MANSUR SHAKIPOV

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EDUCATION

University of Maryland, College Park, MD, USA

PhD in Applied Mathematics, Aug 2020 – May 2026. Advisor: Prof. Ricardo H. Nochetto.

Nazarbayev University, Astana, Kazakhstan

BS in Computer Science, Aug 2016 – May 2020. Advisors: Prof. Siamac Fazli (Computer Science), Prof. Dongming Wei (Mathematics).

WORK EXPERIENCE

University of Houston, Houston, TX, USA

- Postdoctoral Fellow (Aug 2026 - July 2027) with Prof. Maxim Olshanskii.

University of Maryland, College Park, MD, USA

- Graduate Research Assistant: 4 summer semesters and 5 regular semesters. Supervisor: Prof. Ricardo H. Nochetto.
- Graduate Teaching Assistant: 6 regular semesters.

Nazarbayev University, Astana, Kazakhstan

- Graduate Research Assistant: Summer 2021. Supervisor: Prof. Dongming Wei.
- Undergraduate Research Assistant: Fall 2018, Spring 2019, Fall 2019. Supervisor: Prof. Piotr Skrzypacz.

Courant Institute of Mathematical Sciences, New York, NY, USA

- Undergraduate Research Intern: Summer 2019. Supervisor: Prof. Aleksandar Donev.

SCHOLARSHIPS AND GRANTS

Hauptman Summer Fellowship ($4,000), University of Maryland, May 2025.

Summer Research Internship Funding ($8,000), Shakhmardan Yessenov Foundation, Jan 2019.

Full Scholarship and Stipend, Nazarbayev University, 2016-2020.

PUBLICATIONS

Google Scholar: https://scholar.google.com/citations?user=DGNJK-QAAAAJ&hl=en.

Published

L. Bouck, R. H. Nochetto, M. Shakipov, V. Yushutin, "Inf-Sup Stability of Parabolic TraceFEM", *Found. Comp. Math*, pp. 1-54, 2026.

G. A. Benavides, R. H. Nochetto, M. Shakipov, "L^p-based Sobolev theory on closed manifolds of minimal regularity: Scalar elliptic problems," *J. Math. Anal. Appl.*, 562(1), 130666, 2026.

R. Zhumagambetov, D. Kazbek, M. Shakipov, D. Maksut, V. A. Peshkov, and S. Fazli, "cheML.io: an online database of ML-generated molecules," *RSC Adv.*, vol. 10, pp. 45189–45198, 2020.

F. Sabit, M. Shakipov, P. Skrzypacz, and B. Golman, "Dead-Core Solutions to Simple Catalytic Reaction Problems in Chemical Engineering", *Eurasian Chem.-Technol. J.*, vol. 21, no. 1, pp. 29-33, Feb. 2019.

Accepted

G. A. Benavides, R. H. Nochetto, M. Shakipov, "L^p-based Sobolev theory on closed manifolds of minimal regularity: Vector-valued problems". *SIAM J. Math. Anal.* (to appear). arXiv: https://arxiv.org/abs/2508.11109.

R. H. Nochetto, M. Shakipov, "Surface Stokes Without Inf-Sup Condition". *SIAM J. Numer. Anal.* (to appear). arXiv: https://arxiv.org/abs/2508.13342.

Submitted

M. A. Olshanskii, M. Shakipov, "Analysis of TraceFEM for the Surface Stokes–Cahn–Hilliard Model", 2026. arXiv: https://arxiv.org/abs/2611.15982.

M. A. Olshanskii, M. Shakipov, "Surface Stokes–Cahn–Hilliard System: Analysis and Structure-Preserving Discretization", 2026. arXiv: https://arxiv.org/abs/2610.06552.

G. A. Benavides, R. H. Nochetto, M. Shakipov, "Existence of weak solutions of the surface Beris-Edwards model", 2026. arXiv: https://arxiv.org/abs/2607.01638.

G. A. Benavides, R. H. Nochetto, M. Shakipov, "Ferrofluids: Modeling and Approximation", 2026. arXiv: https://arxiv.org/abs/2606.01392.

In preparation

R. H. Nochetto, M. Shakipov, "Fluid Problems Posed on Closed Hypersurfaces: Circumventing the Saddle-Point Structure." arXiv: https://arxiv.org/abs/2610.36641.

R. H. Nochetto, M. Shakipov, "On the Well-Posedness of Transient (Navier–)Stokes on Closed Hypersurfaces."

R. H. Nochetto, M. Shakipov, "Transient Surface Stokes Without Inf-Sup Condition."

Research Talks

Seminar talks

Computational Mathematics Seminar talk, Louisiana State University, LA, Oct 20, 2026.

Scientific Computing Seminar talk, University of Houston, TX, Sep 3, 2026.

CAM Seminar talk, University of Tennessee, Knoxville, TN, Oct 21, 2025.

Numerical Analysis Seminar talk, University of Maryland, College Park, MD, Sep 16, 2025.

Conference talks

SIAM Texas-Louisiana 2026 Sectional Meeting, Southern Methodist University, Dallas, TX, Oct 30-Nov 1, 2026.

SIAM New York-New Jersey-Pennsylvania Section Conference, Pennsylvania State University, University Park, PA, Oct 31-Nov 2, 2025. Two mini-symposium talks.

Contributed talks

Sayas Numerics Day, University of Maryland, College Park, MD, May 9, 2026.

Finite Element Circus, George Mason University, Arlington, VA, Oct 17-18, 2025.

Sayas Numerics Day, University of Delaware, Newark, DE, May 3, 2025.

Mid-Atlantic Numerical Analysis Day, Temple University, Philadelphia, PA, Nov 15, 2024.

Sayas Numerics Day, George Mason University, Arlington, VA, May 11, 2024.

Posters

PDEs and Geometry: Numerical Aspects. A workshop at ICERM, Providence, RI (March 11-15, 2024).

TEACHING

University of Maryland

Instructor

MATH 113 College Algebra and Trigonometry: Fall 2021, Spring 2021.

Teaching Assistant

MATH 141 Calculus II: Spring 2024.
MATH 120 Elementary Calculus I: Fall 2022.

Grader

AMSC 715 Numerical Methods for Evolution PDEs: Spring 2023, Spring 2022.
AMSC 466 Introduction to Numerical Analysis I: Spring 2023.
AMSC 460 Computational Methods: Spring 2022.

PROFESSIONAL SERVICE

Ad hoc reviewer: Journal of Numerical Mathematics (2026, one manuscript).