

Departmental List of Publications for the Calendar Year 2020

K. Antwi-Fordjour, S. Kim and M. Nkashama, Global analysis of the Gierer-Meinhardt system with general linear boundary conditions in a random environment, *J. Applied Anal. Computation* 10 (2020), 1980-1994.

S. Bhattacharya and A. Blokh, Very badly ordered cycles of interval, *Journal of Difference Equations and Applications* 26 (2020), 1067-1084.

S. Bhattacharya and A. Blokh, Over-rotation intervals of bimodal interval maps, *Journal of Difference Equations and Applications* 26 (2020), 1085-1113.

A. Blokh, L. Oversteegen, R. Ptacek and V. Timorin, Laminational models for some spaces of polynomials of arbitrary degree, *Memoirs of AMS* 265 (2020), No. 128.

A. Blokh, L. Oversteegen and V. Timorin, Dynamical generation of parameter laminations, *Contemporary Mathematics* 744 (2020), 205—229.

Hoehn, L. C. and Oversteegen, L. G., A complete classification of hereditarily equivalent plane continua, *Adv. Math.* 368 (2020), 107-131.

L. Hoehn, L. Oversteegen and E. Tymchatyn, A canonical parametrization of paths in \mathbb{R}^n , *Houston J. of Math* 46 (2020), 465-489.

Yu. Karpeshina, Seonguk Kim and R. Shterenberg, “Solutions of Gross-Pitaevskii Equation with Periodic Potential in Dimension Two” in “Analysis as a Tool in Mathematical Physics: in Memory of Boris Pavlov” P. Kurasov, A. Laptev, S. Naboko and B. Simon (eds), *Operator Theory: Advances and Applications* 276 (2020), pp 401-416.

Ian Knowles and Ajay Mahato, The inverse volatility problem for American options, *Discrete and Continuous Dynamical Systems, Series S*, 13 (2020),

C. Navasca, Ramin Goudarzi-Karimi, Guimi Guo and Da Yan, Accurate Tensor Decomposition with Simultaneous Rank Approximation for Surveillance Videos, *Proceedings of the IEEE Asilomar Conference on Signals, Systems and Computers*, Pacific Grove, October 2020.

A. Nayak, A new regularization approach for numerical differentiation, *Inverse Problems in Science and Engineering* 28 (2020), 1747-1772.

Jean Rugamba and Yanni Zeng, "Pointwise asymptotic behavior of a chemotaxis model", *Hyperbolic Problems: Theory, Numerics, Applications, AIMS Series on Applied Mathematics* 10 (2020), 621-629.

N. Selinger, D. Dudko and M. Lyubich, Pacman renormalization and self-similarity of the Mandelbrot set near Siegel parameters, *Journal of the AMS*, 2020, 76 pages.

N. Selinger, K. Rafi and M. Yampolsky, Centralizers in Mapping Class Group and Decidability of Thurston Equivalence, *Arnold Mathematical Journal*, 2020.

G. Stolz, Aspects of the mathematical theory of disordered quantum spin chains. Analytic trends in mathematical physics, *Contemp. Math.* 741 (2020), 163-197.

G. Stolz, D. Lenz and P. Stollmann, An uncertainty principle and lower bounds on Dirichlet Laplacians on graphs, *J. Spectr. Theory* 10 (2020), 115-145.

G. Stolz, Abdul-Rahman and R. Sims, On the regime of localized excitations for disordered oscillator systems, *Lett. Math. Phys.* 110 (2020), 1159-1189.

G. Stolz, H. Abdul-Rahman and C. Fischbacher, Entanglement bounds in the XXZ quantum spin chain, *Ann. Henri Poincaré* 21 (2020), 2327-2366.

Yanni Zeng and Kun Zhao, Corrigendum to 'Optimal Decay Rates for a

Chemotaxis Model with Logistic Growth, Logarithmic Sensitivity and Density-dependent Production/Consumption Rate' [J. Differential Equation (2020) 1379-1411], *J. Differential Equation*, 269 (2020), 6359-6363.

Yanni Zeng and Kun Zhao, Optimal Decay Rates for a Chemotaxis Model with Logistic Growth, Logarithmic Sensitivity and Density-dependent Production/Consumption Rate, *J. Differential Equations* 268 (2020), 1379-1411.

Yanni Zeng and Kun Zhao, Recent Results for the Logarithmic Keller-Segel-Fisher/KPP System, *Bol. Soc. Parana. Mat., special issue for ICMS 2018*, 38 (2020), 37-48