

# Departmental List of Publications for the Year 2011

## BOOKS

- [1] Mark Agranovsky, Matania Ben-Artzi, Greg Galloway, Lavi Karp, Simeon Reich, David Shoikhet, Gilbert Weinstein, and Lawrence Zalcman, editors. *Complex analysis and dynamical systems IV. Part 1*, volume 553 of *Contemporary Mathematics*, Providence, RI, 2011. American Mathematical Society. Function theory and optimization.
- [2] Mark Agranovsky, Matania Ben-Artzi, Greg Galloway, Lavi Karp, Simeon Reich, David Shoikhet, Gilbert Weinstein, and Lawrence Zalcman, editors. *Complex analysis and dynamical systems IV. Part 2*, volume 554 of *Contemporary Mathematics*, Providence, RI, 2011. American Mathematical Society. General relativity, geometry, and PDE.
- [3] Nikolai Chernov. *Circular and linear regression*, volume 117 of *Monographs on Statistics and Applied Probability*. CRC Press, Boca Raton, FL, 2011.
- [4] Jan Janas, Pavel Kurasov, Ari Laptev, Sergei Naboko, and Günter Stolz, editors. *Spectral theory and analysis*, volume 214 of *Operator Theory: Advances and Applications*. Birkhäuser/Springer Basel AG, Basel, 2011.

## ARTICLES

- [1] A. Al-Sharadqah and N. Chernov. Statistical analysis of curve fitting methods in errors-in-variables models. *Teor. Īmovĭr. Mat. Stat.*, (84):4–17, 2011.
- [2] P. Bálint, N. Chernov, and D. Dolgopyat. Limit theorems for dispersing billiards with cusps. *Comm. Math. Phys.*, 308(2):479–510, 2011.
- [3] B. Bayar, N. Bouaynaya, and R. Shterenberg. Clustering gene expression data using probabilistic non-negative matrix factorization. In *Genomic Signal Processing and Statistics (GENSIPS), 2011 IEEE International Workshop on*, pages 143–146, dec. 2011.
- [4] Alexander Blokh, Douglas K. Childers, John C. Mayer, and Lex Oversteegen. Non-degenerate quadratic laminations. *Topology Proc.*, 38:313–360, 2011.
- [5] Alexander M. Blokh, Clinton P. Curry, and Lex G. Oversteegen. Locally connected models for Julia sets. *Adv. Math.*, 226(2):1621–1661, 2011.
- [6] N. Bouaynaya, M. Rasheed, R. Shterenberg, and D. Schonfeld. Intervention in general topology gene regulatory networks. In *Genomic Signal Processing and Statistics (GENSIPS), 2011 IEEE International Workshop on*, pages 222–225, dec. 2011.
- [7] N. Bouaynaya, R. Shterenberg, and D. Schonfeld. Inverse perturbation for optimal intervention in gene regulatory networks. *Bioinformatics*, 27(1):103–110, 2011.
- [8] N. Bouaynaya, R. Shterenberg, and D. Schonfeld. Robustness of inverse perturbation for discrete event control. In *Engineering in Medicine and Biology Society, EMBC, 2011 Annual International Conference of the IEEE*, pages 2422–2425, 30 2011-sept. 3 2011.
- [9] N. Chernov. Fitting circles to scattered data: parameter estimates have no moments. *Metrika*, 73(3):373–384, 2011.
- [10] N. Chernov and H. Ma. Least squares fitting of quadratic curves and surfaces. In S. R. Yoshida, editor, *Computer Vision*, pages 285–302. Nova Science Publ., 2011.
- [11] Sergio Dain, Gilbert Weinstein, and Sumio Yamada. A counterexample to a Penrose inequality conjectured by Gibbons. *Classical Quantum Gravity*, 28(8):085015, 6, 2011.
- [12] David Damanik and Günter Stolz. A continuum version of the Kunz-Souillard approach to localization in one dimension. *J. Reine Angew. Math.*, 660:99–130, 2011.
- [13] Lee M. Goswick and Nándor Simányi. Homotopical complexity of 2d billiard orbits. *Studia Sci. Math. Hungar.*, 48(4):540–562, 2011.
- [14] Paul Jung. Indicator fractional stable motions. *Electron. Commun. Probab.*, 16:165–173, 2011.
- [15] Yu. E. Karpeshina. Zero-range model of  $p$ -scattering by a potential well. In *Spectral theory and analysis*, volume 214 of *Oper. Theory Adv. Appl.*, pages 45–66. Birkhäuser/Springer Basel AG, Basel, 2011.
- [16] Chan-Gyun Kim and James R. Ward. Nonresonance for a one-dimensional  $p$ -Laplacian with strong singularity. *Appl. Math. Lett.*, 24(8):1400–1404, 2011.

- [17] Ian Knowles and Mary A. LaRussa. Conditional well-posedness for an elliptic inverse problem. *SIAM J. Appl. Math.*, 71(4):952–971, 2011.
- [18] Junfang Li and Xiangjin Xu. Differential Harnack inequalities on Riemannian manifolds I: linear heat equation. *Adv. Math.*, 226(5):4456–4491, 2011.
- [19] N. Mavinga and M. N. Nkashama. Strong full bounded solutions of nonlinear parabolic equations with nonlinear boundary conditions. *Nonlinear Anal.*, 74(15):5171–5188, 2011.
- [20] Gábor Moussong and Nándor Simányi. Circle decompositions of surfaces. *Topology Appl.*, 158(3):392–396, 2011.
- [21] Roger Nichols and Günter Stolz. Spectral properties of the discrete random displacement model. *J. Spectr. Theory*, 1(2):123–153, 2011.
- [22] Lex G. Oversteegen and Kirsten I. S. Valkenburg. Characterizing isotopic continua in the sphere. *Proc. Amer. Math. Soc.*, 139(4):1495–1510, 2011.
- [23] Yoshimi Saitō and Tomio Umeda. Eigenfunctions at the threshold energies of magnetic Dirac operators. *Rev. Math. Phys.*, 23(2):155–178, 2011.
- [24] Günter Stolz. An introduction to the mathematics of Anderson localization. In *Entropy and the quantum II*, volume 552 of *Contemp. Math.*, pages 71–108. Amer. Math. Soc., Providence, RI, 2011.
- [25] Gunter Stolz and Micael Loss. Localization for the random displacement model. In P. Exner, editor, *Mathematical Results in Quantum Physics. Proceedings of the QMath 11 Conference*. World Scientific, 2011.
- [26] Yu. Stoyan, A. Pankratov, T. Romanova, and N. Chernov. Pseudo-normalized phi-functions for two-dimensional phi-objects. *Doklady Akademii Nauk Ukrainy*, 6:29–34, 2011.