Maja Tasković

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EDUCATION

The University of Texas at Austin
Ph.D. in Mathematics, May 2016
Advisers: Irene M. Gamba and Nataša Pavlović

Princeton University
M.A. in Mathematics, 2009

University of Novi Sad, Serbia
M.S. in Mathematics, 2007, B.S. in Mathematics, 2006

PROFESSIONAL EXPERIENCE

Research member
Simons Laufer Mathematical Sciences Institute, Berkeley, CA, Fall 2025

Summer Collaborators Program (collaboration with I. Ampatzoglou),
Institute for Advanced Study, Princeton, NJ, two weeks in Summer 2025

Assistant Professor
Emory University, 2019 - present

Hans Rademacher Instructor of Mathematics
University of Pennsylvania, 2016 - 2019
Mentor: Robert M. Strain

Program Associate
Mathematical Sciences Research Institute, Berkeley, CA, six weeks in Fall 2015

Adjunct Instructor
George Mason University, Fall 2009 - Spring 2010
Northern Virginia Community College, Spring 2010

HONORS AND AWARDS

National Science Foundation (NSF) research Grant DMS-2206187: "Topics in kinetic theory"
Total budget: $195,663
Project period: August 15, 2022 - July 31, 2026

US Junior Oberwolfach Fellow, MFO Workshop on "Classical and Quantum Mechanical Models of Many-Particle Systems" Oberwolfach, Germany, September 3-8, 2023.

AMS-Simons Travel Grant, 2019-2022
Total budget: $4,000

AWM Dissertation Prize
Association for Women in Mathematics, 2018

Good Teaching Award, Fall 2016, Spring 2017 and Fall 2017
Department of Mathematics, University of Pennsylvania

Frank Gerth III Dissertation Award
Department of Mathematics, The University of Texas at Austin, 2016

Graduate School Fellowship
The University of Texas at Austin, Summer 2015

Departmental Fellowship
Department of Mathematics, The University of Texas at Austin, Fall 2013

Professor and Mrs. Hubert S. Wall Endowed Presidential Fellowship in Mathematics
The University of Texas at Austin, Fall 2010

Best Undergraduate Student Award
University of Novi Sad, Serbia, 2006

Second Prize at the International Mathematics Competition for University Students
Blagoevgrad, Bulgaria, July 22-28, 2005

Third Prize at the International Mathematics Competition for University Students
Skoplje, Macedonia, July 23-29, 2004

Bronze Medal at the 43rd International Mathematical Olympiad
Glasgow, UK, July 19-30, 2002

RESEARCH INTERESTS

Nonlinear Kinetic Equations, Dispersive Partial Differential Equations, Wave Turbulence

PUBLICATION LIST

1. M.-P. Gualdani, N. Guillen, N. Pavlović, M. Tasković, N. Zamponi
   The fuzzy Landau equation: global well-posedness and Fisher information.
   Preprint. arXiv:2507.08689

2. C. Henderson, S. Snelson, A. Tarfulea, M. Tasković
   Global regularity and decay estimates for the relativistic Landau equation.
   Submitted. arXiv:2505.12017

3. F. U. Caja, M. G. Delgadino, M.-P. Gualdani, M. Tasković
   Contractivity of Wasserstein distance and exponential decay for the Landau equation with Maxwellian molecules. Preprint. arXiv:2504.13802

4. I. Ampatzoglou, I. M. Gamba, N. Pavlović M. Tasković
   Moment estimates and well-posedness of the binary-ternary Boltzmann equation.
   arXiv:2210.09600

5. N. Pavlović M. Tasković, L. Velasco
   Inhomogeneous six-wave kinetic equation in exponentially weighted L^∞ spaces.
   To appear in SIAM J. Math. Anal. arXiv:2501.10565

6. R. J. Alonso, I. M. Gamba, M. Tasković
   Exponentially-tailed regularity and time asymptotic for the homogeneous Boltzmann equation.
   Nonlinear Anal. 262 (2026), Paper No. 113920.

7. I. Ampatzoglou, J.K. Miller, N. Pavlović M. Tasković
   Inhomogeneous wave kinetic equation and its hierarchy in polynomially weighted L^∞ spaces.
   Comm. Partial Differential Equations 50 (2025), no. 6, 723–765.

8. I. Ampatzoglou, J.K. Miller, N. Pavlović M. Tasković
   On the global in time existence and uniqueness of solutions to the Boltzmann hierarchy.
   J. Funct. Anal. 289 (2025), no. 9, Paper No. 111079.

9. I. Ampatzoglou, I. M. Gamba, N. Pavlović, M. Tasković
   Global well-posedness of a binary-ternary Boltzmann equation.
   Ann. Inst. H. Poincaré Anal. Non Linéaire 39 (2022), no. 2, pp. 327–369.

10. R. M. Strain, M. Tasković
    Entropy dissipation estimates for the relativistic Landau equation, and applications.
    J. Funct. Anal. 277 (2019), no. 4, 1139–1201.

11. I. M. Gamba, N. Pavlović, M. Tasković
    On pointwise exponentially weighted estimates for the Boltzmann equation.
    SIAM J. Math. Anal. 51 (2019), no. 5, 3921–3955.

12. M. Pavić-Čolić, M. Tasković, *Propagation of streched exponential moments for the Kac equation and Boltzmann equation for Maxwell molecules.*
    Kinet. Relat. Models 11 (2018) no. 3, 597-613.

13. M. Tasković, R. J. Alonso, I. M. Gamba, N. Pavlović
    On Mittag-Leffler moments for the Boltzmann equation for hard potentials without cutoff.
    SIAM J. Math. Anal. 50 (2018), no. 1, 834-869.

14. Y. Hong, M. Tasković
    On dispersive blow-ups for nonlinear Schrödinger equations.
    Differential and Integral Equations, Volume 29 (2016), 875-888.

15. M. Budinčević, D. Perišić, M. Tasković
    Structural theorems for Gelfand-Shilov spaces.
    Integral Transforms Spec. Funct. 20 (2009), no. 3-4, 223-229.

16. Z. Lozanov-Crvenković, D. Perišić, M. Tasković
    Gelfand-Shilov spaces, Structural and Kernel theorems.
    Preprint. arXiv:0706.2268

INVITED TALKS

Upcoming: Special session on "Recent Advances of PDEs in Modern Mathematical Physics: Theory and Applications", AMS Sectional Meeting, Georgia Southern University, Savannah, GA, March 28-29, 2026.

Upcoming: Mini-symposium on "Analytical Methods in Kinetic Theory and Fluid Mechanics", SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November 17-20, 2025.

Upcoming: Mini-symposium on "Many-body Systems and their Effective Equations", SIAM Conference on Analysis of Partial Differential Equations, Pittsburgh, PA, November 17-20, 2025.

Upcoming: Workshop on "Kinetic Theory: Novel Statistical, Stochastic and Analytical Methods", Simons Laufer Mathematical Sciences Institute (SLMath), Berkeley, CA, October 20-24, 2025.

Upcoming: Special Session on "Recent trends in nonlocal and local PDEs", AMS Sectional Meeting at Saint Louis University, St. Louis, Missouri, October 18-19, 2025.

Geometry and Analysis Seminar,
University of Colorado Boulder, April 25, 2025.

Special Session on "Recent advances in nonlinear partial differential equations and their microscopic derivation", AMS Spring Southeastern Sectional Meeting, Clemson University, March 8-9, 2025.

Analysis Seminar (online),
Wayne State University, November 21, 2024.

The 42st Southeastern-Atlantic Regional Conference on Differential Equations (SEARCDE),
West Virginia University, November 9-10, 2024.

Harmonic Analysis & PDE Seminar,
CUNY Graduate Center, November 1, 2024.

Special Session on "Nonlinear Dispersive PDEs", AMS Fall Southeastern Sectional Meeting, Georgia Southern University, Savannah, GA, October 5-6, 2024. Cancelled due to hurricane Helene.

Analysis Seminar,
Penn State University, October 2, 2024.

Special Session on "Recent Developments on Local and Nonlocal PDEs" at the 2024 Fall Central Sectional Meeting at the University of Texas, San Antonio, September 14-15, 2024.

Second Joint Alabama–Florida Conference on Differential Equations, Dynamical Systems and Applications", Florida State University, May 18-19, 2024.

Spring Eastern AMS Sectional Meeting, Special Session on "Nonlinear Hamiltonian PDEs", Howard University, Washington, DC, April 6-7, 2024.

M. E. Taylor Analysis and PDE Seminar,
The University of North Carolina at Chapel Hill, February 21, 2024.

Analysis Seminar,
The University of Texas at Austin, February 7, 2024.

Oregon State Analysis Seminar,
Held virtually on December 4, 2023.

The 41st Southeastern-Atlantic Regional Conference on Differential Equations (SEARCDE), Florida A&M University, Tallahassee, FL, November 18-19, 2023.

GROW (Graduate Research Opportunities for Women),
Duke University, Oct 20 - 22, 2023.

MFO workshop "Classical and Quantum Mechanical Models of Many-Particle Systems",
Oberwolfach, Germany, September 5, 2023.

Special Session "Local and Nonlocal Fully Nonlinear Partial Differential Equations of Elliptic and Parabolic Type" 13th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Wilmington, North Carolina May 31 - Jun 4, 2023.

"Joint Alabama–Florida Conference on Differential Equations, Dynamical Systems and Applications", Auburn University, May 13-14, 2023.

The 40th Southeastern-Atlantic Regional Conference on Differential Equations (SEARCDE), North Carolina State University, November 12-13, 2022.

Special session on "Recent advances in the theory of fluid dynamics" at the Fall Western Sectional AMS Meeting, University of Utah, October 22-23, 2022.

Analysis Seminar,
The University of Texas at Austin, April 1, 2022.

Special Session on Fully Nonlinear Partial Differential Equations,
AMS Spring Central Virtual Sectional Meeting held virtually, March 26-27, 2022.

122nd Statistical Mechanics Conference,
Rutgers University, December 15-17, 2019.

SIAM Conference on Analysis of Partial Differential Equations,
La Quinta, California, December 11-14, 2019.

PDE/Analysis Seminar,
Massachusetts Institute of Technology, October 29, 2019.

PDE Seminar,
Georgia Institute of Technology, September 24, 2019.

Analysis of Fluids and Related Topics Seminar,
Princeton University, September 12, 2019.

"Applied Kinetic Theory for Junior Researchers",
University of Wisconsin-Madison, April 19-21, 2019.

Calderón-Zygmund Analysis Seminar,
University of Chicago, April 8, 2019.

Workshop for Women in Analysis and PDEs,
University of Illinois at Chicago, April 6-7, 2019.

Colloquium,
Emory University, February 28, 2019.

Colloquium,
Iowa State University, February 14, 2019.

Colloquium,
University of North Texas, February 12, 2019.

Analysis Seminar,
The University of Texas at Austin, February 8, 2019.

Colloquium,
University of Arizona, January 14, 2019.

Analysis Seminar,
University of Pennsylvania, January 10, 2019.

Analysis Seminar,
University of Massachusetts Amherst, November 28, 2018.

"Nonlinear phenomena in Stockholm: kinetic meets dispersive",
Royal Institute of Technology, Stockholm, Sweden, November 19-21, 2018.

Special Session "Nonlocality in Models for Kinetic, Chemical, and Population Dynamics",
AMS Sectional Meeting, University of Michigan, Ann Arbor, October 20-21, 2018.

Colloquium,
Iowa State University, September 11, 2018.

Mathematics Seminar,
Korea Institute for Advanced Study, Seoul, South Korea, July 12, 2018.

Special Session "Nonlinear Evolution Equations", 12th AIMS Conference on Dynamical Systems,
Differential Equations and Applications, Taipei, Taiwan July 5-9, 2018.

Colloquium,
Reed College, April 12, 2018.

NSF-FRG Women in PDE Conference,
University of Massachusetts Amherst, March 2-3, 2018.

Young Researchers Workshop: "Kinetic models in biology and social sciences",
School of Mathematical and Statistical Sciences of Arizona State University, February 19-22, 2018.

PDE Seminar,
University of Wisconsin-Madison, February 19, 2018.

Special Session "Recent Progress on Nonlinear Dispersive and Wave Equations",
Joint Mathematics Meeting, Atlanta, GA January 4-7, 2017.

Young Researchers Workshop: "Stochastic and deterministic methods in kinetic theory",
Duke University, November 28 - December 2, 2016.

Lefschetz Center for Dynamical Systems Seminar,
Division of Applied Mathematics, Brown University, November 14, 2016.

Applied Mathematics Seminar,
George Washington University, November 8, 2016.

Analysis Seminar,
University of Pennsylvania, September 29, 2016.

FRG Conference at MIT,
Massachusetts Institute of Technology, September 9-11, 2016.

Computational, Applied Mathematics and PDE Seminar,
University of Chicago, March 2, 2016.

SIAM Conference on Analysis of Partial Differential Equations,
Scottsdale, Arizona, December 7-10, 2015.

Analysis and Applied Math Seminar,
Duke University, November 16, 2015.

Young Researchers Workshop: "Kinetic Theory with Applications in Physical Sciences",
CSCAMM Center, University of Maryland, November 9-13, 2015.

Special Session "Hamiltonian Partial Differential Equations I",
AMS Fall Western Sectional Meeting, San Francisco State University, October 25-26, 2014.

CONTRIBUTED TALKS

International Workshop on Elliptic and Kinetic PDEs,
IMPA, Rio de Janeiro, Brazil, July 6-17, 2015.

6th Workshop Theory and Numerics of Kinetic Equations,
University of Saarlands, Saarbrücken, Germany, June 1-3, 2015.

Workshop on "Mathematical Problems in Kinetic Theory",
Rennes, France, May 26-29, 2015.

X Americas Conference on Differential Equations and Nonlinear Analysis,
Buenos Aires, Argentina, February 9-20, 2015.

The Texas Analysis and Mathematical Physics Symposium (TexAMP),
The University of Texas at Austin, November 21-23, 2014.

XV International Conference on Hyperbolic Problems: Theory, Numerics and Applications, IMPA,
Rio de Janeiro, Brazil, July 28 - August 1, 2014.

TEACHING EXPERIENCE

As an Instructor:

Emory University

- Spring 2025:   Math 250 (Foundations of Mathematics, undergraduate class)
- Fall 2024:   Math 112z (Calculus II, undergraduate class)
- Fall 2023:   Math 351 (Partial Differential Equations, undergraduate class)
- Spring 2023:   Math 558 (Partial Differential Equations, graduate class)
- Fall 2022:   Math 557 (Partial Differential Equations, graduate class)
- Fall 2022:   Math 351 (Partial Differential Equations, undergraduate class)
- Summer 2022: Math 112 (Calculus II, undergraduate class)
- Spring 2022:   Math 512 (Analysis II, graduate class)
- Fall 2021:   Math 250 (Foundations of Mathematics, undergraduate class)

- Spring 2021:   Math 558 (Partial Differential Equations, graduate class)
- Fall 2020:   Math 557 (Partial Differential Equations, graduate class)
- Fall 2020:   Math 351 (Partial Differential Equations, undergraduate class)
- Spring 2020:   Math 351 (Partial Differential Equations, undergraduate class)
- Fall 2019:   Math 351 (Partial Differential Equations, undergraduate class)

University of Pennsylvania

- Spring 2019:   Math 241 (Calculus IV, undergraduate class)
- Fall 2018:   Math 103 (Introduction to Calculus, undergraduate class)
- Fall 2018:   Math 241 (Calculus IV, undergraduate class)
- Spring 2018:   Math 425 (Partial Differential Equations, undergraduate class)
- Fall 2017:   Math 644 (Partial Differential Equations, graduate class)
- Fall 2017:   Math 241 (Calculus IV, undergraduate class)
- Spring 2017:   Math 425 (Partial Differential Equations, undergraduate class)
- Spring 2017:   Math 241 (Calculus IV, undergraduate class)
- Fall 2016:   Math 241 (Calculus IV, undergraduate class)

George Mason University

- Fall 2009:   Quantitative reasoning (one section, undergraduate class)
- Spring 2010:   Quantitative reasoning (two sections, undergraduate class)

Northern Virginia Community College

- Spring 2010:   Developmental Math (one section, undergraduate class)
- Spring 2010:   Algebra I (two sections, undergraduate class)

As a Teaching Assistant:

The University of Texas at Austin

- Fall 2014:   M 305G (Preparation for Calculus, undergraduate class)
- Fall 2013:   M 427K (Advanced Calculus for Applications I, undergraduate class)
- Fall 2012:   M 408M (Multivariable Calculus, undergraduate class)
- Spring 2012:   M 302 (Introduction to Mathematics, undergraduate class)
- Fall 2011:   M 408C (Differential and Integral Calculus, undergraduate class)
- Spring 2011:   M 408L (Integral Calculus, undergraduate class)

PROFESSIONAL SERVICE AT THE NATIONAL LEVEL

Conference, workshop, mini-symposium, and lecture series organization

Co-organizer of the weekly seminar at the Simons Laufer Mathematical Sciences Institute, Berkeley, CA, Fall 2025

Co-organizer of the workshop "Integro-differential equations in kinetic theory and many-particle interacting systems", American Institute of Mathematics, Pasadena, CA, April 14 -18, 2025.

Co-organizer of the special session "Recent developments in nonlinear evolution equation", 2025 AMS Spring Eastern Sectional Meeting, Hartford, CT, April 5-6, 2025.

Co-organizer of the special session "Advances in Nonlinear Dispersive and Kinetic Equations" at the 2025 JMM (Joint Mathematics Meeting), Seattle, WA, January 8-11, 2025.

Co-organizer of the conference "Recent Progress in Kinetic and Integro-Differential Equations", Banff International Research Station, Banff, Canada, November 6-11, 2022.

Co-organizer of the Minisymposium "Kinetic Modeling: Analysis and Applications", SIAM Conference on Analysis and Partial Differential Equations, La Quinta, California, December 11-14, 2019.

Co-organizer of the Minisymposium "Transport Theory in Complex Particle Systems", SIAM Conference on Analysis and Partial Differential Equations, Scottsdale, Arizona, December 7-10, 2015.

PROFESSIONAL SERVICE AT THE EMORY UNIVERSITY

University Service

Emory College of Arts & Sciences Faculty Senate (substituting David Zureick-Brown), Spring 2023.

Advising pre-major first year undergraduate students (First-Year Faculty Connections, formerly known as Pre-Major Advising Connection at Emory), Emory University, Fall 2020 - Spring 2023.

Thesis committees

PhD thesis committee member for Maxwell Auerbach, Emory University, Spring 2024 - Spring 2025.

Honors thesis committee member for Josh Peacock, Emory University, Spring 2023.

PhD thesis committee member for Haozhe Yu, Fall 2022 - Summer 2023.

Honors thesis committee member for Tianlang (Louie) Luo, Emory University, Spring 2021.

PhD thesis committee member for Qianli Hu, Georgia Institute of Technology, Spring 2020.

Other

Organized qualifying exam in Real Analysis, Emory University, Summer 2022 and Spring 2023.

Organized qualifying exam in Partial Differential Equations, Emory University, Summer 2021.

Leading a Mathematics Instructor Mentoring Team, Emory University, since Spring 2021.

Helped with the organization of the student competition "Mathematical Modeling: Coronavirus Outbreak", Emory University, May 2020.

PROFESSIONAL SERVICE AT THE UNIVERSITY OF PENNSYLVANIA

Department Service

Preliminary Exam Committee, Fall 2018 and Spring 2019.

Faculty Advisor for the Math Club, Spring 2017, Fall 2017 and Spring 2018.

Undergraduate Committee, Fall 2017 and Spring 2018.

Credit Transfer Committee, Fall 2016 and Spring 2017.

PROFESSIONAL SERVICE AT THE UNIVERSITY OF TEXAS AT AUSTIN

Department Service

Co-organizer of the Distinguished Women in Mathematics Lecture Series, The University of Texas at Austin, 2011-2016.