Dan-Andrei Geba

Department of Mathematics
University of Rochester
806 Hylan Building
Rochester, NY 14627

Email: dangeba@math.rochester.edu
Homepage: https://dangeba.github.io/

Education

Ph.D. in Mathematics, Princeton University, 2002.

Dissertation: A Local Well-Posedness Result for the Quasilinear Wave Equation in $\mathbb{R}^{2+1}$.

Advisor: Sergiu Klainerman.

M.A. in Mathematics, Princeton University, 1998.

B.A. in Mathematics, Al. I. Cuza University, Iasi, Romania, 1997.

Diploma with Honors, Valedictorian of Class '97.

Academic Experience

University of Rochester, Department of Mathematics

Professor, since 2017.

Associate Professor, 2009–2017.

Assistant Professor, 2006–2009.

University of California, Berkeley, Department of Mathematics

Lecturer, 2005–2006.

Charles B. Morrey Assistant Professor, 2002–2005.

Mathematical Sciences Research Institute, Berkeley

Postdoctoral Fellow, Fall 2005.

Recent Works

Dan-Andrei Geba, A. Alexandrou Himonas and Curtis Holliman, Ill-posedness in the critical Sobolev space for the *b*-Novikov equation, in preparation.

Dan-Andrei Geba, Unconditional Well-Posedness for the Kawahara Equation Revisited, *J. Math. Anal. Appl.* 556 (2026), No. 2, 130262.

Dan-Andrei Geba, Unconditional Well-Posedness for the Modified Kawahara Equation, *Appl. Numer. Math.* 199 (2024), 2-25.

Dan-Andrei Geba, Unconditional Well-Posedness for the Periodic Boussinesq and Kawahara Equations, *Electron. Res. Arch.* 32 (2024), No. 2, 1067-1081.

Dan-Andrei Geba and Bai Lin, Unconditional Well-Posedness for the Kawahara Equation, *J. Math. Anal. Appl.* 502 (2021), No. 2, 125282.

Teaching Experience

Courses taught at University of Rochester

MTH 163, Ordinary Differential Equations.

MTH 164, Multidimensional Calculus.

MTH 165, Linear Algebra with Differential Equations.

MTH 173, Honors Calculus III.

MTH 174, Honors Calculus IV.

MTH 190, Topics in Problem Solving.

MTH 200, Transition to Advanced Mathematics.

MTH 235, Linear Algebra.

MTH 263, Qualitative Theory of Ordinary Differential Equations.

MTH 265H, Functions of a Real Variable (Honors).

MTH 266, Real Analysis II.

MTH 282, Introduction to Complex Variables with Applications.

MTH 282H, Introduction to Complex Analysis (Honors).

MTH 285, Partial Differential Equations (formerly named Methods of Applied Mathematics).

MTH 391, Independent study.

MTH 393, Senior Project.

MTH 463, Partial Differential Equations (graduate).

MTH 467, Theory of Analytic Functions/Analysis II (graduate).

MTH 471, Real Analysis/Analysis I (graduate).

MTH 472, Functional Analysis/Analysis III (graduate).

MTH 565, Introduction to Hyperbolic PDE's (graduate).

MTH 565, Topics in Nonlinear Dispersive Equations (graduate).

MTH 565, An Introduction to the Theory of Wave Maps and Related Problems (graduate).

MTH 565, Small Data Global Regularity for Wave Maps and Related Problems (graduate).

MTH 565, An Introduction to Nonlinear Wave Equations (graduate).

MTH 565, An Introduction to Nonlinear Dispersive Equations (graduate).

MTH 591, Ph.D. Readings in Mathematics (graduate).

MTH 595, Ph.D. Research in Mathematics (graduate).

Problem Solving Seminar.

Courses taught at University of California, Berkeley

MATH 104, Introduction to Analysis.

MATH 105, A Second Course in Analysis.

MATH 110, Linear Algebra.

MATH 140, Metric Differential Geometry.

MATH 185, Introduction to Complex Analysis.

Courses taught at Princeton University

MAT 203, Advanced Multivariable Calculus.

Students Mentored

Undergraduate Students

Zekuan Guo (2024-Present) - Putnam competition.

Matthew Kaminskas (2022-2023) - Honors thesis.

Henry Lin (2022-2023) - Honors thesis.

Tran Duy Anh Le (2021-2025) - Putnam competition.

Tyler Perlman (2021) - Honors thesis.

Zhengkai Li (2021) - Honors thesis.

Kyhl Weber (2020-2021) - Honors thesis.

Phuc Lam (2018-2022) - Putnam competition.

Trung Nguyen (2018-2021) - Putnam competition.

Logan Meredith (2018) - Honors thesis.

Bai Lin (2013-2016) - Putnam competition.

Brian McDonald (2012-2016) - Putnam competition.

Douglas Miller (2010-2015) - Honors thesis, Putnam competition.

Vincent Yu (2010-2014) - Putnam competition.

Xiaoqing Tang (2008-2012) - Putnam competition.

Kevin Lin (2008-2012) - Putnam competition.

Christopher Kauffman (2007-2011) - Honors thesis, Putnam competition, independent study.

Cheng Sun (2006-2009) - Honors thesis, Putnam competition.

Michael Wijaya (2006-2008) - Putnam competition.

Marcello Magno (2004) - Summer REU through the UCLEADS program.

Daniel Nolan (2003-2005) - Putnam competition.

David Karapetyan (2003-2004) - Putnam competition.

Neil Molino (1997-1999) - Putnam competition.

Graduate Students

Bai Lin (2017-2021) - Doctoral advisor.

Dissertation: Well-Posedness Issues for a Pair of Nonlinear Dispersive Equations.

Evan Witz (2017-2020) - Doctoral advisor.

Dissertation: New Results for Generalized Boussinesq Equations.

Matthew Creek (2010-2014) - Doctoral advisor.

Dissertation: Large-Data Global Well-Posedness for the $1 + 2$-Dimensional Equivariant Faddeev Model.

Xiang Zhang (2010-2013) - Doctoral advisor.

Dissertation: A Small Data Global Well-Posedness Result for a 2+1-Dimensional Equivariant Faddeev Model.

Daniel da Silva (2008-2012) - Doctoral advisor.

Dissertation: Non-concentration of Energy in Generalized Wave Maps.

Suresh Eswarathasan (2007) - Independent study finished with seminar presentation.

Selected Recent Talks

2025 Cornell University, Analysis Seminar.

2025 University of Maryland, PDE-Applied Math Seminar.

2025 University of Notre Dame, PDE, Complex Analysis and Differential Geometry Seminar.

2024 Northeast Analysis Network Conference, Syracuse University, Syracuse, September 2024.

AMS Spring Central Sectional Meeting, Special Session on Nonlinear Waves, University of Wisconsin-Milwaukee, Milwaukee, April 2024.

12th IMACS International Conference, Special Session on Evolution Equations and Integrable Systems, University of Georgia, Athens, March 2022.

AMS-MAA Joint Mathematics Meetings, Special Session on Partial Differential Equations and Spaces of Holomorphic Functions, virtual meeting, January 2021.

Professional Activities

Co-organizer of:

AMS-MAA Joint Mathematics Meetings, Special Session on Analysis and Geometry of Nonlinear Evolution Equations, Baltimore Convention Center, Baltimore, January 2019;

AMS Fall Eastern Sectional Meeting, Special Session on Nonlinear Evolution Equations, State University of New York at Buffalo, Buffalo, September 2017;

8th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena, Special Session on the Analysis and Geometry of Nonlinear Evolution Equations, University of Georgia, Athens, March 2013;

AMS Fall Eastern Section Meeting, Special Session on Microlocal Analysis and Nonlinear Evolution Equations, Rochester Institute of Technology, Rochester, September 2012;

7th IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena, Special Session on the Analysis and Geometry of Nonlinear Evolution Equations, University of Georgia, Athens, April 2011.

Referee for: Annals of PDE, Calculus of Variations and Partial Differential Equations, Inventiones Mathematicae, Mathematical Research Letters, Nonlinearity, Proceedings of the American Mathematical Society, Proceedings of the Edinburgh Mathematical Society, Transactions of the American Mathematical Society.

Creator and organizer of: Problem Solving Seminar (2006–Present), University of Rochester Math Olympiad (2007–2020), Rochester Area Math Circle (2008–2016), and Mathcounts Club at Our Lady of Mercy School for Young Women (2016–2019), The College Math Olympiad (started in 2025).

University service: college enrollment advisory committee, Sproull fellowship committee, ad-hoc faculty committees.

Departmental service: mathematical competitions adviser and coach (2006–Present), organizer of the analysis seminar (2006–2017, 2020–Present), curriculum committee (2007–2010, 2011–2015), graduate

committee (2011–2013, 2015–2016), hiring committee (2008–2010, 2015–2016), Meliora committee (2015–2016, 2019–2020), publicity committee (2015–2019), coordinator of undergraduate research (2008–2010), undergraduate research/honors B.A committee (2022–Present).

Honors, Awards, and Fellowships

Simons Foundation Collaboration Grant Award ($35,000) for the "Regularity Issues for Equations of Mathematical Physics" research proposal, 2015.

Goergen Award for Excellence in Undergraduate Teaching, 2011.

Coach of the 10th (2008), 12th (2010), 14th (2009), 15th (2011, 2016), 17th (2013, 2015), 18th (2018), and 21st (2021) ranked teams in the William Lowell Putnam Mathematical Competition.

NSF Career Award ($450,869) for the "Career: Topics in Nonlinear Wave Equations" research proposal, 2008.

Postdoctoral Fellowship, "Nonlinear Partial Differential Equations" Summer Microprogram, MSRI, 2007.

Mentor Recognition Award, University of California, San Diego, 2006.

Postdoctoral Fellowship, "Nonlinear Dispersive Equations" Program, MSRI, 2005.

National Merit Scholarship, Al.I.Cuza University, 1992-1997.

Gold Medal, Balkan Mathematical Olympiad, Athens, Greece, 1992.