Peer-reviewed Publications in Conference Proceedings

- (18) *The theorem on three spheres for harmonic differential forms*, in “Complex Analysis, Operators and Related Topics”, 213–220, Operator Theory Adv. Appl., Vol. 113, Birkhauser, Basel, 2000.
- (19) *Measures on the sphere orthogonal to harmonic gradients*, in “Complex Analysis and Dynamical Systems”, 181–192, Contemp. Math., 364, Amer. Math. Soc., Providence, RI, 2004.
- (20) *On the existence of harmonic differential forms with prescribed singularities*, 207–213, in “Complex analysis and Potential theory”, World Scientific, 2007.
- (21) *Quantitative transfer of smallness for solutions of elliptic equations with analytic coefficients and their gradients*, 1185–1193, in “More Progress in Analysis”, World Scientific, 2008.

- (22) (with Yu.Lyubarkii) *Composition operators on model spaces*, Recent trends in Analysis: Proceedings of the conference in honor of Nikolai Nikolski, Bordeaux; Theta Foundation, Bucharest, 149–157, 2013.

#### Conference talks 2010-2014

- *Time-frequency localization of orthonormal sequences and bases in  $L^2(\mathbb{R}^d)$* , May 2010, 12th Annual Workshop on Applications and generalizations of Complex Analysis, Aveiro, Portugal
- *Radial behaviour of harmonic functions*, February 2011, Congreso de la Real Sociedad Matemática Española, Avila, Spain
- *Localization of Riesz bases for  $L^2(\mathbb{R}^d)$* , June 2011, Hilbert spaces of entire functions and Operator Theory, Barcelona, Spain
- *Boundary behavior of harmonic functions in growth spaces*, March 2012, Operator related Function Theory, ESI Workshop, Vienna, Austria
- *Composition operators in model spaces*, August 2012, Complex analysis and dynamical system; Mittag-Leffler, Stockholm, Sweden
- *Localization properties of Riesz bases for  $L^2$* , May 2012, Harmonic Analysis Meeting, Toulouse, France
- *Wavelet characterization of harmonic functions in weighted spaces and its applications*, March 2013, Journées d'analyse Harmonique, Marseille, France
- *Wavelet characterization of some spaces of distributions* February 2013, Oberwolfach Workshop, Structured families of functions; Oberwolfach, Germany
- *Coefficients of harmonic functions in growth spaces on the unit ball*, April 2014, Complex Analysis and related topics, St Petersburg, Russia