

MILENA STANISLAVOVA

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Department of Mathematics ♦ University of Alabama Birmingham
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RESEARCH INTERESTS

Partial Differential Equations: Stability of Waves, Nonlinear Wave Equations

Dynamical Systems: Invariant Manifolds, Hamiltonian Systems, Control

Analysis: Semigroups of Linear Operators, Spectral Mapping Theorems

EDUCATION

2000, Ph.D., Department of Mathematics, University of Missouri, Columbia.

1993, M.S. in Mathematics, Sofia University, Sofia, Bulgaria.

PROFESSIONAL EXPERIENCE

2021-date, Professor, Department of Mathematics, University of Alabama Birmingham.

2013-2021, Professor, Department of Mathematics, KU.

2007-2013, Associate Professor, Department of Mathematics, KU.

2002-2007, Assistant Professor, Department of Mathematics, KU.

2000-2002, Visiting Assistant Professor, University of Massachusetts-Amherst.

1996-2000, Graduate Teaching Assistant, University of Missouri-Columbia.

1994-1996, Researcher, Bulgarian Academy of Sciences.

ADMINISTRATIVE EXPERIENCE

Chair, Mathematics Department, UAB, 2021-date.

Chair, Department of Economics, KU, 2017-2021.

Director of Graduate Studies, KU Department of Mathematics, 2012-2017.

RESEARCH AND CONFERENCE GRANTS

2025, NSF DMS Third Joint Alabama Florida (JAF) Conference on Differential Equations, Dynamical Systems and Applications, (\$ 41,600)

2021-2026, NSF DMS - 2108285 **Infinite-Dimensional Dynamical Systems - Stability and Long-Time Behavior**, (\$ 197,000)

2015-2019, NSF DMS-1516245 **Stability and Long-Time Behavior for Infinite-Dimensional Dynamical Systems** (\$ 195,000)

2018, NSF DMS- 1753332 **KUMUNU PDE Conference Proposal** (\$17,500)

2017, IMA funding (\$3,500) for KUMUNU PDE Conference April, 2018

2012-2016, NSF DMS - 1211315 **Linear and Nonlinear Stability for Infinite-Dimensional Dynamical Systems** (\$ 215,157)

2015, NSF DMS - 1500607 **KUMU PDE Conference Proposal** \$15,500

2015, IMA funding \$4,500 for KUMU PDE Conference April, 2015, co-PI M. Johnson

2008-2012, NSF DMS-0807894 **Long-Time Behavior and Stability of Infinite-Dimensional Dynamical Systems** (\$141,199)

2005-2008, NSF DMS-0508184 **Stability and Long-Time Behavior of Hamiltonian Partial Differential Equations** (\$116,181)

2004-2005, NSF First Award EPS-0236913 **Analytical Studies of Regularity and Stability of Hamiltonian PDE's** (\$72,750)

2003, KUCR NFGRF-2301720 **Infinite-Dimensional Hamiltonian Systems and Stability of Special Solutions with Applications in Nonlinear Optics** (\$7,995)

TEACHING AWARDS AND GRANTS

2012, Don and Pat Morrison Award for Excellence in Teaching Mathematics.

2009, Faculty seminar grant from Center for Teaching Excellence

2005, Teaching Grant from Center for Teaching Excellence

2003, Center for Teaching Excellence Grant for the Best Practices Institute

PUBLICATIONS

Atanas Stefanov, Milena Stanislavova, Jesus Cuevas, Panos Kevrekidis, *On a Klein-Gordon Reduction for Oscillons*, Journal of Nonlinear Waves (2026).

M. Stanislavova, A. Stefanov, *Asymptotic attraction with algebraic rates toward fronts of dispersive-diffusive Burgers equations*, Journal of Nonlinear Waves; **1**, no 7, (2025).

S. Hakkaev, M. Stanislavova, A. Stefanov, *On the spectral instability of some cnoidal and snoidal waves of the full Klein-Gordon-Zakharov system*, Dynamics of PDE, **22**, no 2, (2025), pp.107-133.

S. Hakkaev, M. Stanislavova, A. Stefanov, *Existence and stability for the traveling waves of the Benjamin equation*, Nonlinearity, **38**, (2025), 025020 (33pp).

- S. Hakkaev, M. Stanislavova, A. Stefanov, *Spectral stability of periodic waves for the Zakharov system*, *J. Math. Phys.* **64**, no 8, (2023).
- M. Stanislavova, A. Stefanov, *On the long time dynamics of the Landau-De Gennes gradient flow*, *Journal of Statistical Physics*, **190**, no 1, (2023)
- S. Hakkaev, M. Stanislavova, A. Stefanov, *On the stability of the periodic waves for the Benney system*, *SIADS*, **21**, no 3, (2022), pp. 1726-1747.
- W. Feng, M. Stanislavova, A. Stefanov, *On the Barashenkov-Bogdan-Zhanlav solitons and their stability*, *Chaos, Solitons and Fractals: the interdisciplinary journal of Nonlinear Science, and Nonequilibrium and Complex Phenomena*, Vol. 152 (2021), 111467.
- S. Hakkaev, M. Stanislavova, A. Stefanov, *On the stability of periodic waves for the cubic derivative NLS and the quintic NLS*, *Journal of Nonlinear Science*, **31**, no 3, (2021).
- H. Gaebler, M. Stanislavova, *Hamiltonian linearized operators: bounds on the spectra and optimal L^2 estimates for the semigroups*, *Physica D*, Vol. 416, (2021), 132738.
- M. Stanislavova, A. Stefanov, *On the ground states for the Schrödinger equation under a trapping potential*, *Journal of Evolution Equations*, online first (2020).
- W. Feng, M. Stanislavova, *On the spectral stability of standing waves of nonlocal PT -symmetric systems*, special volume "Mathematics of Wave Phenomena", (2020).
- S. Malhi, M. Stanislavova, *Energy decay for the linear fractional Klein-Gordon model*, *Mathematische Nachrichten*, **293**, no 2 (2019), pp 363-375.
- S. Hakkaev, M. Stanislavova, A. Stefanov, *On the generation of stable Kerr frequency combs in the Lugiato-Lefever model of periodic optical waveguides*, *SIAM Journal of Applied Math.*, Vol. 79, No. 2, (2019), pp. 477-505.
- A. Demirkaya, M. Stanislavova, *Numerical results on existence and stability of standing and traveling waves for the fourth order beam equation*, *DCDS- B*, **24** (1), (2019), pp 159-186.
- M. Stanislavova, A. Stefanov, *Asymptotic stability for spectrally stable Lugiato-Lefever solutions in periodic waveguides*, *Journal of Math Physics*, **59**, 10 (2018), 101502, 12pp.
- S. Malhi, M. Stanislavova, *When is the energy of the 1D damped Klein-Gordon equation decaying?*, *Mathematische Annalen*, v.**372**, 3-4,(2018), pp 1459-1479.
- W. Feng, M. Stanislavova, *On the vortices for the NLS in higher dimensions*, *Phil Trans A*, v. **376** (2018), 20170189.
- W. Feng, M. Stanislavova, A. Stefanov *On the spectral stability of ground states of the semilinear Schrödinger and Klein-Gordon equations with fractional dispersion*, *Communications in Pure and Appl. Analysis* **17**, no. 4, (2018), p. 1371–1385.
- M. Stanislavova, A. Stefanov, *On stability of PT symmetric ground states for Schrödinger and Klein-Gordon equations in higher space dimensions*, *Proceedings of the AMS*, **145**, (2017) p. 5273–5285.

- S. Hakkaev, M. Stanislavova, A. Stefanov, *Spectral stability for classical periodic waves of the Ostrovsky and short pulse models*, *Studies in Applied Math* , **139**, no 3, (2017), p. 405-433.
- S. Hakkaev, M. Stanislavova, A. Stefanov, *Periodic traveling waves of the regularized short pulse and Ostrovsky equations: existence and stability*, *SIAM Journal of Math Analysis*, **49**, no 1, (2017), p. 674-698.
- M. Stanislavova, A. Stefanov, *On the spectral problem $\mathcal{L}u = \lambda u'$ and applications*, *Communications in Math Physics*, v. 343, 2, (2016), p. 361-391.
- A. Demirkaya, P.G. Kevrekidis, M. Stanislavova, A. Stefanov, *Spectral Stability Analysis for Standing Waves of a Perturbed KG Equation*, *DCDS - A* (2015) p.359-368.
- A. Demirkaya, S. Hakkaev, M. Stanislavova, A. Stefanov, *On the Spectral Stability of Periodic Waves of the Klein-Gordon Equation*, *Diff. Int. Equations*, V. 28, no. 5-6 (2015), 431-454.
- M. Stanislavova, *Linear Stability of Solitary Waves for the one-dimensional Benney-Luke and Klein-Gordon Equations*, *Studies in Applied Mathematics*, v. 134, no.1, (2015), 1-23.
- A. Demirkaya, T. Kapitula, P.G. Kevrekidis, M. Stanislavova and A. Stefanov *On The Spectral Stability Of Kinks in some PT -symmetric Variants of the Classical Klein-Gordon Field Theories*, *Studies in Applied Mathematics*, v.133, **3** (2014), p.298-317.
- S. Hakkaev, M. Stanislavova, A. Stefanov, *Linear stability analysis for periodic traveling waves of the Boussinesq equation and the KGZ system*, *Proc. Roy. Soc. Edinburgh A.*, v. 114, no. 3 (2014), p. 455-489.
- M. Stanislavova, A. 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.
- S. Hakkaev, M. Stanislavova, A. Stefanov, *Spectral stability for traveling pulses of the Boussinesq 'abc' system*, *SIAM J. Appl Dyn Systems*, v.12, **2** (2013), p.878-898.
- S. Hakkaev, M. Stanislavova, A. Stefanov, *Orbital stability for periodic standing waves of the Klein-Gordon-Zakharov system and the beam equation* , *ZAMP-Zeitschrift fuer Angewandte Mathematik und Physik*, v. 64, **2**, (2013) p. 265-282.
- M. Stanislavova, A. Stefanov , *Linear stability analysis for traveling waves of second order in time PDEs*, *Nonlinearity* v. 25, (2012) p. 2625-2654.
- S. Hakkaev, M. Stanislavova, A. Stefanov, *Transverse instability for periodic waves of KP-I and Schrödinger equations*, *Indiana Univ. Math. J.* v.61 (2012), 461-492.
- A. Demirkaya, M. Stanislavova , *Conditional stability theorem for the one dimensional Klein-Gordon equation*, *J. Math. Phys.*, **52**, (2011).
- M. Stanislavova, A. Stefanov , *Asymptotic estimates and stability analysis of Kuramoto-Sivashinsky type models*, *Journal of Evolution Equations (JEE)*, **11**(2011), no. 3, 605-635, Erratum: *J. Evol. Equ.* 11 (2011), no. 3, 637-639.

- A.Demirkaya, M. Stanislavova, *Long Time Behavior for Radially Symmetric Solutions of the Kuramoto-Sivashinsky Equation*, *Dynamics of PDEs*, v.7, **2** (2010), 161–175.
- M. Stanislavova, A. Stefanov, *Effective estimates of the higher Sobolev norms for the Kuramoto-Sivashinsky equation* *DCDS* (2009), 729–738.
- M. Stanislavova, A. Stefanov, *On precise center stable manifold theorems for certain reaction-diffusion and Klein-Gordon equations* *Physica D: Nonlinear Phenomena* **238**(2009) 2298-2307.
- M. Stanislavova, *Diffraction Managed Solitons with Zero-mean Diffraction*, *Journal of Dynamics and Differential Equations*, **19** (2007), no.2, 295-307.
- M. Stanislavova, A. Stefanov, *Attractors for the viscous Camassa-Holm equation*, *DCDS - A* **18** (2007), 159–186.
- M. Stanislavova, *On the Global Attractor for the Damped BBM equation*, *Discrete and Continuous Dynamical Systems Suppl. Volume* (2005), 824–832.
- M. Stanislavova, A. Stefanov, B. Wang *Asymptotic Smoothing and Attractors for the Generalized Benjamin-Bona-Mahony Equation on R^3* , *J.Diff. Eq.* **219** (2005), no. 2, 451–483.
- M. Stanislavova, *Regularity of ground state solutions of DMNLS*, *J.Diff. Eq.*, 210, 1 (2005) 87-105.
- M. Stanislavova, A. Stefanov, *On global finite energy solutions of the Camassa-Holm equation*, *Journal of Fourier Analysis and Applications* **11** (2005), no. 5, 511–531.
- Y. Latushkin, C.Li and M.Stanislavova, *The Spectrum of a Linearized 2D-Euler Operator*, *Studies in Applied Mathematics*, **112** (2004) 259-270.
- F. Gesztesy, C.K.R.T. Jones, Y. Latushkin and M. Stanislavova, *A Spectral Mapping Theorem and Invariant Manifolds for Nonlinear Schrödinger Equations*, *Indiana Univ. Math. J.*, **49** (2000) 221–243.
- M. Konstantinov, M. Stanislavova, P.Petkov *Perturbation Bounds and Characterization of the Solution of the Associated Algebraic Riccati Equation*. *Journal of Linear Algebra and Applications*, **285** (1998) 7-31.
- M. Stanislavova, A. Zhivkov *On the Dynamics of the Four Dimensional Rigid Body in a Quadratic Potential Field.*, *J. Math. Phys.* **36** (1995), 5760–5788.

INVITED TALKS

Invited talk, Workshop ”Challenges and Opportunities in Applied Analysis and Scientific Computing”, University of Alabama, Tuscaloosa, August 2026.

Invited Talk, Fifth International Conference “Mathematics Days in Sofia”, July 6-10, 2026, Sofia, Bulgaria.

Invited Talk, SIAM PDE Conference (PD25), November 17-20, 2025, Pittsburgh, Pennsylvania.

Invited Talk, SIAM Conference on Applications of Dynamical Systems (DS25), May 11-15, 2025, Denver, Colorado.

Invited Talk, The Thirteenth International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory April 14 -16, 2025, Athens, GA.

Invited Talk, AMS Sectional Meeting, Special Session "Analysis on Nonlinear Wave Models", Lawrence, KS, March 29-30, 2025.

Invited Talk, SIAM Conference Nonlinear Waves and Coherent Structures, Session on "Advances in Stability Analysis for Nonlinear Waves", Baltimore, June 24-27, 2024.

Invited Talk, KUMUNU PDE Conference, University of Kansas, Lawrence, KS, April 5-7, 2024.

Invited Talk, Session "Theory of Nonlinear Waves", Spring AMS Sectional meeting, Florida State University, Tallahassee, FL, March 23-24, 2024.

Plenary Talk, The 49th Annual Mathematics Conference, Department of Mathematics, Miami University at Oxford, Ohio, Sep 29-30, 2023.

Invited Talk, Mathematics Days in Sofia 2023 (MDS 2023) conference, Sofia, Bulgaria, July 10-14, 2023.

Invited Talk, Session "Geometric methods in spectral theory of traveling waves and patterns", 13-th AIMS conference, Wilmington, NC, May 31 – June 5, 2023.

Invited Colloquium Talk, University of Memphis, October 28, 2022.

Invited Talk, AMS Fall Southwestern Sectional Meeting, Special Session on "Deterministic and Stochastic PDEs: Theoretical and Numerical Analyses", University of Tennessee Chattanooga, October 2022.

Invited Talk, BIRS Workshop, Mathematical aspects of the physics with non-self-adjoint operators Banff, Canada, July 2022.

Invited Talk, 12th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, April 2022.

Invited Talk, Conference on Mathematics of Wave Phenomena, Special Session on "The Stability of Nonlinear Waves", Karlsruhe, Germany, February 14-18, 2022, virtual.

Invited Talk, AMS Fall Central Sectional Meeting, Special Session on Progress in Nonlinear Waves, virtual, October 9-10, 2021.

Invited Talk, IFIP TC7 Conference on System Modeling and Optimization, Special session on "Qualitative and quantitative analysis of nonlinear evolutionary partial differential equations", virtual, September 1-3, 2021.

Invited Talk, SIAM Conference on Applications of Dynamical Systems, virtual, May 23-27, 2021.

Invited Talk, Session on "Existence and stability of nonlinear waves", ICIAM, Valencia, Spain, July 15-19, 2019.

Invited Talk, Session on "Stability of nonlinear waves and coherent structures", Equadiff 2019 Conference, Leiden, July 8-12, 2019.

Invited Talk, 11th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, Athens, GA, April 2019.

Invited Speaker, Midwest PDE Conference, Bloomington, Indiana, March 30-31, 2019.

Invited Talk, Specials session on Mathematical Analysis and Control Theory of Coupled Partial Differential Equation Models at the AMS Spring Southeastern Sectional Meeting, Auburn, Alabama, March 2019.

Invited Speaker, SIAM Conference on Nonlinear Waves and Coherent Structures, special session on Existence and Stability of Traveling Waves, Orange County, June 2018.

Invited Speaker, special session on Nonlinear Waves and Patterns, AMS sectional meeting, Ohio State University, March 2018.

Invited Speaker. International Conference 'Mathematics Days in Sofia', Differential Equations and Mathematical Physics section, Sofia, Bulgaria, July 2017.

"Geometrical Methods, Non self-adjoint Spectral Problems, and Stability of Periodic Structures" workshop at BIRS, Oaxaca, Mexico, June 2017.

Invited Talk, special session on "Recent Advances on Traveling Waves in Systems of Partial Differential Equations", SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, May 2017.

Invited Talk, special session on "Nonlinear waves: analysis and computation", AMS Sectional meeting, College of Charleston, Charleston, NC, March 10-12, 2017

Invited talk, special session on "Problems in Partial Differential Equations", Joint Mathematics Meeting, Atlanta, January 4-7, 2017.

Invited Talk, special session on "Existence and Stability of Nonlinear Waves and Patterns", SIAM Conference on Nonlinear Waves and Coherent Structures (NWCS16), Philadelphia, August 8-11, 2016.

Invited Talk, special session on "Evolution of Partial Differential Equations and their Control", Spring Eastern Sectional Meeting, SUNY, Stony Brook, NY, March 2016.

Invited talk, special session on "Recent Developments in Dispersive Partial Differential Equations and Harmonic Analysis", Joint Mathematics Meeting Seattle, Washington, January 6-9, 2016.

Invited talk at the special section on "Spectral methods in Stability of Traveling Waves", 9th IMACS international conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, The University of Georgia, Athens, April 2015.

Invited talk at the mini-symposium on "Spectral and geometric methods in stability of waves and patterns", SIAM Conference on Nonlinear Waves and Coherent Structures, University of Cambridge, UK, August 11-14, 2014.

Invited talk at 10th AIMS conference on Dynamical Systems, Differential Equations and Applications, Madrid, July 7-11, 2014.

Invited talk at the "Stability of solitary waves workshop", De Giorgi Center, Scuola Normale Superiore, Pisa, May 24-31, 2014.

Invited talk at SIAM conference on Analysis of PDEs, Lake Buena Vista, Florida, December 2013.

Invited talk at a special session 'Existence and stability of traveling wave solutions' at the "Nonlinear Waves", SIAM Conference on Applications of Dynamical Systems, Snowbird, UT, May 2013.

Invited talk, AMS meeting, University of Iowa, April 2013.

Invited Talk, Special session on "Nonlinear Evolution Equations", Joint Mathematics Meeting (JMM) San Diego, January 9 - 12, 2013.

Invited Talk, Special Session on "Traveling Waves", AMS Central Section Meeting, University of Akron, Akron, OH, October 20-21, 2012.

Invited talk at 38th International Conference "Applications of Mathematics in Engineering and Economics" (AMEE'12), June 8-13, 2012, Sozopol, Bulgaria.

"Linear Stability Analysis for Periodic Traveling Waves of the Boussinesq Equation and the KGZ System", AMS sectional meeting, University of Kansas-Lawrence, March 2012.

Invited Talk, "Geometric Methods for Infinite-Dimensional Dynamical Systems" conference, Brown University, November 4-6, 2011.

Invited Talk, AMS sectional meeting, University of Nebraska, October 2011.

Invited talk at the special session on "Nonlinear Waves", SIAM Conference on Applications of Dynamical Systems, Snowbird, UT, May 2011.

Invited talk, 7th IMACS conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, The University of Georgia, Athens, April 2011.

Invited talk at SIAM Conference on Nonlinear Waves and Coherent Structures (NW10), Philadelphia, August 16-19th, 2010.

Invited talk at 36th International Conference "Applications of Mathematics in Engineering and Economics" (AMEE'10), June 5-10, 2010, Sozopol, Bulgaria.

Special session talk at Joint SIAM/RSME-SCM-SEMA Meeting Emerging Topics in Dynamical Systems and Partial Differential Equations DSPDEs, 2010, Barcelona, Spain.

Invited talk at the conference on "Harmonic Analysis and PDEs", University of Nebraska-Lincoln, April 17-18, 2010.

Invited talk at the First Oklahoma PDE workshop, Oklahoma State University, November 21-22, 2009

Invited participant - Banff International Research Station for Mathematical Innovation and Discovery (BIRS) workshop: Analysis of nonlinear wave equations and applications in engineering, Banff, Alberta, Canada, August 2009.

On precise center stable manifold theorems for reaction diffusion equations 6th IMACS international conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory, The University of Georgia, Athens, March 2009.

On the Kuramoto-Sivashinsky equation in R^1 and R^2 : effective estimates of the high-frequency tails, special session on Long time behavior for Hamiltonian and dissipative systems, 7th AIMS Conference, University of Texas, Arlington, May 2008.

Applications of Discrete and Continuous Nonlinear Schrödinger Equations, Pioneers of Bulgarian Mathematics, International Conference, Sofia, Bulgaria, Section on Dynamical Systems, July 2006.

Attractors for evolution equations-a Fourier-Analytic Approach, Dynamical Systems Weekend, Columbia, MO, May 2006.

Recent Developments in Applications of Discrete and Continuous Nonlinear Schrödinger Equations in Nonlinear Optics, Kansas Center for Advanced Scientific Computing, KU, April 2006.

Attractors for the viscous Camassa-Holm equation, AMS sectional meeting, Special Session on Analysis and Geometry of Non-linear Evolution Equation, University of Notre Dame, April 2006.

Diffraction Managed Nonlinear Schrödinger equation, localization and ground states. January 2005, PASI 2005, Workshop on differential equations and nonlinear analysis, Santiago, Chile, January 2005.

On the Global Attractor for the Damped Benjamin-Bona-Mahony Equation, special session on Dynamical Systems and Applications, Fifth AIMS Conference, California State Polytechnic University - Pomona, California, June 2004.

The Dispersion Managed Nonlinear Schrödinger Equation in one and two dimensions, AMS sectional meeting, Special Session on Current Topics in Optical Communication Systems, University of North Carolina, October 2003.

Regularity of Ground States for DMNLS, SIAM Conference on Applications of Dynamical Systems, Snowbird, UT, May 2003.

Time-smoothing Techniques and Applications to the Camassa-Holm Equation, SIAM 50th annual meeting, Philadelphia, July 2002.

Stability of Evolution Equations, University of New Mexico, February 2002.

Global Well-Posedness for the Camassa-Holm Equation in the Energy Norm, SEARCADE, Wake Forest University, November 2001.

Spectral Mapping Theorem for the 2D Euler Equation, Georgia Institute of Technology, Dynamical Systems Seminar, April 2001.

Invariant Manifolds and Spectral Mapping Theorems, AMS meeting, Special Session on Semigroups and Evolution Equations, March 2001.

Spectral Mapping Theorem for the 2D Euler Equation, Southeastern-Atlantic Regional Conference on Differential Equations, Virginia Tech University, October 2000.

Spectral Theory for Perturbed Semigroups, International Conference on Spectral Theory and Asymptotic Behavior of Semigroups, Blaubeuren, Germany, June 1999.

Dynamics of the four-dimensional rigid body in a quadratic potential field, International Conference on Differential Equations and Mathematical Physics, University of Alabama - Birmingham, March 1999.

Invariant Manifolds for the Nonlinear Schrödinger Equation, Southeastern-Atlantic Regional Conference on Differential Equations, Auburn University, October 1998.

Spectral Mapping Theorem for the Nonlinear Schrödinger Equation, Brown University, November 1998.

Perturbation Bounds for the Associated Algebraic Riccati Equation, International Conference on Differential Equations, Varna-Bulgaria, August 1995.

POSTDOCTORAL FELLOWS AND GRADUATE STUDENTS SUPERVISED

Anna Ghazaryan, postdoc 2008-2010, Professor and Chair, Miami University, Ohio.

Harrison Gaebler, PhD student, graduated 2021, University of Oklahoma

Satbir Malhi, PhD student, graduated 2019, Franklin and Marshall College.

Wen Feng, PhD student, graduated 2018, Sam Houston State University.

Aslihan Demirkaya, PhD student, graduated 2011, Amazon.

Ayse Esen, MA student, graduated 2012, .

Weinan Wang, MA student, graduated 2014, Assistant Professor, University of Oklahoma.

SCHOLARLY SERVICE

Member of the Editorial Board, *Studies in Applied Mathematics*, 2020-date

Co-organizer, Joint Alabama Florida (JAF) Conference in Differential Equations and Dynamical Systems, 2023 at Auburn University, 2024 at Florida State University, 2025 at UAB, 2026 at Florida International University.

NSF grant-review panels in Applied Mathematics, NSF Postdoctoral Research Fellowships and Graduate Research Fellowships, 2009, 2010, 2012, 2016, 2022, 2024.

Co-organizer, Mathematics Days Sofia Conference 2023, special session "Progress in Nonlinear Waves", July 10-14, 2023

Co-organizer, Joint Alabama Florida (JAF) Conference in Differential Equations and Dynamical Systems, Auburn University, May 13-14, 2023.

Member of the selection committee for the Martin Kruskal Prize, SIAM Activity Group on Nonlinear waves and coherent structures, 2020.

Co-organizer and founder, KUMUNU PDE, Dynamical Systems and Applications Conference, 2015-2021.

Member of the selection committee for the Crawford Prize, SIAM Activity Group on Dynamical Systems, 2013.

Co-organizer, special session, AMS sectional meeting, University of Kansas, March 2012.

Guest editor, *Discrete and Continuous dynamical systems-Series S*, Vol.5, **5**.

Organizer of a special session on Linear and Nonlinear Stability of coherent structures, Eight AIMS Conference, Dresden, Germany, May 2010.

Organizer of a special session on Long time behavior for Hamiltonian and dissipative systems, Seventh AIMS Conference, University of Texas, Arlington, May 2008.

Organizer of a Mini-symposium, SIAM Meeting in Snowbird, UT May 2003.

Organizer of a Mini-symposium, SIAM Meeting in Snowbird, UT, May 2005.

Referee for Proceedings of AMS, SIAM Journal of Math Analysis, Proceedings of the Royal Society A, Nonlinearity, Applied Mathematics Letters, Dynamics of PDE, Communications Pure and Applied Analysis, ADMA, International Journal of Mathematics and Mathematical Sciences, JMAA, AMS contemporary mathematics volume, Journal of Applied Mathematics and Stochastic Analysis, Annali Matematica Pura ed Applicata

Reviewer for Mathematical Reviews

COLLEGE AND UNIVERSITY SERVICE, UAB

Member of CAS working group on NTE faculty

COLLEGE AND UNIVERSITY SERVICE, KU

Honors Program Faculty Fellow, 2020-2021

Executive Council of Graduate Studies member, 2015-2018

Senior Administrative Fellows Program, AY2016-2017

Self Fellowship Faculty Evaluation Committee, 2017-2020

Graduate Studies Departmental Scholarships Committee, 2016-date

University Committee on Sabbatical Leaves, 2014-2017
College Committee on Graduate Studies, 2012-2015, chair in AY13-14
First Year Seminar Proposal Review Committee, 2014
Documenting and Advancing Learning Faculty Seminar, CTE, 2012-2014
First Year Seminar steering committee member, AY11-12
Member of Faculty Senate, 2009 - 2012

STATE SERVICE

International Math Kangaroo competition for K-12 kids, 2007-date
KU Mini-Math Club for Elementary School students, 2014-2015

DEPARTMENTAL SERVICE - KU MATHEMATICS DEPARTMENT

P&T Committee Member, Fall 2020
Director of Graduate Studies, Spring 2012-2017.
Member of the self-study committee, 2016.
Faculty Advisor of Graduate Student Organization, Spring 2012-2017
Admissions Director of Graduate Studies, 2010- 2012.
Coordinator responsible scholarship requirement, 2011- 2017.
Analysis qualifying examinations, 2002-2017.
P&T Committee Member, Fall 2014.
Member of the Executive Committee, Spring 2014.
Sabbatical Committee, Fall 2013.
Wells-Morrison Committee, 2012-2014
Chair Search Committee, 2011-2012.
Long Range Planning committee, 2003-2004 and 2011-2012
Member of the Executive Committee, 2009-2010.
Member of the Outreach Committee, 2008-2010.
Colloquium Co-chair, 2002-2007.
Ambassador for the Center for Teaching Excellence, 2004-2007.
Chair of the Elementary Algebra Courses Committee, 2006-2010.
Member of the Lower Division of the Undergraduate Committee, 2002-2010.

COURSES TAUGHT AT UAB

MA 650 Differential Equations

MA 252 Introduction to Differential Equations

MA 419 Game Theory

COURSES TAUGHT AT KU

Math 115, 116 Applied Calculus I, II

Math 125, 126 Calculus I, II

Math 143, Honors Multivariable Calculus

Math 177, First Year Seminar

Honors 195, Honors Seminar

Math 220, Applied ODEs

Math 221, Honors ODEs

Math 290, Linear Algebra

Math 320 Differential Equations

Math 647, Applied PDEs

Math 648, Calculus of Variations and Integral Equations

Math 765, Real Analysis I

Math 800, Complex Analysis

Math 850, Advanced ODEs and Dynamical Systems

Math 851, Spectral Theory and Stability

Math 950, Advanced PDEs

MEMBERSHIP IN GRADUATE EXAMINATION COMMITTEES

Wesley Perkins, member of dissertation committee

Jingxian Hu, member of dissertation committee, Economics Department

Ayse Esen, member of dissertation committee, School of Education

Connor Smith, member of prelim committee

Kyle Claassen, member of prelim committee

Xi Li, member of dissertation committee

Minji Zhang, member of dissertation committee

Tim Dorn, member of dissertation committee.

Andrew Monaco, member of dissertation committee, Economics Department

Mohamed Badawy, member of prelim committee.

Joel Klipfel, member of master's thesis committee

Melinda Montgomery, member of master's committee.

Michael Bateman, member of master's committee.

ADDITIONAL RESEARCH FUNDING

2011, Support from the IMA, Minneapolis to participate in the "Invariant Objects in Dynamical Systems" short course (invitation only)

2003, Support from the IMA, Minneapolis to participate in the New Directions Short Course on Math Biology (invitation only)

2002, Association for Women in Mathematics Travel Grant

2000-2001, Faculty Research Travel Grant, University of Massachusetts.

1994-1996, Research grant of the Bulgarian Government, co-PI.

1996-2000 Doctoral Fellowship, University of Missouri - Columbia.

1988-1993, State scholarship for excellence in academic work, Sofia University.