CURRICULUM VITAE

ATANAS G. STEFANOV

(205) 934-8551 ⋄ stefanov@uab.edu ⋄
University Hall, Room 4005, 1402 10th Avenue S.,
Birmingham AL 35294-1241

1. Professional Experience

- 2021 - date, Professor of Mathematics, University of Alabama - Birmingham; Senior Scientist - Center for Nanoscale Materials and Biointegration, UAB.
- 2012-2021, Professor, Department of Mathematics, University of Kansas.
- 2007-2012, Associate Professor, Department of Mathematics, University of Kansas.
- 2002-2007, Assistant Professor, Department of Mathematics, University of Kansas.
- 2000-2002, Visiting Assistant Professor, UMASS - Amherst.
- 1999-2000, Postdoctoral fellow, Syracuse University.
- 1995-1999, Research/Teaching Assistant, University of Missouri - Columbia.
- 1993-1995, Assistant Professor, Sofia University, Bulgaria.

2. Editorial Work

- 2025-date, Associate Editor, Journal of Geometric Analysis.

3. Education

- 1999 Ph.D. in Mathematics, University of Missouri, Columbia.
  Specialization: Fourier Analysis.
- 1993, D.E.A. "Analyse et modelisation", University of Paris - VI, France.
  Specialization: Functional Analysis.
- 1993, M.Sc. in Mathematics, Sofia University, Bulgaria.
  Specialization: Functional Analysis.

4. Research Interests: Analysis of Partial Differential Equations

- Soliton dynamics - linear and nonlinear stability of solitary waves in dispersive models, asymptotic stability. Existence and stability of solitary waves in spatially discrete systems. Analysis of waves in $\mathscr{PT}$ symmetric models.
- Local and global behavior of nonlinear dispersive PDE's - Schrödinger, wave, Klein-Gordon, Dirac, KdV, Ostrovsky/short pulse and the Whitham model.
- Well-posedness, regularity and asymptotics for fluid models: Boussinesq, quasi-geostrophic equation.

5. **Research grants**

- Aug. 1st, 2019 - July. 31st, 2023, NSF - DMS 1908626, Applied Math Program, “Dynamics and stability of nonlinear waves”, single PI, $ 231127.
- Sept. 1st, 2016 - Aug 30th, 2019, NSF - DMS 1614734, Applied Math Program, “Stability of solitary waves in dynamical systems”, single PI, $ 193000.
- May 1st, 2014 - April 30th, 2015, NSF-DMS 1419217, Applied Math Program, “Workshop: Stability of solitary waves, May 25-30, 2014”, co-PI (with A. Comech) $ 19955.
- July 15th, 2013 - June 30th, 2016, NSF - DMS 1313107, Applied Math Program, “Stability of waves in discrete and continuous dynamical systems”, single PI, $ 184655.
- September 2009 - August 2013, NSF - DMS 0908802, Applied Math Program, “Stability in Discrete and Continuous Dynamical Systems”, single PI, $ 183849.
- June 2007 - May 2010, NSF-DMS 0701802, Analysis Program, “Harmonic Analysis and Nonlinear Dispersive Equations”, single PI, $ 114000.
- April 2003 - April 2007; NSF-DMS 0300511, Analysis Program, "Harmonic analysis and applications to geometric PDE's, 2003-2006, single PI, $ 98000.

6. **Honors and Awards**

- 2019, Max Wells Teaching award
- 2018, G. Bailey Price Teaching award[1]
- 2018, American Institute of Physics - Scitation
- 2015, KU Scholarly Achievement Award[2],
- 1995-1999, G. Ellsworth Huggins fellow, University of Missouri.
- 1992-1993, TEMPUS program of the European Commission, one year fellowship.

7. **Ph.D. students supervision**

(1) Current Ph.D. students:
   - Malihe Farziharomi, University of Alabama - Birmingham,

(2) Vishnu Iyer, University of Alabama - Birmingham, Ph.D. 2025, Dissertation: “Solitary waves for power degenerate NLS and a fourth order wave equation”.
first job: Model Risk Analyst, First Horizon Bank, Birmingham, AL.
`https://www.linkedin.com/in/vishnu-prasad-iyer`

(3) Abba Ramadan, Ph.D. 2022, University of Kansas, Dissertation: “Existence and Stability of Solitary Waves for NLS with Defects”
first job: Postdoctoral fellow, University of Alabama.
current job: Tenure-track Assistant Professor, University of Alabama.
`https://www.linkedin.com/in/ramadan-abba-70bbb475`

[1] awarded by the KU math department graduate student association

[2] four such awards awarded per year for the whole University

(4) Brad Isom (co-advised by D. Mantzavinos), Ph.D. 2021, University of Kansas, Dissertation: "Growth Bounds and Nonlinear Smoothing for the Periodic Benjamin-Ono and Derivative Nonlinear Schrödinger Equations".
first job: Credit risk analyst, T-Mobile, Kansas City.
current job: Credit strategy manager, T-Mobile, Kansas City.
`https://www.linkedin.com/in/bsisom`
(5) Fazel Hadadifard, Ph.D. 2019, University of Kansas, Dissertation: "Sharp time asymptotics for the quasi-geostrophic equation, the Boussinesq system and near plane waves of reaction-diffusion models",
first job: Visiting Assistant Professor, Drexel University.
second job: Visiting Assistant Professor, University of California - Riverside,
currently: AI Mathematician at META (Facebook)
(6) Iurii Posukhovskyi , Ph.D. 2019, University of Kansas, Dissertation: "On the Existence and Stability of Normalized Ground States of the Kawahara, Fourth Order NLS and the Ostrovsky Equations".
first job: Data scientist - Home Depot, Atlanta, GA.
current job: Data Science manager - Wells Fargo Bank, Charlotte, NC.
`https://www.linkedin.com/in/iurii-posukhovskyi`
(7) Seungly Oh, Ph.D. 2012, University of Kansas, Dissertation: "Normal Form Approach for Dispersive Equations with Low-Regularity Data".
first job: post-doc at Univ. of Missouri, Columbia.
current: Associate Professor, Western New England University, Springfield, MA.
`https://www.linkedin.com/in/seunglyoh`

8. **Masters and undergraduate student supervision**

- Spring 2013, Lifeng Wang, University of Kansas, Masters project: "L^p and weak type $(1,1)$ bounds of maximal Hilbert transforms over large sets of directions".
- Summer 2010, REU program, University of Kansas, funded by NSF under grant # 0908802 - Jeff Poskin, Edward Fensholt.

9. **Publications**

(1) V. Iyer, R. Parker, Atanas G. Stefanov, *Existence and stability for traveling waves of fourth order semilinear wave and Schrodinger equations*, submitted.
`https://arxiv.org/pdf/2512.12390`
(2) Atanas G. Stefanov, *Asymptotic stability for monotone traveling kinks of the dissipative Boussinesq problem*, submitted.
(3) M. Stanislavova, Atanas G. Stefanov, J. Cuevas-Maraver, P. G. Kevrekidis, *On a Klein-Gordon reduction for oscillons*, submitted.
(4) F. Hadadifard, Atanas G. Stefanov, *Sharp asymptotics for global solutions of the parabolic Hardy-Sobolev equation*, submitted.
(5) Atanas G. Stefanov, P. G. Kevrekidis, *Kinks of fractional ϕ^4 models: existence, uniqueness, stability, monotonicity and sharp asymptotics*, submitted
(6) Atanas G. Stefanov, J. Wu, X. Xu, Z. Ye, *Global regularity of the 2D fractional Boussinesq equations with subcritical dissipation*, submitted.

(7) M. Stanislavova, Atanas G. Stefanov, *Asymptotic attraction with algebraic rates toward fronts of dispersive-diffusive Burgers equations*, *J. Nonlinear Waves*, (2025), **1**, p. 1–16. https://doi.org/10.1017/jnw.2025.10013
(8) O. Christov, S. Hakkaev, S. Oh, Atanas G. Stefanov, *Dynamics of the Drinfeld-Sokolov-Wilson system: well-posedness and (in)stability of the traveling waves*, *J. Diff. Eq.*, **439** (2025), 113410.
(9) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *On the spectral instability of some cnoidal and snoidal waves of the full Klein-Gordon-Zakharov system*, *Dyn. Partial Differ. Equ.*, **22**, (2025), no. 2, p. 107–133.
(10) Atanas G. Stefanov, J. Wu, X. Xu, Z. Ye, *Global regularity results of the 2D fractional Boussinesq equations*, *Math. Ann.* **391**, (2025), no. 4, p. 5965–6012.
(11) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *Existence and stability for the travelling waves of the Benjamin equation*, *Nonlinearity*, **38**, (2025) 025020 (33pp).
(12) S. Hakkaev, Atanas G. Stefanov, *On the stability of the dnoidal waves for the Schrödinger - KdV system*, *Proc. Amer. Math. Soc.*, **153**, (2025), p. 715–725.
(13) V. Iyer, Atanas G. Stefanov, *Solitary waves for power degenerate NLS - existence and stability*, *Calc. Var. Partial Differential Equations*, **64** (2025), no. 1, Paper No. 19.
(14) M. Arnesen, M. Ehrnström, Atanas G. Stefanov, *A maximisation technique for solitary waves: the case of the non-locally dispersive Whitham equation*, *Arch. Rat. Mech. Anal.* **248**, (2024), no.3, Paper No. 53. https://arxiv.org/pdf/2303.14036.pdf
(15) B. Isom, D. Mantzavinos, Atanas G. Stefanov, *Growth bound and nonlinear smoothing for the periodic derivative nonlinear Schrödinger equation*, *Math. Ann.* **388**, (2024), p. 2289–2329. https://arxiv.org/pdf/2012.09933.pdf.
(16) A. Ramadan, Atanas G. Stefanov, *On the stability of solitary waves in the NLS system of the third-harmonic generation*, *Anal. Math. Phys.* **14**, (2024), no. 1, Paper No. 4. https://arxiv.org/pdf/2304.01867.pdf
(17) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *On the stability of periodic waves for the Zakharov system*, *J. Math. Phys.*, **64**, (2023), no. 8, Paper No. 081503, 14 pp. **Paper was featured in the Kudos by JMP.**
(18) T. Gou, H. Hajaiej, Atanas G. Stefanov, *On the solitary waves for anisotropic nonlinear Schrödinger models on the plane*, *Eur. J. Math.* **9**, (2023), no. 3, 55. https://arxiv.org/pdf/2303.03312.pdf
(19) Atanas G. Stefanov, R.M. Ross, P. Kevrekidis, *Ground states in spatially discrete non-linear Schrödinger lattices*, *Nonlinearity* **36**, (2023), no. 8, p. 4053–4085. https://iopscience.iop.org/article/10.1088/1361-6544/acdbfc/pdf
(20) M. Stanislavova, Atanas G. Stefanov, *On the long time dynamics of the Landau-de Gennes gradient flow*, *J. Stat. Phys.* **190**, (2023), no. 1, Paper No. 26.
(21) S. Hakkaev, A. Ramadan, Atanas G. Stefanov, *On the stability of the compacton waves for the degenerate KdV and NLS models*, *Quart. Appl. Math.*, **80**, (2022), no. 3, p. 507–528. https://arxiv.org/pdf/2110.03030.pdf

(22) 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. https://arxiv.org/pdf/2204.01628.pdf

(23) Atanas G. Stefanov, G. Tsolias, J. Cuevas-Maraver, P. G. Kevrekidis, *Mixed dispersion nonlinear Schrödinger equation in higher dimensions: theoretical analysis and numerical computations. J. Phys. A* **55**, (2022), no. 26, Paper No. 265701, 25 pp, https://arxiv.org/pdf/2203.06415.pdf

(24) 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. https://arxiv.org/pdf/2110.02451.pdf

(25) S. Oh, Atanas G. Stefanov, *Smoothing and growth bound of periodic generalized Korteweg-de Vries equation*, *J. Hyper. Differ. Equ.* **18**, (2021), no. 4, p. 899–930. https://arxiv.org/pdf/2001.08984.pdf

(26) W. Feng, M. Stanislavova, Atanas G. Stefanov, *On the Barashenkov-Bogdan-Zhanlav solitons and their stability*, *Chaos, Solitons, Fractals*, **152**, (2021), Paper No. 111467. https://arxiv.org/pdf/2004.10866.pdf

(27) S. Hakkaev, Atanas G. Stefanov, *Stability of periodic waves for the fractional KdV and NLS equations*, *Proc. Roy. Soc. Edinburgh A*, **151**, (2021), no. 4, p. 1171–1203. https://arxiv.org/pdf/1907.05149.pdf,

(28) A. Ramadan, Atanas G. Stefanov, *On the standing waves of the Schrödinger equation with concentrated nonlinearity*, *Anal. Math. Phys.* **11**, (2021), no. 3, Paper 136. https://arxiv.org/pdf/2009.07214.pdf

(29) B. Isom, D. Mantzavinos, S. Oh, Atanas G. Stefanov, *Polynomial bound and nonlinear smoothing for the Benjamin-Ono equation on the circle*, *J. Diff. Eq.* **297**, (2021), p. 25–46. https://arxiv.org/pdf/2001.06896.pdf

(30) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *On the stability of periodic waves for the cubic derivative NLS and the quintic NLS*, *J. Nonlinear Science* **31**, No. 54 (2021). https://arxiv.org/pdf/2006.13658.pdf

(31) M. Stanislavova, Atanas G. Stefanov, *Ground states for the nonlinear Schrödinger equation under a general trapping potential*, *J. Evol. Eq.* **21**, (2021), no. 1, p. 671–697. https://arxiv.org/pdf/2002.03822.pdf

(32) F. Hadadifard, Atanas G. 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. https://arxiv.org/pdf/2008.09868.pdf

(33) A. Ramadan, Atanas G. Stefanov, *Existence and stability of solitary waves for the inhomogeneous NLS*, *Phys. D*, **414**, (2020), 132691. https://stefanov.ku.edu/Inhomogeneous_NLS_final.pdf,

(34) I. Posukhovskyi, Atanas G. Stefanov, *On the ground states for the Ostrovskyi equation and their stability*, *Stud. Appl. Math.*, **144**, (2020), no. 4, p. 548–575.

(35) I. Posukhovskyi, Atanas G. Stefanov, *On the normalized ground states for the Kawahara equation and a fourth order NLS*, *Disc. Cont. Dyn. Syst. - A*, **40**, (2020), no. 7, p. 4131–4162.

(36) F. Hadadifard, Atanas G. Stefanov, *Sharp relaxation rates for plane waves of general reaction - diffusion systems*, *J. Math. Phys.* **61**, (2020), no. 4, 041502, 22 pp.

(37) Atanas G. Stefanov, J. D. Wright, *Small amplitude traveling waves in the full-dispersion Whitham equation*, *J. Dyn. Diff. Eq.* , **32**, (2020), no. 1, p. 85–99.
(38) Atanas G. Stefanov, F. Hadadifard, *On the sharp time decay rates for the 2D generalized quasi-geostrophic equation and the Boussinesq system*, *J. Nonlinear Science*, **29**, (2019), no.5, p. 2231–2296.
(39) Atanas G. Stefanov, *On the normalized ground states of second order PDE's with mixed power non-linearities*, *Comm. Math. Phys.*, **369**, (2019), no. 3, p. 929–971.
(40) Atanas G. Stefanov, J. Wu, *A global regularity result for the 2D Boussinesq equations with critical dissipation*, *J. Anal. Math.* **137**, (2019), no. 1, p. 269–290.
(41) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *On the generation of stable Kerr frequency combs in the Lugiato-Lefever model of periodic optical waveguides*, *SIAM J. Appl. Math*, **79**, (2019), no. 2, p. 477–505.
(42) M. Stanislavova, Atanas G. Stefanov, *Asymptotic stability for spectrally stable Lugiato-Lefever solitons in periodic waveguides*, *J. Math. Phys.* **59**, (2018), no. 10, 101502, 12 pp.
(43) W. Feng, M. Stanislavova, Atanas G. Stefanov, *On the spectral stability of ground states of semi-linear Schrödinger and Klein-Gordon equations with fractional dispersion*, *Comm. Pure Appl. Anal.*, **17**, (2018), no. 4, p. 1371–1385.
(44) V. Georgiev, Atanas G. Stefanov, *On the classification of the spectrally stable standing waves of the Hartree problem*, *Physica D*, **370** (2018), p. 29–39.
(45) M. Stanislavova, Atanas G. Stefanov, *On stability of $\mathscr{PT}$ symmetric ground states for Schrödinger and Klein-Gordon equations in higher space dimensions*, *Proc. Amer. Math. Soc.* , **145**, No. 12, (2017), p. 5273–5285.
(46) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *Spectral stability for classical periodic waves of the Ostrovsky and short pulse models*, *Stud. Appl. Math.*, **139**, (2017), p. 405–433.
(47) F. Hadadifard, Atanas G. Stefanov *On the global regularity of the 2D critical Boussinesq system with $\alpha > \frac{2}{3}$*, *Comm. Math. Sci.*, **15**, No. 5 (2017), p. 1325–1351.
(48) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *Periodic traveling waves of the regularized short pulse and Ostrovsky equations: existence and stability*, *SIAM J. Math. Anal.*, **49**, (2017), No. 1, p. 674–698.
(49) A. Comech, T.V. Phan, Atanas G. Stefanov, *Asymptotic stability of solitary waves in generalized Gross - Neveu model*, *Ann. Inst. H. Poincaré Anal. Non Linéaire*, **34**, (2017), no. 1, p. 157–196.
(50) P.G. Kevrekidis, Atanas G. Stefanov, H. Xu, *Traveling waves for the Mass in Mass model of granular chains*, *Lett. Math. Phys.* **106** (2016), no. 8, p. 1067–1088.
(51) M. Stanislavova, Atanas G. Stefanov, *On the spectral problem $\mathscr{L}u = \lambda u'$ and applications*, *Comm. Math. Phys.* **343** (2016), no. 2, p. 361–391.
(52) A. Demirkaya, S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *On the spectral stability of periodic waves of the Klein-Gordon equation*, *Diff. Int. Eq.*, **28**, no. 5-6, (2015), p. 431–454.
(53) A. Demirkaya, P. Kevrekidis, M. Stanislavova, Atanas G. Stefanov, *Spectral stability analysis for standing waves of a perturbed Klein-Gordon equation*, *Discrete*

Contin. Dyn. Syst. Suppl. **2015**, Dynamical systems, differential equations and applications, 10th AIMS Conference, p. 359–368.

(54) H. Xu, P.G. Kevrekidis, Atanas G. Stefanov, *Traveling waves and their tails in locally resonant granular systems, J. Phys. A: Math. Theor.* **48**, No. 19, (2015) p195204, 19 pages.

(55) A. Demirkaya, M. Stanislavova, Atanas G. Stefanov, T. Kapitula, P.G. Kevrekidis, *On the spectral stability of kinks in some $\mathscr{PT}$ -symmetric variants of the classical Klein-Gordon Field Theories, Stud. Appl. Math.* , **133** (2014), p. 298–317.

(56) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *Linear stability analysis for periodic traveling waves of the Boussinesq equation and the KGZ system, Proc. Roy. Soc. Edinburgh A.*, **144** (2014), p. 455–489.

(57) T. Kapitula, Atanas G. Stefanov, *A Hamiltonian-Krein (instability) index theory for KdV-like eigenvalue problems, Stud. Appl. Math.*, **132**, no. 3, (2014), p. 183–211.

(58) M. Stanislavova, Atanas G. Stefanov, *Spectral stability analysis for special solutions of second order in time PDE's: the higher dimensional case, Physica D*, **262** (2013), p. 1–13.

(59) V. Georgiev, Atanas G. Stefanov, *Global regularity for the quadratic Klein-Gordon equation in* $\mathbf{R}^{1+2}$, *Comm. PDE*, **38**, no. 8, (2013), p. 1287–1312.

(60) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *Spectral stability for traveling pulses of the Boussinesq 'abc' system, SIAM J. Appl. Dyn. Syst.* **12** (2013), no. 2, p. p. 878–898.

(61) S. Oh, Atanas G. Stefanov, *Improved local well-posedness for the periodic "good" Boussinesq equation, J. Diff. Eq.* **254** (2013), no. 10, p. 4047–4065.

(62) Atanas G. Stefanov, P. G. Kevrekidis, *Traveling waves for monomer chains with precompression, Nonlinearity*, **26**, (2013), p. 539–564.

(63) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *Orbital stability for periodic standing waves of the Klein-Gordon-Zakharov system and the beam equation, Zeit. Ang. Math. Phys. (ZAMP)*, **64**, No. 2, (2013), p. 265–282.

(64) A. Demirkaya, D. J. Frantzeskakis, P. G. Kevrekidis, A. Saxena, Atanas G. Stefanov, *Effects of $\mathscr{PT}$ -symmetry in Nonlinear Klein-Gordon Models and Their Stationary Solitary Waves, Phys. Rev. E.* **88**, 023203 (2013)

(65) J. Feng, A. Swiech, with Appendix by Atanas G. Stefanov, *Optimal control for a mixed flow of Hamiltonian and gradient type in space of probability measures*, Trans. Amer. Math. Soc. **365** (2013), p. 3987-4039.

(66) M. Stanislavova, Atanas G. Stefanov, *Linear stability analysis for traveling waves of second order in time PDE's, Nonlinearity* **25**, (2012) p. 2625–2654.

(67) D. Pelinovsky, Atanas G. Stefanov, *Asymptotic stability of small gap solitons in the nonlinear Dirac equations, J. Math. Phys.* **53**, (2012), 073705, 27 pages.

(68) S. Oh, Atanas G. Stefanov, *Local well-posedness for quadratic Schrödinger equations in* $\mathbf{R}^{1+1}$*: a normal form approach, J. London Math. Soc.* (2) **86** (2012), p. 499-519.

(69) Atanas G. Stefanov, P. Kevrekidis, *On the existence of solitary traveling waves for generalized Hertzian chains, Journal of Nonlinear Science*, **22**, no. 3 (2012), p. 327–349.

(70) S. Hakkaev, M. Stanislavova, Atanas G. Stefanov, *Transverse instability for periodic waves of KP-I and Schrödinger equations, Ind. Univ. Math. J.* **61** No. 2, (2012), p. 461–492.
(71) M. Stanislavova, Atanas G. Stefanov, *Asymptotic estimates and stability analysis of stationary solutions of the Kuramoto-Sivashinsky type models, J. Evol. Eq.*, **11**, (2011), p. 605–635.
(72) A. Stefanov, *Global regularity for the minimal surface equation in Minkowskian geometry,Forum Mathematicum*, **23**, no. 4 (2011), p. 757–791.
(73) Atanas G. Stefanov, *Global regularity for Yang-Mills fields in* $\mathbf{R}^{1+5}$, *J. Hyperbolic Differ. Equ.* **7** (2010), no. 3, p. 433–470.
(74) Atanas G. Stefanov, Y. Shen, P. Kevrekidis, *Well-posedness and small data scattering for the generalized Ostrovsky equation, J. Diff. Eq.* , **249** (2010), 10, p. 2600–2617.
(75) Atanas G. Stefanov, *On the Lipshitzness of the solution map for the 2D Navier-Stokes system, Disc. Contin. Dyn. Syst. - A* **26**, (4), (2010), p. 1471 - 1490.
(76) Atanas G. Stefanov, *Pseudodifferential operators with rough symbols, J. Four. Anal. Appl.* **16**, (2010), p. 97 - 128.
(77) M. Stanislavova, A. Stefanov, *Effective estimates of the higher Sobolev norms for the Kuramoto-Sivashinsky equation*, Disc. Contin. Dyn. Syst. - A (suppl.) September **2009**, p. 729 - 738.
(78) Atanas G. Stefanov, *Decay and Strichartz Estimates for DNLS*, Chapter 22, from the book, The Discrete Nonlinear Schrödinger Equation: Mathematical Analysis, Numerical Computations and Physical Perspectives, Springer Tracts in Modern Physics, Springer Berlin/Heidelberg, vol. 232/2009.
(79) P. Kevrekidis, D. Pelinovsky, Atanas G. Stefanov, *Asymptotic stability of small solitons in the discrete nonlinear Schrödinger equation in one dimension, SIAM J. Math. Anal.*, **41**, (2009), pp. 2010-2030.
(80) M. Stanislavova, Atanas G. Stefanov, *On precise center-stable manifold theorems for certain reaction-diffusion and Klein-Gordon equations, Physica D: Nonlinear Phenomena*, **23**, (2009), p. 2298-2307.
(81) D. Pelinovsky, Atanas G. Stefanov *On the spectral theory and dispersive estimates for a discrete Schrödinger equation in one dimension, J. Math. Phys.* **49**,(2008), 113501, 17 pages.
(82) P.G. Kevrekidis, J.A. Espinola-Rocha, Y. Drossinos, Atanas G. Stefanov, *Dynamical Barrier for the Nucleation of Solitary Waves in Discrete Lattices, Phys. Lett. A,* Vol. **372**, Issue 13, 2008 , p. 2247-2253.
(83) Atanas G. Stefanov, *Global well-posedness for the 2 D quasi-geostrophic equation in a critical Besov space, Electron. J. Diff. Eqns.*, Vol. **2007** (2007), No. 150, pp. 1-9.
(84) M. Stanislavova, Atanas G. Stefanov, *Attractors for the viscous Camassa-Holm equation*, Discrete Contin. Dyn. Syst. - A **18**, (2007), 159–186.
(85) V. Georgiev, Atanas G. Stefanov, M. Tarulli, *Smoothing - Strichartz estimates for the Schrödinger equation with small magnetic potential, Disc. Contin. Dyn. Syst. - A* **17**, (2007), 771–786.

(86) Atanas G. Stefanov, *On quadratic derivative Schrödinger equations in one space dimension, Trans. Amer. Math. Soc.*, **359**, (2007), 3589-3607.
(87) Atanas G. Stefanov, *Strichartz estimates for the magnetic Schrödinger equation, Adv. Math.*, **210**, (2007) 246–303.
(88) V. Naibo, Atanas G. Stefanov, *On some Schrödinger and wave equations with time dependent potentials, Math. Ann.* **334**, (2006), 325–338.
(89) P. Kevrekidis, D. Pelinovsky, Atanas G. Stefanov, *Nonlinearity management in higher dimensions, J. Phys. A*, **39** (2006), p. 479-488.
(90) M. Stanislavova, Atanas G. Stefanov, B. Wang, *Asymptotic Smoothing and Attractors for the Generalized BBM Equation on* $\mathbf{R}^3$, *J. Diff. Eq.* **219** (2005), 451–483.
(91) M. Stanislavova, Atanas G. Stefanov, *On global finite energy solutions of the Camassa-Holm equation*, J. Four. Anal. Appl. **11** (2005), 511–531.
(92) A. Stefanov, *On first order perturbations of the Schrödinger equation with conjugation, Diff.Int. Eq.* **18** (2005), 997-1012.
(93) Atanas G. Stefanov, P. Kevrekidis, *Asymptotic behavior of small solutions for the discrete nonlinear Schrödinger and Klein-Gordon equations, Nonlinearity* **18** (2005), 1841–1857.
(94) Atanas G. Stefanov; R. H. Torres, *Calderón-Zygmund operators on mixed Lebesgue spaces and applications to null forms, J. London Math. Soc.* (2) **70** (2004), 447–462.
(95) A. Nahmod; Atanas G. Stefanov; K. Uhlenbeck, *On the well-posedness of the wave map problem in high dimensions, Comm. Anal. Geom.* **11** (2003), 49–83.
(96) A. Nahmod; Atanas G. Stefanov; K. Uhlenbeck, *On Schrödinger maps, Comm. Pure Appl. Math* **56** (2003), 114–151; *Erratum: "On Schrödinger maps"* Comm. Pure Appl. Math. **57** (2004), 833–839.
(97) Atanas G. Stefanov, *Weak type estimates for certain Calderón-Zygmund singular integral operators, Studia Mathematica* **147**, (2001), 1–13.
(98) Atanas G. Stefanov, *Strichartz estimates for the Schrödinger equation with radial data, Proc. Amer. Math. Soc.*, **129** (2001), 1395–1401.
(99) Atanas G. Stefanov, *Characterizations of* H^1 *and applications to singular integrals, Illinois J. Math.* **44** (2000), 574–592.
(100) L. Grafakos; Atanas G. Stefanov, *Convolution Calderón-Zygmund singular integral operators with rough kernels*, Analysis of divergence (Orono, ME, 1997), 119–143, Appl. Numer. Harmon. Anal., Birkhäuser Boston, Boston, MA, 1999.
(101) L. Grafakos; Atanas G. Stefanov, L^p *bounds for singular integrals and maximal singular integrals with rough kernels, Ind. Univ. Math. J.* **47** (1998), 455–469.

10. **Teaching Experience**

10.1. **Undergraduate:** Calculus - I, II, III; Linear algebra; Elementary ODE; Calculus of Variations; Applied PDE.

10.2. **Graduate:** Mathematical Analysis - I, II; Measure theory; Complex Analysis; Advanced PDE; Functional Analysis I, II; Fourier analysis and PDE.

11. **Invited Presentations**

- November 2025, Invited Presentation, SIAM conference on SIAM Conference on Analysis of Partial Differential Equations in Pittsburgh, PA.
- April 2025, Invited Presentation, 13^{th} International Conference on Nonlinear Evolution Equations and Wave Phenomena, Athens, GA.
- March 2025, Invited Presentation, 2025 AMS Spring Central Sectional Meeting, Lawrence, KS.
- June 2024, Invited Presentation, SIAM meeting "Nonlinear waves and Coherent structures", Baltimore, MD.
- May 2024, Invited Presentation, Second Joint Alabama-Florida Conference on Differential Equations, Dynamical Systems and Applications, FSU.
- March 2024, Mini-course, Hohai University, Nanjing, China.
- March 2024, AMS sectional meeting, Florida State University.
- October 2023, AMS sectional meeting, Creighton University, Omaha, NE.
- September 2023, PDE seminar presentation, Georgia Tech, Atlanta, GA.
- July 2023, Invited talk, Mathematics Days in Sofia, Bulgarian Academy of Sciences, Sofia, Bulgaria.
- July 2023, Colloquium, Trakya University, Edirne, Turkey.
- April 2023, Virtual invited talk, Hohai University, Nanjing, China.
- March 2023, Virtual invited talk, weakly workshop "Nonlinear problems in mathematics", Istanbul, Turkey.
- Jan. 2023, Invited talk, Workshop on the nonlinear dispersive equations, Hohai University
- Nov. 2022, Departmental Colloquium, Florida International University, Miami, FL.
- Sept. 2022, Analysis seminar, University of Alabama - Tuscaloosa.
- July 2022, workshop "Mathematical aspects of the Physics with non Self-Adjoint Operators", Banff Int. Res. Station, Alberta, Canada.
- March 2022, 12^{th} IMACS Conference on Nonlinear Waves, Athens, GA.
- November 2021, Mini-course, Hohai University, Nanjing, China.
- May 2021, Departmental Colloquium, University of Alabama - Birmingham.
- October 2020, Virtual mini-workshop on nonlinear dispersive wave equations, Hohai University, China.
- July 2019, International Congress of Industrial Applied Mathematics (ICIAM), Valencia, Spain.
- May 2019, SIAM conference on applications of dynamical systems, special session "Nonlinear patterns and waves", Snowbird, UT.
- January 2019, Joint AMS-SIAM Meetings, special session "Nonlinear Evolution Equations and their Applications", Baltimore, MD.
- October 2018, MATTEX 2018 Conference, Shumen University, Bulgaria, plenary talk.
- July 2018, 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taipei, Taiwan.

- June 2018, SIAM Conference on Nonlinear Waves and Coherent Structures, Orange, CA.
- March 2018, AMS Sectional meeting, Ohio State University, Columbus, OH.
- Dec. 2017, Departmental Colloquium, College of Charleston, SC.
- October 2017, Waves, Spectral Theory and Applications, UNC - Chapel Hill, invited talk.
- July 2017, "Mathematics Days in Sofia", invited talk, section "Analysis", Bulgarian academy of sciences, Sofia, Bulgaria, invited talk.
- June 2017, Workshop "Geometrical methods, non self-adjoint spectral problems, and stability of periodic structures", Casa Matemática Oaxaca, Mexico, invited talk.
- April 2017, KUMUNU Conference on PDE, Dynamical Systems and Applications, Lincoln, NE - invited talk.
- March 2017, 10^{th} IMACS Conference on Nonlinear Waves, special session "Traveling waves and spectral theory", Athens, GA.
- January 2017, AMS national meeting, AMS Special Session "Dynamics of Fluids and Nonlinear Waves", Atlanta, GA.
- January 2017, AMS national meeting, AMS Special Session "Problems in Partial Differential Equations", Atlanta, GA.
- August 2016, Vladimir Georgiev's 60th birthday conference "Mathematical Analysis for stability in Nonlinear Dynamics", Hokkaido University, Sapporo Japan, invited talk.
- May 2016, Departmental Seminar, Norwegian University of Science and Technology, Trondheim, Norway.
- March 2016, AMS meeting, SUNY - Stony Brook, NY.
- February 2016, Colloquium talk, Department of Math and Applied Math, University of Cape Town, Cape Town, South Africa.
- February 2016, Colloquium talk, Karaköy Minerva Palace, Sabanci University, Istanbul Turkey.
- January 2016, Colloquium talk, Math and Comp. Science Department, Aydin University, Istanbul, Turkey.
- March 2015, AMS meeting, University of Alabama, Huntsville, AL.
- November 2014, Colloquium talk, University of Missouri - Kansas city.
- July 2014, NSF-CBMS Conference "Problems of PDEs Related to Fluids", Oklahoma State University, Stillwater, OK, invited talk.
- July 2014, 10th AIMS conference on Dynamical Systems, Differential Equations and Applications, Madrid, Spain.
- Dec. 2013, SIAM Conference on Analysis of Partial Differential Equations, session Qualitative Analysis of Nonlinear Waves Orlando, Florida.
- Sept. 2013, Oberwolfach Workshop "Lattice Differential Equations", Oberwolfach, Germany, invited talk.
- Sept. 2013, seminar talk at Texas A& M University.
- June 2013, participation in the 16^{th} Internet seminar " Operator semigroups and Dispersive equations", Blaubeuren, Germany.

- May 2013, SIAM Conference on Applications of Dynamical Systems, Snowbird, UT.
- April 2013, AMS meeting, special section “Control Theory and Qualitative Analysis of Partial Differential Equations ”, Ames, IA.
- March 2013, Eight IMACS conference on nonlinear evolution equations and wave phenomena, Athens, GA.
- Dec. 2012, Focused Research Group workshop, “Spectral and asymptotic stability in nonlinear Dirac equations”, Banff Int. Res. Station, Alberta, Canada.
- July 2012, “Localized Excitations in Nonlinear Complex Systems” (LENCOS), University of Seville, invited talk.
- June 2012, Colloquium talk, Shumen University, Bulgaria.
- June 2012, 38th AMEE conference, Sozopol, Bulgaria, plenary talk.
- March 2012, Colloquium talk, University of Tennessee, Knoxville.
- October 2011, AMS meeting, special session “Continuous and Numerical Analysis in the Control of PDE’s”, Lincoln, NE.
- October 2011, “Evolution Equations: Randomness and Asymptotics”, Bad Herrenhalb, Germany (organized by Karlsruhe Institute of Technology), invited talk.
- May 2011, SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah.
- May 2011, Wave Breaking and Global Solutions in the Short-Pulse Dispersive Equations, Fields Institute, Toronto, ON, plenary talk.
- April 2011, invited talk, Seventh IMACS conference on nonlinear evolution equations and wave phenomena, Athens, GA.
- June 2010, plenary talk, 36th AMEE conference, Sozopol, Bulgaria.
- May 2010, invited talk, 8th AIMS Conference on Dyn. Systems, Diff. Equations and Applications, TU - Dresden.
- May 2010, invited series of talks, Zhejiang Normal University.
- April 2010, invited talk, “Harmonic Analysis and PDE”, University of Nebraska, Lincoln.
- January 2010, Colloquium talk, McMaster University, Hamilton, ON.
- November 2009, invited talk, AMS special session on Harmonic Analysis, Boca Raton, Florida.
- July 2009, invited talk, 7th ISAAC Congress, Imperial College, London, UK.
- July 2009, invited presentation, "Localized Excitations in Nonlinear Complex Systems” (LENCOS), University of Seville.
- June 2009, seminar talk, Sofia University.
- July 2008, invited talk at the SIAM Conference on Nonlinear waves and coherent structures, Universita di Roma “La Sapienza”.
- May 2008, invited talk, 7th AIMS Conference on Dyn. Systems, Diff. Equations and Applications, UT - Arlington.
- September 2007, invited talk at the workshop “Nonlinear Waves and Dispersive Equations”, Oberwolfach, Germany.
- May 2007, mini symposium talk at SIAM conference on applications of dynamical systems, Snowbird, UT.

- April 2007, Applied Analysis Seminar, UMASS, Amherst.
- March 2007, Analysis and PDE seminar, Johns Hopkins University,
- January 2007, invited talk at "Nonlinear Lattice Dynamics: from localization to statistical behavior", Centro Internacional de Ciencias, Cuernavaca, Mexico.
- November 2006, Kansas State University, Analysis seminar.
- August 2006, Seville, Spain, invited talk at "Harmonic and Geometrical Analysis with Applications to Partial Differential Equations", ICM 2006 satelite conference.
- July 2006, Sofia University, Bulgaria, Conference honoring the Pioneers of Bulgarian Mathematics.
- June 2006, University of Pisa, PDE seminar.
- April 2006, University of Notre Dame, AMS special session on Analysis and Geometry of Non-linear Evolution Equations.
- April 2006, Florida International University, AMS special session on Nonlinear waves.
- March 2005, Applied Analysis Seminar, UMASS - Amherst.
- January 2005, Santiago, Chile, PASI 2005, Workshop on differential equations and nonlinear analysis.
- October 2004, Albuquerque, New Mexico, AMS special session on Regularity in PDE and Harmonic Analysis
- June 2004, Show-me conference, University of Missouri.
- April 2004, Phase Space Analysis of Partial Differential Equations, Centro Di Ricerca Matematica, Pisa.
- June 2003, First AMS-RMSE meeting, Seville, Spain.
- May 2002, University of Missouri, Harmonic Analysis/PDE conference.
- May 2002, University of Montreal, AMS special session on Harmonic Analysis.
- Jan 2002, University of Kansas,Lawrence.
- Jan 2002, University of Illinois, Urbana-Champaign.
- Jan 2002, University of New Mexico.
- July 2001, Mt. Holyoke College, AMS special summer program on harmonic analysis.
- April 2001, Yale University, Analysis seminar.
- March 2001, University of Kansas, Lawrence, AMS special session on Harmonic Analysis and Applications.
- February 2001, Brown University, Analysis seminar.
- October 2000, Virginia Tech University, Southeastern-Atlantic Regional Conference on Differential Equations.
- November 1999, University of Massachusetts, Amherst.
- June 1999, Blaubeuren, Germany, International Conference on Spectral Theory and Asymptotic Behavior of Semigroups.
- January 1999, University of Wisconsin, Conference on Singular and Oscillatory integrals.
- October 1998, Auburn University, Southeastern-Atlantic Regional Conference on Differential Equations.

- November 1997, University of New Mexico, AMS special session on Harmonic Analysis.

12. **State and University service**

N.B. All service before Fall 2021 is done with the appropriate unit of the University of Kansas.

- 2005, Founding organizer for the Kansas collegiate mathematics competition
  - 2005, Lawrence, KS, University of Kansas;
  - 2006, Arkansas city, KS, Cowley county community college;
  - 2007, Wichita, KS, Wichita State University;
  - 2008, Newton, KS, Bethel college.
  - 2010, Washburn University, Topeka, KS.
  - 2011, Baker University, Baldwin city, KS
  - 2012, Kansas State University, Manhattan, KS
- Coach, KU Putnam competition team, 2002 - 2005. In this period, KU placed nationally as follows
  - 52nd in 2002 edition,
  - 47th in 2003 edition,
  - 28th in the 2004 edition.
- 2014-2017, member of the KU Faculty Senate Research Committee.
- Participation in Ph.D. committees (outside College of Liberal Arts Sciences) Muharrem Tunc, Ph.D. 2014, University of Kansas (EECS);

13. **College Service**

N.B. All service before Fall of 2021 is done with the appropriate unit of the University of Kansas.

- AY 2018/19 - 2020/21 - Committee on Appointments, Promotion and Tenure
- AY 2017/2018 - Committee on Appointments, Promotion and Tenure
- AY 2008/2009 - Sabbatical committee.

14. **Departmental Service**

N.B. All service before Fall 2021 is done with the appropriate unit of the University of Kansas.

- Chair of the problem selection committee for the joint program exam in mathematical analysis, Fall 2023.
- Colloquium chair, Fall 2021 - now, UAB Math Department.
- Wells-Morrison awards selection committee - Springs 2020, 2021
- Recruiting committee 2004/2005, 2005/2006, 2007/2008, 2010/2011, 2012/2013, 2013/2014, 2015/2016.
- Math. Dept. Chair search committee, 2008-2009.
- Graduate Review committee, Fall 2009.
- Graduate program review committee, 2009-2010.
- Library committee, 2002-2010.

- Self-study committee, Spring 2010 - Fall 2011.
- Executive committee, Fall 2010-Spring 2012, Fall 2014-Spring 2016.
- Distinguished/Foundation Professor recruiting committee - 2014/2015.
- Analysis qualifying exam (problem selection/grading), 2002 - 2017, 2018-2021.
- Honors committee, 2005-2018, Chair 2010-2015, 2016-2018.
- Promotion to Full Professor committee (member), Fall 2014.
- Promotion and tenure committee (chair), AY 2016/2017.
- General research fund committee, Spring 2015.
- Post tenure review committees: member - Spring 2015, 2018;
  chair - Spring 2017.
- Sabbatical committee - AY 2016/2017.
- Ph.D. committees - member:
  Ryan Frier, Ph.D. 2023, University of Kansas;
  Steven Redolfi, Ph.D. 2023, UAB;
  Satbir Malhi, Ph.D. 2019, University of Kansas;
  Wen Feng, Ph.D. 2018, University of Kansas;
  Wei-Da Chen, Ph.D. 2017, University of Kansas;
  Lucas Chafee, Ph.D. 2015, University of Kansas;
  Khoa Le, Ph.D. 2015, University of Kansas;
  Jingyu Huang, Ph.D. 2015, University of Kansas;
  Jarod Hart, Ph.D. 2013, University of Kansas;
  Maila Brucal-Hallare, Ph.D. 2012, University of Kansas;
  Charles Lamb, Ph.D. 2012, University of Kansas;
  Aslihan Demirkaya, Ph.D. 2011, University of Kansas;
  Erika Ward, Ph.D. 2010, University of Kansas;
  Jmmy Mauro, Ph.D. 2009 , University of Pisa, Italy;
  Angel Ivanov, Ph.D. 2006, University of Pisa, Italy;
  Mirko Tarulli, Ph.D. 2006, University of Pisa, Italy;
  Diego Maldonado, Ph.D. 2005, University of Kansas.
- Masters in Art committees - member: Lucas Shauer, 2019; Neha Sharma, 2018; Majed Sofiani, MA 2017; Joel Klipfel, MA 2015; Weinan Wang, MA 2014; Ayse Esen, MA 2012 ; Cubilay Dagtoros, MA 2011.

15. **Service to the profession**

Organizing Committees

- Section Organizer, “Analysis of Nonlinear waves”, Mathematics Days in Sofia, Bulgarian Academy of Sciences, Sofia, Bulgaria.
- Section organizer, “Qualitative Aspects of Nonlinear PDEs: Well-posedness and Asymptotics”, 2023 Spring Southeastern Sectional Meeting, Georgia Tech.
- Section Organizer, “Stability of solitary waves”, Conference on Mathematics of Wave Phenomena, July 2018, Karlsruhe Institute of Technology, Germany.
- Member, Scientific and organizing committee, Workshop “Stability of solitary waves ”, May 2014, Centre Di Giorgi, Pisa, Italy.
- Section Organizer, AMS Spring Sectional meeting, Lawrence, KS, March, 2012.

- Section organizer, SIAM Conference on Applications of Dynamical Systems, May 2011, Snowbird, Utah.
- Section Organizer, 8th AIMS International Conference on Dyn. Systems, Diff. Equations and Applications, Dresden, Germany, May 2010.
- Member, Global Organizing Committee for 7th AIMS International Conference on Dyn. Systems, Diff. Equations and Applications, Arlington, May 18 - 21, 2008

Reviewing for Grant agencies, P & T committees, publishers

- NSERC (Research council of Canada) - Discovery grant.
- NSF - two panels in the Analysis program
- NSF - Mail reviews
- Grant agency of the Czech Academy of sciences, mail review
- University of Wisconsin - Milwaukee Research Growth initiative.
- Italian Ministry for Education, University and Research (MIUR).
- Wrote external letter for a promotions to full professor (Louisiana State University, Sultan Quaboos University, Oman) and associate professor/tenure (Miami University, Ohio).
- Refereed a book for the American Mathematical Society Publishing House.

Ad-hoc Referee[3]

- Math Reviews, more than 150 reviews, including four books.
- Advances in Differential Equations,
- AMS Contemporary Mathematics special issue
- Applicable Analysis, 2 papers;
- Applied Mathematics - A Journal of Chinese Universities;
- American Mathematical Monthly, 2 papers
- Applied Mathematics Letters, 2 papers
- Archiv der Mathematik
- Boundary Value Problems
- Chaos, Solitons, Fractals
- Collectanea Mathematica
- Communications in Contemporary Mathematics
- Communications in Mathematical Physics
- Communications in PDE
- Communications in Pure and Applied Analysis - 2 papers
- Computers and Mathematics with Applications
- Contemporary Mathematics, 2 papers
- Differential Equations and Dynamical Systems
- Differential and integral equations, 4 papers
- Disc. Cont. Dyn. Sys. - A, 3 papers
- Disc. Cont. Dyn. Sys. - B
- Forum Mathematicum, 3 papers
- Glasgow Mathematical Journal

[3]the list contains only items refereed before 2016. For articles after that date, please consult Web of science.

- Illinois Journal of Mathematics, 2 papers
- Indiana University Mathematics Journal
- International Journal of Mathematics and Mathematical Sciences, 2 papers
- Israel Journal of Mathematics
- Journal of Differential Equations, 3 papers.
- Journal of Difference Equations and Applications
- Journal of Evolution Equations
- Journal of Fourier Analysis and Applications
- J. Funct. Anal., 3 papers
- Journal of Geometric Analysis
- J. London Math. Soc.
- J. Math. Anal. Appl., 12 papers
- Journal of Mathematical Physics, 4 papers
- Journal of Nonlinear Science
- Journal of Physics A, 2 papers
- Letters in Mathematical Physics
- Mathematical Methods in the Applied Sciences
- Mathematical Modeling of Natural Phenomena
- Nonlinear Analysis Series A: Theory, Methods & Applications - 4 papers
- Nonlinearity, 3 papers
- Pacific Journal of Mathematics
- Philosophical Transactions of the Royal Society A
- Physica D: Nonlinear Phenomena, 5 papers
- Physics Letters A
- Proceedings of the AMS
- Proceedings of the Edinburgh Mathematical Society
- Proceedings of the Center for Mathematics and its Applications (ANU)
- Publicacions Matemàtiques
- Revista Matemática Iberoamericana
- Science in China
- SIAM J. Math. Anal., 3 papers.
- SIAM J. Appl. Dyn. Systems., 2 papers.
- Studies in Applied Mathematics, 4 papers.
- Transactions of the AMS