

## LISTA DE LUCRĂRI

IOAN LIVIU IGNAT

Submitted

- (1) Liviu I. Ignat, A. Pozo, E. Zuazua. Large time asymptotics, vanishing viscosity and numerics for 1-D scalar conservation laws, submitted.
- (2) Liviu I. Ignat, Ademir Pazoto. Large time behaviour for a nonlocal diffusion - convection equation related with the gas dynamics, submitted.
- (3) Liviu I. Ignat, Tatiana I. Ignat, Denisa Stancu-Dumitru. A compactness tool for the analysis of nonlocal evolution equations, submitted.
- (4) V. Banica, L. I. Ignat. Dispersion for the Schrödinger equation on the line with multiple Dirac delta potentials and on delta trees, submitted.
- (5) N. Beli, L. Ignat, E. Zuazua. Dispersion for 1-d Schrödinger and wave equation with BV coefficients, submitted.

Accepted/Published

- (6) Liviu I. Ignat, Damian Pinasco, Julio D. Rossi, and Angel San Antolin. Decay estimates for nonlinear nonlocal diffusion problems in the whole space. Accepted *Journal d'Analyse Mathématique*
- (7) Liviu I. Ignat and Enrique Zuazua. Asymptotic expansions for anisotropic heat kernels. *J. Evol. Equ.* 13 (2013), no. 1, 1-20.
- (8) Liviu I. Ignat and Enrique Zuazua. Convergence rates for dispersive approximation schemes to nonlinear Schrödinger equations. *J. Math. Pures Appl.*, (9) 98 (2012), no. 5, 479–517.
- (9) Liviu I. Ignat, Julio D. Rossi, and Angel San Antolin. Lower and upper bounds for the first eigenvalue of nonlocal diffusion problems in the whole space. *Journal of Differential Equations*, 252(12):6429 – 6447, 2012.
- (10) Liviu I. Ignat, Ademir Pazoto and Lionel Rosier. Inverse problem for the heat equation and the Schrödinger equation on a tree. *Inverse Problems*, 28(015011), 2012.
- (11) Valeria Banica and Liviu I. Ignat. Dispersion for the Schrödinger equation on networks. *J. Math. Phys.*, 52(083703), 2011.
- (12) Liviu I. Ignat and Diana Stan. Dispersive properties for discrete Schrödinger equations. *Journal of Fourier Analysis and Applications*, 17(5):1035–1065, 2011.
- (13) Liviu I. Ignat, A splitting method for the nonlinear Schrödinger equation, *Journal of Differential Equations Vol. 250, Issue 7, 1 April 2011, pp, 3022–3046*
- (14) L.I. Ignat, Strichartz estimates for the Schrödinger Equation on a tree and applications, *SIAM Journal of Mathematical Analysis*, Vol. 42, No. 5, pp. 2041–2057, 2010.
- (15) L.I. Ignat and J.D. Rossi, Asymptotic expansions for nonlocal diffusion equations in  $L^q$ -norms for  $1 \leq q \leq 2$ . *Journal of Mathematical Analysis and Applications* 362 (2010), pp. 190–199.
- (16) L.I. Ignat and J.D. Rossi, Decay estimates for nonlocal problems via energy methods. *Journal de Mathématiques Pures et Appliquées*, (9) 92 (2009), no. 2, 163–187.
- (17) L.I. Ignat and E. Zuazua. Convergence of a two-grid algorithm for the control of the wave equation. *Journal of European Mathematical Society*, 11 (2009), no. 2, 351–391.
- (18) L.I. Ignat and E. Zuazua. Numerical dispersive schemes for the nonlinear Schrödinger equation. *SIAM Journal of Numerical Analysis*, 47 (2009), no. 2, 1366–1390..
- (19) L.I. Ignat and J.D. Rossi, Refined asymptotic expansions for nonlocal diffusion equations *Journal of Evolution Equations*, 8 (2008), no. 4, 614–629.

- (20) I.L. Ignat and J.D. Rossi, Asymptotic behaviour for a nonlocal diffusion equation on a lattice. *Z. Angew. Math. Phys.* 59 (2008), no. 5, 918–925.
- (21) L. I. Ignat and J.D. Rossi. *A nonlocal convection-diffusion equation*. *J. Functional Analysis*, 251(2) (2007), 399–437.
- (22) L.I. Ignat. Fully discrete schemes for the Schrödinger equation: Dispersive properties. *Math. Models Methods Appl. Sci.*, 17(4):567–591, 2007.
- (23) L.I. Ignat. Global Strichartz estimates for approximations of the Schrödinger equation. *Asymptotic Analysis*, 52:37–51, 2007.
- (24) L.I. Ignat and E. Zuazua. Dispersive properties of numerical schemes for nonlinear Schrödinger equations. In *Foundations of Computational Mathematics, Santander 2005*. *L. M. Pardo et al. eds*, volume 331, pages 181–207. London Mathematical Society Lecture Notes, 2006.
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- (27) L.I. Ignat and E. Zuazua. Dispersive properties of a viscous numerical scheme for the Schrödinger equation. *C. R. Acad. Sci. Paris, Ser. I*, 340(7):529–534, 2005.
- (28) L. I. Ignat and C. Lefter and V. D. Radulescu, Minimization of the renormalized energy in the unit ball of  $R^2$ . *Nieuw Arch. Wiskd.* (5) 1 (2000), no. 3, 278–280