








Bobokandov Makhmud

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Summary

- Award**  Winner of the Government scholarship named after Biruni
- Work experience**  **6+ years** of experience as a Senior Lecturer in the Education and Research field;
- Education**  **B.Sc., M.Sc.** in Applied Mathematics and Information Technologies with an excellent GPA.
Ph.D. in Applied Mathematics (05.01.07 - Mathematical modeling. Numerical methods and software).
- Research**  Main research interests are the mathematical modelling of nonlinear physical processes, including analysing the qualitative features of differential equation solutions, developing self-similar solutions, and conducting research. Furthermore, I am interested the Data Analysis.
- Teaching**  Teaching experience in Mathematical modelling, Calculus, Database Management Systems, Introduction to Programming, Introduction to LaTeX, and Skills for Applied Mathematics subjects at the **National University of Uzbekistan named after Mirzo Ulugbek**.
Also, have experience in Numerical methods, modelling, and programming in MATLAB, Programming in Python subjects at the **Tashkent State Transport University**.





Employment

- 2025 – now  **Researcher& Senior Lecturer @ NUUz** – Department of Applied Mathematics and Computer Analysis, National University of Uzbekistan named after Mirzo Ulugbek (NUUz), Tashkent, Uzbekistan.
- 2024 – 2025  **Senior Lecturer @ TSTU** – Department of Information Systems and Technologies in Transport, Tashkent State Transport University (TSTU), Tashkent, Uzbekistan.
- 2022 – 2024  **PhD student @ NUUz** – Department of Applied Mathematics and Computer Analysis, National University of Uzbekistan named after Mirzo Ulugbek (NUUz), Tashkent, Uzbekistan.
- 2023 – 2024  **Senior Lecturer @ TUSI** – Department of Economics and Digital Technologies, Tashkent University of Social Innovations (TUSI), Tashkent, Uzbekistan.
- 2020 – 2023  **Teacher Assistant @ NUUz** – Department of Applied Mathematics and Computer Analysis, National University of Uzbekistan named after Mirzo Ulugbek (NUUz), Tashkent, Uzbekistan.
- 2019 – 2020  **Math Teacher @ School** – 125th Public School, Tashkent, Uzbekistan.












Education

- 2022 – 2024  **Ph.D., National University of Uzbekistan named after Mirzo Ulugbek, Uzbekistan** in Mathematical Simulations and Numerical Methods.
Thesis title: *Mathematical modelling of diffusion processes represented by parabolic equations and systems of non-divergent form*
- 2018 – 2020  **M.Sc., National University of Uzbekistan named after Mirzo Ulugbek, Uzbekistan** in Applied Mathematics and Information Technologies.
- 2014 – 2018  **B.Sc., Tashkent Institute of railway engineering, Uzbekistan** in Informatics and Information Technologies.

Awards and Achievements

- 2025-2027  **National Grant**, as a senior researcher at the project "Mathematical modelling of processes described by nonlinear, divergent and non-divergent parabolic equations and systems", Republican fundamental grant ID: **AL-9224104601** with approximately 1.64 bln. Uzbek sum.
- 2017-2020  **Fundamental Grant**, as a junior researcher at the project "Investigation of the qualitative properties of a double nonlinear cross system under the influence of source, convective displacement, variable density, source or absorption" Republican fundamental grant ID: **OTF-4-30** with 65 mln. Uzbek sum.
- 2018-2020  **Scholarship Award**, for full master studies with a monthly stipend at "National University of Uzbekistan named after Mirzo Ulugbek", Uzbekistan.
- 2016  **Scholarship Award**, Winner of "Uzbekistan Railways" JSC scholarship competition, Uzbekistan.

Certification

- 2024  Data Analysis Using Python, Issued by IBM Skills Build. April 2024, USA.
 Python for Data Science, Issued by IBM Skills Build. April 2024, USA.
 Data Fundamentals, Issued by IBM Skills Build. April 2024, USA.
 Python Core, a course of study offered by EPAM. March 2024, USA.
- 2023  Intro to Machine Learning, a course of study offered by Kaggle. July 2023, USA.
 Pandas, a course of study offered by Kaggle. July 2023, USA.
 Introduction to \LaTeX , a course of study offered by HSE University. Coursera, February 2023, USA.
- 2022  6.00.1x Introduction to Computer Science and Programming Using Python, a course of study offered by MITx, an online learning initiative of the Massachusetts Institute of Technology. EdX, October 2022, USA.
 6.431x: Probability - The Science of Uncertainty and Data a course of study offered by MITx, an online learning initiative of the Massachusetts Institute of Technology. EdX, June 2022, USA.
- 2017  **Winner of Olympiad**, 1st-degree diploma for taking first place in the subject Olympiad of students of the Republic of Uzbekistan in higher mathematics, Tashkent Institute of Railway Engineering, Uzbekistan.
- 2016  **Certificate of the 3rd place**. Olympiad in Higher Mathematics, Tashkent Institute of Railway Engineering, Uzbekistan.

★ Skills

Languages	📖 Uzbek as a native, writing and speaking competencies for English(B1).
ML & Data Analysis	📖 Pandas, Matplotlib, Simulink ...
Coding:	📖 C#, Python, MATLAB.
Technologies	📖 Core C#&Python, .NET Framework, MVC (ASP MVC), OOP, ...
Databases	📖 SQL, MS Access.
Web Dev	📖 HTML, CSS, Django.
Misc.	📖 Academic research, teaching, training, \LaTeX typesetting and publishing.

🔗 Reviewer








- 📖 **zbMATH Open** (Zentralblatt MATH)
- 📖 **Mathematics and Statistics** (ISSN: 2332-2071; 2332-2144).
- 📖 **Applied and Computational Mathematics** (ISSN: 2328-5605; 2328-5613).
- 📖 **IEEE International Conference on Actual Problems of Electronic Instrument Engineering (APEIE)**

📖 Research Publications

Journal Articles


- 1 Mukhamadiyev, A., Urunbaev, J., Rakhmonov, Z., Khujakulov, T., & **Bobokandov, M.** (2026). Self-similar analysis of the solutions to the cross-diffusion system. *Mathematics*, 14, 83.
🔗 doi:10.3390/math14010083
- 2 Aripov, M., & **Bobokandov, M.** (2025a). Cauchy problem for the double nonlinear parabolic equation not in divergent form with a time-dependent source or absorption. *Carpathian Mathematical Publications*, 17, 693–705. 🔗 doi:10.15330/cmp.17.2.693-705
- 3 Aripov, M., & **Bobokandov, M.** (2025b). The cauchy problem for a double nonlinear time-dependent parabolic equation with absorption in a non-homogeneous medium. *Carpathian Mathematical Publications*, 17, 277–291. 🔗 doi:10.15330/cmp.17.1.277-291
- 4 Aripov, M., Mamatkulova, M., & **Bobokandov, M.** (2025). Analysis of a double nonlinear diffusion equation in inhomogeneous medium. *Journal of Mathematical Sciences (United States)*, 289, 657–669.
🔗 doi:10.1007/s10958-024-07384-7
- 5 Aripov, M., & **Bobokandov, M.** (2024a). Analysis of a double nonlinear parabolic equation with a source in an inhomogeneous medium. *Proceedings of the Institute of Mathematics and Mechanics*, 50, 285–306. 🔗 doi:10.30546/2409-4994.2024.50.2.285
- 6 Aripov, M., & **Bobokandov, M.** (2023). The cauchy problem for a doubly nonlinear parabolic equation with variable density and nonlinear time-dependent absorption. *Journal of Mathematical Sciences (United States)*, 277, 355–365. 🔗 doi:10.1007/s10958-023-06840-0
- 7 **Bobokandov, M.** (2023). Global solutions for double nonlinear parabolic crosswise-diffusion systems with time-dependent nonlinearity absorption. *Acta NUUz*, 1, 226–235.
🔗 doi:10.13140/RG.2.2.36212.87683
- 8 Aripov, M., & **Bobokandov, M.** (2022). Blow-up analysis for a doubly nonlinear parabolic non-divergence form equation with source term. *Bulletin of the Institute of Mathematics*, 5, 7–21.
Retrieved from 🔗 <http://mib.mathinst.uz>

In Proceedings

- 1 **Bobokandov, M.**, Uralov, N. et al. (2025). Investigation of the doubly nonlinear parabolic equation. (Vol. 13, pp. 339–346).  doi:10.25673/120454
- 2 Aripov, M., Uralov, N., & **Bobokandov, M.** (2024, June). Analysis of double nonlinear parabolic crosswise-diffusion systems with time-dependent nonlinearity absorption. (Vol. 1, p. 060006). Toronto Metropolitan University. Retrieved from  <https://journals.library.torontomu.ca/index.php/ictea/article/view/2257>
- 3 Aripov, M., & **Bobokandov, M.** (2024b, March). Asymptotic behavior of solutions for a doubly nonlinear parabolic non-divergence form equation with density. (Vol. 3004, p. 060006).  doi:10.1063/5.0199587
- 4 Aripov, M., Mamatkulova, M., & **Bobokandov, M.** (2024, February). To numerical solution of the non-divergent diffusion equation in non-homogeneous medium with source or absorption. (Vol. 3085, p. 020024).  doi:10.1063/5.0194632
- 5 M.Aripov, F., M.Sayfullayeva, & **Bobokandov, M.** (2024, February). About one exact solution to the nonlinear problem of a biological population with absorption in a heterogeneous medium. (Vol. 3085, p. 020031).  doi:10.1063/5.0194751
- 6 Aripov, M., Matyakubov, A., & **Bobokandov, M.** (2023). Cauchy problem for the heat dissipation equation in non-homogeneous medium. (Vol. 2781, p. 020027).  doi:10.1063/5.0144807
- 7 Aripov, M., Matyakubov, A., Khasanov, J., & **Bobokandov, M.** (2021). Mathematical modelling of the double nonlinear problem of reaction-diffusion in not divergent form with a source and variable density. (Vol. 2131, p. 032043).  doi:10.1088/1742-6596/2131/3/032043

Primary MSC: 35Co6, 35D30, 35K55, 35K59, 35K57, 35Ko5.

Trainings and seminars abroad

2025  **The scientific seminar, Bahçeşehir University, Türkiye**, on enhancing and applying numerical schemes to visualise the parabolic p-Laplacian and its crosswise system.

References

Mersaid Aripov

Professor, Department of Applied Mathematics and Computer Analysis

National University of Uzbekistan named after Mirzo Ulugbek (Tashkent, Uzbekistan)

Relation: PhD supervisor


 mirsaidaripov@mail.ru

Zafar Rakmonov

Dean of the Faculty of Applied Mathematics and Intellectual Technologies

National University of Uzbekistan named after Mirzo Ulugbek (Tashkent, Uzbekistan)

Relation: Employer

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