



## EDITORIAL TO THE FIRST ISSUE OF THE *JOURNAL OF MATHEMATICAL SCIENCES* (SERIES A)

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This issue is the first in a series of direct submissions making the *Journal of Mathematical Sciences* an excellent new platform for the publication of high-quality papers submitted by scientists from all over the world.

The idea of creating a separate direct submissions section within the *Journal of Mathematical Sciences*, having the status of a standard independent scientific journal, was discussed over a year ago and realized in 2021. I had the honor to collaborate with my colleagues from Springer Nature and make all the necessary preparations to start the project. At the plenary opening of the 13th ISAAC Congress (August 2–August 6, 2021, Ghent, Belgium), Dr. Thomas Hempfling, Editorial Director, Mathematics Birkhäuser, announced the launch of the project and offered me to be the editor-in-chief. At the plenary session of OTHA-2021 conference, Clemens Heine, Executive Editor, Applied Mathematics/Computer Sciences, Birkhäuser, spoke about the agreements we had reached and gave a detailed presentation of his vision of the journal development, which was being supported by all project participants.

We still share this forward-looking opinion, and we can state that the foundation of a real scientific journal was laid, and my team and I will make every effort to achieve the most ambitious goals in the nearest future.

In September, I proposed editorial board members, and I am very grateful to those outstanding scientists who agreed to support this ambitious and quite a demanding project. Undoubtedly, the editorial board will be expanded with the emergence of new tasks, but currently I have the honor to work with the following: Robert Csetnek, University of Vienna, Vienna, Austria; Pavel Exner, Czech Academy of Sciences, Prague, Czech Republic; Anatoly Golberg, Holon Institute of Technology, Holon, Israel; Uwe Kaehler, University of Aveiro, Aveiro, Portugal; Alexei Karlovich, NOVA University Lisbon, Lisbon, Portugal; Vladislav Kravchenko, Cinvestav, Queretaro, Mexico; Massimo Lanza de Cristoforis, University of Padova, Padova, Italy; Changpin Li, Shanghai University, Shanghai, China; Elijah Lifyand, Bar-Ilan, University, Ramat-Gan, Israel; Michael Ruzhansky, Ghent University, Belgium, and Queen Mary University of London, UK; Yoshihiro Sawano, Chuo University, Tokyo, Japan; Armen Sergeev, Steklov Math Institute of Russian Academy of Sciences, Moscow, Russia; Maria Skopina, St. Petersburg State University, St. Petersburg, Russia; Ioannis Stratis, National and Kapodistrian University of Athens, Athens, Greece; and Elena Vasilyeva—Bagler, Assistant to EiC, Southern Federal University, Rostov-on-Don, Russia.

From the very beginning, the policy of the editorial board has been to ensure acceptance of high-quality articles, to develop well-structured selective and editorial process and careful review procedure. The journal is meant to center around analysis in the broad sense and its applications. As it is stated in Aims and Goals: “The broad scope of the direct submission can be expressed in the sentence “Mathematical analysis in the broad sense”. This means that primarily the Editorial Board are interested in manuscripts in the following fields of study: Mathematical analysis: Real and Complex Variable Methods; Ordinary and Partial Differential Equations; Fractional Integrodifferentiation and Applications; Mathematical Physics;

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Function Theory; Functional Analysis; Applied Analysis; Dynamical Systems; Approximations; Optimization and Optimal Control; Harmonic Analysis: Real and Complex Variable Methods; Operator Theory; Applied Harmonic Analysis; Analytical Methods in Probability Theory and Mathematical Statistics; Mathematical Biology; and applications of fields close or related to harmonic analysis, PDE's, Machine Learning, neural networks and other fields mentioned above.”

Thus, the thematic arrangement of the journal allows to include a wide range of articles for submission and publication. The expertise of the editorial board members will guarantee due analysis and attention to each manuscript.

Publication of thematic issues, including those related to fields of study of various scientific groups or outstanding scientists, will hopefully become a long-standing tradition. For example, already two issues of the *Journal of Mathematical Sciences* are thematic. One of them is dedicated to the scientist S.G. Samko, my teacher and the teacher and a co-author of numerous scientists from all over the world. The present issue, the first in this series, is dedicated to the scientist who has always been very special to me, to professor N. Karapetyants. I am extremely grateful to all colleagues and friends of my father who agreed to contribute to the first issue of the *Journal of Mathematical Sciences* (Series A). Though they all work in different countries, good interpersonal relationship knows no geographical limitations.



Professor Nikolai Karapetyants (1942–2005) was born on January 22, 1942, in Rostov-on-Don. In 1959, he graduated from high school and entered the Faculty of Physics and Mathematics of the Rostov State University. His first paper (1965) was dedicated to the theory of boundary value problems for analytic functions in spaces of generalized functions. In 1969, he defended his Ph.D. thesis and began working at the Chair of Differential Equations of the Rostov State University, first as an assistant, and later he took the position of professor, and was the head of the Chair from 1998. In 1989, in Tbilisi, Georgia, Nikolai Karapetyants defended his doctoral (Doctor of Sciences, second degree) dissertation “Integral convolution operators and with homogeneous kernels with variable coefficients” at Andrea Razmadze Mathematical Institute. Nikolai Karapetyants was one of the first scientists who started research in the field of normalization of normally unsolvable operators. His scientific interests were very broad. He was a world-class expert in the field of integral operators and related areas of analysis. He made a great contribution to the development of the theory of singular integral operators, convolution-type operators in the discrete and continuous cases, integral operators with homogeneous and quasi-homogeneous kernels, integral equations with a shift, fractional integro-differentiation, and some other areas of mathematics. Professor N. Karapetyants published more than 100 scientific papers, as well as two monographs, the last of which was *Equations with Involution Operators* (together with S. Samko) published by Birkhäuser Boston, MA in 2001. This issue consists of ten research articles and one review article, and we are planning to stick to that number in the future. The contributing authors of the first issue are from Belarus, Georgia, Israel, Mexico, Russian Federation, the USA, the UK, and the United Arab Emirates and we are determined to maintain international spirit in all further issues.

The work of the editorial board is meant to be flexible and take into account the realities of the modern world; I am sure this policy is supported by the Springer Nature team, and I am extremely grateful to all the people for their assistance and support. I especially want to thank Tatiana Golea from Springer Nature, who, along with the previously mentioned Clemens Heine, the actual initiator of the project, is now actively developing this project with us and going through the first steps of formation of the *Journal of Mathematical Sciences* (Series A) with us. The format of this short introduction does not

allow me to mention all the colleagues from Springer Nature Team who actively worked and are working with us on the creation of the journal's portal, the organization of the production, and typesetting process, editing, integrating the journal into the indexing system, and contributing to the dissemination of information and visibility of the journal. Nevertheless, this does not diminish their significant contribution to our common project. The flexibility of the editorial policy will be manifested in the willingness to interact with teams and scientists on various projects, the formation of thematic issues, review of articles on exclusively contemporary topics, and other activities. I am open to new and knowledge-intensive initiatives and looking forward to your ideas; all of them will be treated with due attention and interest.

I want to express confidence that together we, authors, editorial board members, reviewers, Springer Nature Team, guest editors, and partner scientists from around the world, will bring the *Journal of Mathematical Sciences* to the forefront of scientific research.

Sincerely yours,

Alexey Karapetyants,

Editor-in-Chief *Journal of Mathematical Sciences*, Series A