Departmental List of Publications for the Year 2014

BOOKS

[1] Peter V. O'Neil. *Beginning partial differential equations.* Pure and Applied Mathematics (Hoboken). John Wiley & Sons, Inc., Hoboken, NJ, third edition, 2014.

ARTICLES

[1] H. Abdul-Rahman and N. Chernov. Fast and numerically stable circle fit. *J. Math. Imaging Vision*, 49(2):289–295, 2014.

[2] Belhassen Bayar, Nidhal Bouaynaya, and Roman Shterenberg. Probabilistic non-negative matrix factorization: Theory and application to microarray data analysis. *Journal of Bioinformatics and Computational Biology*, 12(01):1450001, 2014. PMID: 24467759.

[3] Alexander Blokh, Lex Oversteegen, Ross Ptacek, and Vladlen Timorin. Dynamical cores of topological polynomials. In *Frontiers in complex dynamics*, volume 51 of *Princeton Math. Ser.*, pages 27–48. Princeton Univ. Press, Princeton, NJ, 2014.

[4] Alexander Blokh, Lex Oversteegen, Ross Ptacek, and Vladlen Timorin. The main cubioid. *Nonlinearity*, 27(8):1879–1897, 2014.

[5] Clément Dombry and Paul Jung. A Lindeberg-Feller theorem for stable laws. *Statist. Probab. Lett.*, 84:198–203, 2014.

[6] C. Fischbacher and G. Stolz. The infinite XXZ quantum spin chain revisited: structure of low lying spectral bands and gaps. *Math. Model. Nat. Phenom.*, 9(5):44–72, 2014.

[7] Alexandra Fry and Carmeliza Navasca. Tensor restricted isometry property for multilinear sparse system of genomic interactions. In *Signals, Systems and Computers, 2014 48th Asilomar Conference on*, pages 741–744, Nov 2014.

[8] Fritz Gesztesy and Rudi Weikard. Some remarks on the spectral problem underlying the Camassa-Holm hierarchy. In *Operator theory in harmonic and non-commutative analysis*, volume 240 of *Oper. Theory Adv. Appl.*, pages 137–188. Birkhäuser/Springer, Cham, 2014.

[9] Pengfei Guan and Junfang Li. A mean curvature type flow in space forms. *International Mathematics Research Notices*, 2014.

[10] L. C. Hoehn, L. G. Oversteegen, and E. D. Tymchatyn. Continuum theory. In *Recent progress in general topology. III*, pages 581–600. Atlantis Press, Paris, 2014.

[11] Logan Hoehn and Christopher Mouron. Hierarchies of chaotic maps on continua. *Ergodic Theory Dynam. Systems*, 34(6):1897–1913, 2014.

[12] Takashi Ichinose and Yoshimi Saitō. Improved Sobolev embedding theorems for vector-valued functions. *Funkcial. Ekvac.*, 57(2):245–295, 2014.

[13] S. Jansen and P. Jung. Wigner crystallization in the quantum 1D jellium at all densities. *Comm. Math. Phys.*, 331(3):1133–1154, 2014.

[14] Paul Jung. Random-time isotropic fractional stable fields. *J. Theoret. Probab.*, 27(2):618–633, 2014.

[15] Paul Jung and Greg Markowsky. On the Tanaka formula for the derivative of self-intersection local time of fractional Brownian motion. *Stochastic Process. Appl.*, 124(11):3846–3868, 2014.

[16] Kenichi Kanatani, Ali Al-Sharadqah, Nikolai Chernov, and Yasuyuki Sugaya. Hyper-renormalization: Non-minimization approach for geometric estimation. *IPSJ Transactions on Computer Vision and Applications*, 6:143–159, 2014.

[17] Stefan Kindermann and Carmeliza Navasca. News algorithms for tensor decomposition based on a reduced functional. *Numer. Linear Algebra Appl.*, 21(3):340–374, 2014.

[18] Ian Knowles, Li Feng, and Ajay Mahato. The inverse volatility problem for european options. *Electron. J. Diff. Eqns.*, Conference 21:183–195, 2014.

[19] Ian Knowles and Robert J. Renka. Methods for numerical differentiation of noisy data. *Electron. J. Diff. Eqns.*, Conference 21:235–246, 2014.

[20] Yong-Hoon Lee, Seong-Uk Kim, and Eun Kyoung Lee. Three solutions theorem for p-Laplacian problems with a singular weight and its application. *Abstr. Appl. Anal.*, pages Art. ID 502756, 9, 2014.

[21] Nsoki Mavinga and Mubenga N. Nkashama. Strong bounded solutions for nonlinear parabolic systems. *Electron. J. Diff. Eqns.*, Conference 21:197–221, 2014.

[22] Sergey Morozov, Leonid Parnovski, and Roman Shterenberg. Complete asymptotic expansion of the integrated density of states of multidimensional almost-periodic pseudo-differential operators. *Ann. Henri Poincaré*, 15(2):263–312, 2014.

[23] Amanda M. Rehm, Elizabeth Y. Scribner, and Hassan M. Fathallah-Shaykh. Proper orthogonal decomposition for parameter estimation in oscillating biological networks. *J. Comput. Appl. Math.*, 258:135–150, 2014.

[24] Elizabeth Scribner, Olivier Saut, Paula Province, Asim Bag, Thierry Colin, and Hassan M. Fathallah-Shaykh. Effects of anti-angiogenesis on glioblastoma growth and migration: Model to clinical predictions. *PLoS ONE*, 9(12):e115018, 2014.

[25] R. Shterenberg and V. Sukhanov. RiemannHilbert approach to the inverse problem for the Schrödinger operator on the half-line. *Algebra i Analiz*, 26:198215, 2014.

[26] Henghui Zou. Blow-up rates for semi-linear reaction-diffusion systems. *J. Differential Equations*, 257(3):843–867, 2014.