

Departmental List of Publications

Calendar Year 2021

A.Blokh, A.Chéritat, L.Oversteegen,V.Timorin, *Location of Siegel capture polynomials in parameter spaces*, Nonlinearity, vol. 34 (2021), 2430-2453

Yu. Karpeshina, L. Parnovski, R. Shterenberg “Ballistic transport for Schrödinger operators with quasi-periodic potentials.” J. Math. Phys. 62, 053504 (2021); 18 pp

J. Li Isoperimetric inequalities and hypersurface flows, (with Pengfei Guan), Journal of Mathematical Study, Vol. 54, No.1, pp56-80, March 2021.

Kachkovskiy I., Krymski S., Parnovski L., Shterenberg R., “Perturbative diagonalisation for Maryland-type quasiperiodic operators with flat pieces”, Journal of Math. Physics 62, no. 6, 2021.

Dera D., Bouaynaya N., Rasool G., Shterenberg R., Fathallah-Shaykh H., "PremiUm-CNN: Propagating Uncertainty Towards Robust Convolutional Neural Networks", IEEE Transactions on Signal Processing, accepted, June 2021.

W. Feng, M. Stanislavova, A. Stefanov, On the Barashenkov-Bogdan-Zhanlav solitons and their stability, Chaos, Solitons, Fractals, 152, (2021), Paper No. 111467.

S. Hakkaev, A. Stefanov, Stability of periodic waves for the fractional KdV and NLS equations, Proc. Roy. Soc. Edinburgh A, 151, (2021), no. 4, p. 1171--1203.

A. Ramadan, A. Stefanov, On the standing waves of the Schrödinger equation with concentrated nonlinearity, Anal. Math. Phys. 11, (2021), no. 3, Paper 136.

B. Isom, D. Mantzavinos, S. Oh, A. Stefanov, Polynomial bound and nonlinear smoothing for the Benjamin-Ono equation on the circle, J. Diff. Eq. 297, (2021), p. 25--46.

S. Hakkaev, M. Stanislavova, A. Stefanov, On the stability of periodic waves for the cubic derivative NLS and the quintic NLS, *J. Nonlinear Science*, 31, No. 54 (2021).

M. Stanislavova, A. Stefanov, Ground states for the nonlinear Schrödinger equation under a general trapping potential, *J. Evol. Eq.* 21, (2021), no. 1, p. 671-697.

F. Hadadifard, A. Stefanov, On the forced surface quasi-geostrophic equation: existence of steady states and sharp relaxation rates, *J. Math. Fluid Mech.*, 23, (2021), no. 1, 24.

G Stolz Lower bounds for Dirichlet Laplacians and uncertainty principles (with P. Stollmann), *J. Eur. Math. Soc. (JEMS)* 23 (2021), 2337-2360

Campbell, M. Nguyen and R. Weikard, "On the spectral theory for first-order systems without the unique continuation property", *Linear and Multilinear Algebra*, vol. 69, no. 12, 2021, pp. 2315–2323.

Ghatasheh, R. Weikard, "Sign-changing points of solutions of homogeneous Sturm-Liouville equations with measure-valued coefficients", *Applicable Analysis (online)*, 2021, pp. 1-15.

Yanni Zeng and Kun Zhao, "Optimal Time Decay Rates for a Chemotaxis Model with Logarithmic Sensitivity", *Recent Developments in Mathematical, Statistical and Computational Sciences (the Vth AMMCS International Conference)*, Springer (2021) pp 451-461