Departmental List of Publications for the Calendar Year 2022

1A.Blokh, L. Oversteegen, A. Shepelevtseva, V. Timorin, *Modeling core parts of* Zakeri slices I, Moscow Mathematical Journal, vol. 22 (2022), #2, 1-31

A.Blokh, L. Oversteegen, V. Timorin, Slices of the Parameter Space of Cubic Polynomial, Trans. Amer. Math. Soc., vol. 375, No 8 (August 2022), 5313–5359

A.Blokh, L. Oversteegen, V. Timorin, *Cutpoints of invariant subcontinua of* polynomial Julia sets, Arnold Mathematical Journal, vol. 8 (2022), 271-284

Bhattacharya, Sourav; Blokh, Alexander; Schleicher, Dierk Unicritical laminations. Fund. Math. 258 (2022), no. 1, 25–63. 37F20 (30C35 37E10 54F15)

Bhattacharya, Sourav; Blokh, Alexander Monotonicity of the over-rotation interval for bimodal maps. Topology Appl. 308 (2022), Paper No. 108004, 14 pp.

J. Li, A fully-nonlinear flow and quermassintegral inequalities in the sphere, (with C. Chen, Pengfei Guan, and J. Scheuer), Pure and Applied Math Quarterly, 18 (2022), no.2, 437-461. And J. Scheuer), Pure and Applied Math Quarterly, 18 (2022), no.2, 437-461.

Li, K., Carroll, M., Vafabakhsh, R., Wang, X., Wang, J., "DNAcycP: a Novel Tool for DNA Cyclizability Prediction", Nucleic Acids Research, March 2022; gkac162. DOI:10.1093/nar/gkac162. Online app DNAcycP. Python script available on GitHub: kerenli/dnacycp.

K. Li, Yang, J. , "Score Matching Representative Approach for Big Data Analysis with Generalized Linear Model", Electronic Journal of Statistics, 2022; 16(1):592- 635. DOI:10.1214/21-EJS1965.

Hale, Cameron G., Kelleher, Jonathan R. and Mayer, John C.; Multiplicity of Hexagon Numbers. (MAA) College Mathematics Journal, November, 2022.

Blokh, Alexander M.; Sharkovsky, Oleksandr M. Sharkovsky ordering. Springer Briefs in Mathematics. Springer, [2022] book

C. Navasca, Low CP-Rank Tensor Completion via Practical Regularization (with Jiahua Jiang and Fatoumata Sanogo), Journal of Scientific Computing, 91: 18 (2022) 7

C. Navasca, Decomposition for a Quaternion Tensor Triplet with Applications (with Zhuo-Heng He and Xiang-Xiang Wang), Adv. Appl. Clifford Algebras (2022) 32:9

L. Hoehn, L. Oversteegen and E. Tymchatyn, Shortest paths in arbitrary plane domains, Canad. J. Math. 74 (2022), no. 2, 349–-367.

N. Selinger, On deformation spaces of quadratic rational functions, with Tanya Firsova, Jeremy Kahn, International Mathematics Research Notices, 2022.

Kachkovskiy I., Parnovski L., Shterenberg R., “Convergence of perturbation series for unbounded monotone quasiperiodic operators”, Advances in Mathematics, vol. 409, part B, Nov. 2022.

S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, On the stability of the periodic waves for the Benney system, SIAM J. Appld. Dyn. Sys. 21, (2022), no. 3, p. 1726--1747

Atanas G. Stefanov, G. Tsolias, J. Cuevas-Maraver, P. G. Kevrekidis, Mixed dispersion nonlinear Schr\"odinger equation in higher dimensions: theoretical analysis and numerical computations. J. Phys. A 55, (2022), no. 26, Paper No. 265701, 25 pp.

H. Hajaiej, Atanas G. Stefanov, On the instability of the Ruf-Sani solitons for the NLS with exponential nonlinearity, Appl. Math. Lett. 130 (2022), Paper No. 107988, 8 pp.

S. Hakkaev, A. Ramadan, Atanas G. Stefanov, On the stability of the 4 compacton waves for the degenerate KdV and NLS models, Quart. Appl. Math. 80, (2022), no. 3, p. 507–528.

A. Ghatasheh, R. Weikard, "Sign-changing points of solutions of homogeneous Sturm-Liouville equations with measure-valued coefficients", Applicable Analysis, vol. 101, no. 5, 2022, pp. 1556–1570.

S. Redolfi, R. Weikard, "Green's functions for first-order systems of ordinary differential equations without the unique continuation property", Integral Equations Operator Theory, vol. 94, no. 2, Paper No. 23, 2022, 19 pages.

Yanni Zeng and Kun Zhao, “Asymptotic behavior of solutions to a chemotaxis-logistic model with transitional end-states”, J. Differential Equations, 336 (2022), 1-43.

Yanni Zeng, “Nonlinear stability of diffusive contact wave for a chemotaxis model”, J. Differential Equations, 308 (2022), pp 286-326