

Publications

1. Andreea Grecu, Liviu I. Ignat, The Schrodinger Equation on a Star-Shaped Graph under General Coupling Conditions, <https://arxiv.org/abs/1711.10235>
2. Lucian Beznea, Liviu I. Ignat, Julio D. Rossi, From Gaussian estimates for nonlinear evolution equations to the long time behavior of branching, processes, submitted, <https://arxiv.org/abs/1703.02807>
3. Cristian M. Cazacu, Liviu I. Ignat and Ademir F Pazoto, Null Controllability of the Kuramoto-Sivashinsky Equation on star-shaped accepted SIAM SICON, <https://arxiv.org/abs/1611.04111>
4. Liviu I. Ignat and Diana Stan, Asymptotic behaviour for fractional diffusion-convection equations, *Journal of the London Mathematical Society*, 97, no. 2, (2018), 258-281
5. Liviu I. Ignat and Alejandro Pozo, A splitting method for the augmented Burgers equation, *BIT Numerical Mathematics*, BIT 58 (2018), no. 1, 73–102
6. Liviu I. Ignat and Alejandro Pozo, A semi-discrete large-time behavior preserving scheme for the augmented Burgers equation, *ESAIM Math. Model. Numer. Anal.* 51 (2017), no. 6, 2367–2398
7. Ignat, Liviu I. The dispersion property for Schrödinger equations. PDE's, dispersion, scattering theory and control theory, 59-67, *Semin. Congr.*, 30, Soc. Math. France, Paris, 2017
8. Cristian M. Cazacu, Liviu I. Ignat and Ademir F Pazoto, On the asymptotic behavior of a subcritical convection-diffusion equation with nonlocal diffusion, *Nonlinearity*, Volume 30, Number 8, (2017)
9. Ignat, Liviu I.; Ignat, Tatiana I.; Long-time behavior for a nonlocal convection diffusion equation. *J. Math. Anal. Appl.* 455 (2017), no. 1, 816–831
10. N. Beli, L. Ignat, E. Zuazua. Dispersion for 1-d Schrödinger and wave equation with BV coefficients, *Annales de l'Institut Henri Poincaré (C) Non Linear Analysis*, Volume 33, Issue 6, (2016), Pages 1473–1495
11. Liviu I. Ignat, Tatiana I. Ignat, Denisa Stancu-Dumitru. A compactness tool for the analysis of nonlocal evolution equations *SIAM J. Math. Anal.* 47 (2015), no. 2, 1330–1354
12. V. Banica, L. I. Ignat. Dispersion for the Schrödinger equation on the line with multiple Dirac delta potentials and on delta trees. *Anal. PDE* 7 (2014), no. 4, 903–927
13. Liviu I. Ignat, A. Pozo, E. Zuazua. Large time asymptotics, vanishing viscosity and numerics for 1-D scalar conservation laws. *Math. Comp.* 84 (2015), no. 294, 1633–1662
14. Liviu I. Ignat, Ademir Pazoto. Large time behaviour for a nonlocal diffusion - convection equation related with the gas dynamics. *Discrete Contin. Dyn. Syst.* 34 (2014), no. 9, 3575–3589.
15. Liviu I. Ignat, Damian Pinasco, Julio D. Rossi, and Angel San Antolin. Decay estimates for nonlinear nonlocal diffusion problems in the whole space. *J. Anal. Math.* 122 (2014), 375–401.
16. Liviu I. Ignat and Enrique Zuazua. Asymptotic expansions for anisotropic heat kernels. *J. Evol. Equ.* 13 (2013), no. 1, 1–20.
17. 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.
18. 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.

19. 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.
20. Valeria Banica and Liviu I. Ignat. Dispersion for the Schrödinger equation on networks. *J. Math. Phys.*, 52(083703), 2011.
21. Liviu I. Ignat and Diana Stan. Dispersive properties for discrete Schrödinger equations. *Journal of Fourier Analysis and Applications*, 17(5):1035–1065, 2011.
22. 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*
23. 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.
24. 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.
25. 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.
26. 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.
27. 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..
28. L.I. Ignat and J.D. Rossi, Refined asymptotic expansions for nonlocal diffusion equations *Journal of Evolution Equations*, 8 (2008), no. 4, 614–629.
29. 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.
30. L. I. Ignat and J.D. Rossi. *A nonlocal convection-diffusion equation*. *J. Functional Analysis*, 251(2) (2007), 399–437.
31. L.I. Ignat. Fully discrete schemes for the Schrödinger equation: Dispersive properties. *Math. Models Methods Appl. Sci.*, 17(4):567–591, 2007.
32. L.I. Ignat. Global Strichartz estimates for approximations of the Schrödinger equation. *Asymptotic Analysis*, 52:37–51, 2007.
33. 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.
34. L.I. Ignat. Qualitative properties of a numerical scheme for the heat equation. Bermúdez de Castro, A. (ed.) et al., Proceedings of ENUMATH 2005, the 6th European conference on numerical mathematics and advanced applications, Santiago de Compostela, Spain, July 18–22, 2005. Springer. 593-600, 2006.
35. L.I. Ignat and E. Zuazua. A two-grid approximation scheme for nonlinear Schrödinger equations: dispersive properties and convergence. *C. R. Acad. Sci. Paris, Ser. I*, 341(6):381–386, 2005.
36. 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.
37. 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