

# ISAAC – Newsletter December

## Message of the President

Dear ISAAC members,

The end of 2024 is arriving, and a new year is coming. 2024 was a good year for ISAAC with many activities and new members. Especially, we would like to point out the fruits of our successful cooperation with ICMAM, which sees our community expanding in South and Latin America. In the next year we have as a major event our 15th ISAAC congress in Astana (Kazakhstan). It is for first time that we have an ISAAC congress being held in Central Asia and it is expected to be the largest ISAAC congress to this date. Furthermore, looking at the scientific program we are very excited to listen to the talks. This all is due to the tremendous efforts of the local organizers and our ISAAC members in Kazakhstan.

I am looking forward to seeing you all there.

Merry Christmas and a Happy New Year  
Uwe Kähler  
President of ISAAC

## Summer School and Conference "Analysis, PDEs and Applications"

<https://www.gmg70.com>

This year Ghent Analysis and PDE Center ([analysis-pde.org](https://analysis-pde.org)) and Yerevan State University (YSU) co-organised the Summer School (24–29 June) and Conference (1–6 July) "Analysis, PDEs and Applications" ([gmg70.com](https://www.gmg70.com)) at YSU, Yerevan, Armenia. These events were dedicated to the 70th anniversary of Prof. Martin Grigoryan (YSU). The thematic scope of the conference was Analysis and PDEs broadly defined, including ramifications in mathematical physics.

The following plenary speakers contributed to the conference:

- Sergey Antonyan (National University of Mexico, Mexico)
- Grigor Barseghyan (Institute of Mathematics, Armenia)
- Paula Cerejeiras (University of Aveiro, Portugal)
- Roland Duduchava (Razmadze Mathematical Institute, Georgia)
- Hans G. Feichtner (University of Vienna, Austria)
- Anahit Galstyan (University of Texas Rio Grande Valley, USA)
- Armen Jerbashian (Institute of Mathematics, Armenia)
- Uwe Kaehler (University of Aveiro, Portugal)
- Sergey Konyagin (Moscow State University, Russia)
- Michael Ruzhansky (Ghent University, Belgium)
- Henrik Shahgholian (Royal Institute of Technology, Sweden)
- Armen Shirikyan (University of Cergy–Pontoise, France)
- Sundaram Thangavelu (IIS Bangalore, India)
- Joachim Toft (Linnaeus University, Sweden)
- Dmitri Vassiliev (University College London, UK)
- Andreas Weiermann (Ghent University, Belgium)
- Karen Yaghdjian (University of Texas Rio Grande Valley, USA)



Conference Analysis, PDEs and Applications: some of the plenary speakers and participants at the excursion

The summer school offered 30 hours of lectures by the following lecturers:

- Duvan Cardona (Ghent University, Belgium)
- Paula Cerejeiras (University of Aveiro, Portugal)
- Marianna Chatzakou (Ghent University, Belgium)
- Claudio Dappiaggi (University of Pavia, Italy)
- Roland Duduchava (Razmadze Mathematical Institute, Georgia)
- Hans G. Feichtner (University of Vienna, Austria)
- Uwe Kaehler (University of Aveiro, Portugal)
- Michael Ruzhansky (Ghent University, Belgium)
- Armen Shirikyan (University of Cergy–Pontoise, France)
- Sundaram Thangavelu (IIS Bangalore, India)
- Dmitri Vassiliev (University College London, UK)
- Hans Vernaeye (Ghent University, Belgium)

Most summer school lectures and conference talks were in-person, and all of them were broadcast to the remote audience via Zoom. The recordings of lectures and talks will appear soon on the dedicated YouTube channel of the Remote Lab of Ghent Analysis and PDE Center in Armenia. The conference proceedings will appear in a special issue of Perspectives Ghent Analysis and PDE Center, Trends in Mathematics, Birkhäuser.



Summer school Analysis, PDEs and Applications: mingle at coffee-break

The conference and summer school were attended by participants from about 20 countries, and offered an entertainment programme including day excursions, a cultural evening and a conference dinner. Behind this enjoyable 2 weeks of scientific and social experiences were standing the humble heroes - local organisers: Prof. Sergo Yepiskoposyan, Dr. Smbat Gogyan, Aram Nazaryan (remote lab), Gor Chalyan (remote lab), Armen Yepiskoposyan.

Both events were supported by the Higher Education and Science Committee of Armenia; FAST Foundation; Research Mathematics Fund; International Society for Analysis, its Applications, and Computation (ISAAC); KRISP; Elite Plaza Business Center; Makichyan Consulting; Hyur Service.

## Announcement of 15th ISAAC congress Nazabaryev University, Astana, Kazakhstan, July 21–25, 2024

<https://www.isaac2025.org>

The 15th ISAAC congress will take place at Nazarbayev University from 21 July to 25 July, 2025. The congress continues the successful series of meetings previously held in Delaware, USA (1997), Fukuoka, Japan (1999), Berlin, Germany (2001), Toronto, Canada (2003), Catania, Italy (2005), Ankara, Turkey (2007), London, UK (2009), Moscow, Russia (2011), Krakow, Poland (2013), Macao, China (2015), Växjö, Sweden (2017), Aveiro, Portugal (2019), Ghent, Belgium (2021), Ribeirão Preto, Brazil (2023).



There are currently 22 thematic sessions.

Plenary speakers are:

Manuel Del Pino (University of Bath, UK)  
Hongjie Dong (Brown University, US)  
Yoshikazu Giga (University of Tokyo, Japan)  
Martin Hairer (EPFL, Switzerland)  
Carlos Kenig (University of Chicago, US)  
Ari Laptev (Imperial College London, UK)  
Alexei A. Mailybaev (IMPA, Brazil)  
Nader Masmoudi (Courant Institute at NYU, US)  
Mete Soner (Princeton University, US)  
Carola-Bibiane Schönlieb (University of Cambridge, UK)  
Susanna Terracini (University of Turin, Italy)  
Gang Tian (Peking University, China)  
Xiangyu Zhou (Institute of Mathematics, Chinese Academy of Sciences, China)

Currently, registration for ISAAC 2025 is open. Please visit

<https://isaac2025.org/information/>



**ISAAC CONGRESS  
ASTANA | 2025**  
Nazarbayev University, Kazakhstan

## Announcement ISAAC award 2025

The ISAAC award, presented by the International Society for Analysis, its Applications and Computation, is a prestigious recognition given to outstanding young researchers at each ISAAC Congress. This award serves to celebrate their exceptional contributions to the field. Here are some of the recent awardees who have received this esteemed honor:

- 2023: Danilo Radchenko from University of Lille, France, and Hubert Lacoïn from IMPA, Brazil.
- 2021: Guido De Philippis from the Courant Institute at New York University, USA.
- 2019: Afonso José Sousa Bandeira, affiliated with both the Courant Institute at New York University and ETH Zürich, USA, and Fabio Pusateri from the University of Toronto, Canada.
- 2017: Tuomas Penttinen from the University of Helsinki, Finland.



- 2015: Jinsong Liu, affiliated with the Chinese Academy of Sciences, China.
- 2013: Jasson Vindas from Ghent University, Belgium.
- 2011: Volker Elling from the University of Michigan, USA, and Vladimir Fedorov from Chelyabinsk State University, Russia.
- 2009: Sergey Tikhonov, affiliated with ICREA and the Centre de Recerca Matemàtica, Spain.
- 2007: Michael Ruzhansky from Imperial College London, UK.
- 2005: Terence Tao from UCLA, USA, and Dimitri Georgievskii from Moscow, Russia.
- 2003: Henichiro Umezu from Maebashi, Japan.

These individuals have demonstrated exceptional talent and dedication to their respective areas of research, earning them the ISAAC award and furthering the advancement of analysis, its applications, and computation.

Candidates for the awards may be nominated especially by ISAAC board members and session organizers, but may also apply by themselves. Nominations and applications should be sent before February 15, 2025 to:

Uwe Kähler, ISAAC President  
e-mail: [ukaehler@ua.pt](mailto:ukaehler@ua.pt)

## Announcement President's award for young ISAACs

The president's award for young ISAACs was created in 2023 on the occasion of the 14th ISAAC congress and aims to distinguish young ISAAC members within the society who not only have an outstanding scientific merit, but also worked actively in the society and in its promotional activities.

The prize is open to all ISAAC members under 40 years.

First winner of this award is Bojan Prangoski from Ss. Cyril and Methodius University in Skopje.

Candidates for the awards may be nominated especially by ISAAC board members and session organizers, but may also apply by themselves. Nominations and applications should be sent before February 15, 2025 to:

Uwe Kähler, ISAAC President  
e-mail: [ukaehler@ua.pt](mailto:ukaehler@ua.pt)

## Announcements of conferences

### ACOMEN2025 conference on "Advanced Computational Methods in ENgineering and Applied Mathematics"

The ninth international conference on "Advanced COmputational Methods in ENgineering and Applied Mathematics" (ACOMEN2025) will be held at the congress center Zebrastraat in Ghent, Belgium from September 15 till September 19, 2025. The conference aims to provide an international forum to present and discuss the latest developments in computational and applied mathematics in various emerging engineering and mathematical fields. The main topics of the ACOMEN2025 conference include but are not limited to: applied and computational mathematics, computational solid mechanics, computational fluid mechanics, computational material science, computational electromagnetism, computational natural sciences and biomechanics, data-driven and artificial intelligence applied to modeling, fluid-structure interactions and coupled problems, high-performance scientific computing, inverse problems, machine learning, new and emerging discretisation methods, numerical analysis, optimisation methods, partial differential equations, software for scientific computations, simulation of manufacturing processes, uncertainty quantification and stochastic modelling. Confirmed plenary speakers are Peter Bastian (Universität Heidelberg), Paul Bressloff (Imperial College London), Jerome Droniou (University of Montpellier), Jan S. Hesthaven (École Polytechnique Fédérale de Lausanne), Barbara Kaltenbacher (Alpen-Adria-Universität Klagenfurt), Michael Klivanov (University of North Carolina at Charlotte) and Matti Lassas (University of Helsinki). It is a great pleasure to invite you to participate in the conference. Abstract submission is open now. There is also the possibility to submit a mini-symposium proposal. A selection of abstracts will be asked to extend to a full research paper and submit for review and possible publication in a special issue in Computers & Mathematics with Applications.

You can find all further information (about abstract submission, registration, deadlines, location etc) on our conference website:

<https://cage.ugent.be/acomen2025/>

**Organising committee:** Michael Ruzhansky (chairman), Marián Slodička, Karel Van Bockstal (Ghent University)

**Scientific committee:** Christophe Geuzaine (University of Liège), Sorin Pop (Hasselt University), Enrique Zuazua (Friedrich Alexander University of Erlangen-Nürnberg)

## Activities at ICMAM Latin America

### ICMAM Latin America 2024 (October 14–18, 2024)

Website: <https://sites.google.com/view/icmam2024/home>

#### Support:

- International Mathematical Union (IMU)
- International Society for Analysis, its Applications and Computation (ISAAC)
- ICMAM Latin America

## ISAAC–ICMAM Conference of Analysis in Developing Countries 2024 (October 21–25, 2024)

Website: <https://www.matua.edu.co/isaac-icmam-conference-of-analysis-in-developing-countries-2024/>

### Support:

- International Society for Analysis, its Applications and Computation (ISAAC)
- ICMAM Latin America

## ISAAC–ICMAM Conference of Women in Mathematics 2024 (November 27–19, 2024)

Website: <https://sites.google.com/view/isaac-icmam-conference-4-women/home>

### Support:

- International Mathematical Union (IMU)
- International Society for Analysis, its Applications and Computation (ISAAC)
- ICMAM Latin America

## Colloquium of Analysis and Partial Differential Equations for Central America and the Caribbean 2024 (December 9–13, 2024)

Website: <https://sites.google.com/view/icmamcentroamricaelcaribe2024/home>

### Support:

- International Mathematical Union (IMU)
- International Society for Analysis, its Applications and Computation (ISAAC)
- ICMAM Latin America

## Seminar: [Latin American Seminar of Analysis and PDE](#)

Website: <https://www.matua.edu.co/matematicas-y-memoria-un-seminario-de-analisis-y-ecuaciones-diferenciales-para-latinoamerica/>

### Support:

- International Mathematical Union (IMU)
- International Society for Analysis, its Applications and Computation (ISAAC)
- ICMAM Latin America

To get information about our upcoming conferences and seminars visit our website:

<https://sites.google.com/view/icmamlatinamerica/home>



## Upcoming conferences:

- EDP E DINTORNI X: TENTH MEETING AROUND PDE, University of Bari, Bari, Italy, January 29–31, 2025

- 27th European Intensive Course, University of Aveiro, March 24–28, 2025

<https://sweet.ua.pt/pceres/complex2025/Webpage/EICourse.html>

- 22nd Annual Workshop on Applications and Generalizations of Complex Analysis, University of Aveiro, March 28–29, 2025

<https://sweet.ua.pt/pceres/complex2025/Webpage/Workshop.html>

- QMP25 – Intensive Period, Quantum Mathematics @ Polimi, Politecnico di Milano, Italy, March – June, 2025

<https://sites.google.com/view/qmp25-intensiveperiod/home>

- IWOTA 2025, University of Twente, July 14–18, 2025

- 15th ISAAC congress, Nazarbayev University, July 21–25, 2025

<https://isaac2025.org/>

## New members

### David Santiago Correa

Santiago Correa is originally from Medellín, Colombia. He completed his PhD at the University of Göttingen in 2023 and is currently a postdoctoral researcher at the University of Augsburg. His research centres on mathematical analysis and its applications, with interests spanning microlocal analysis, calculus of variations, and nonlinear analysis.



### Karina Navarro Gonzalez

My research has been centered on characterizing Reproducing Kernel Hilbert Spaces (RKHS) generated by positive definite kernels on various domains, including closed intervals,  $n$ -dimensional spheres, 2-point homogeneous compact spaces, and compact Lie groups. Spherical harmonic analysis, orthogonal polynomials, and compact Lie groups analysis have been essential tools in this study. Additionally, I have investigated the covering numbers of the unit balls on these RKHS, analyzing their asymptotic behavior concerning the radius.





### Frederic Morneau Guerin

Frédéric Morneau-Guérin is a professor at Université TÉLUQ, Québec, Canada known for his contribution to the investigation of convolution weights on sequence spaces. Recently, his focus has shifted towards the Birkhoff polytope of doubly stochastic matrices, which he studies from a geometric perspective.



### Richard A. De la cruz Guerrero

Richard Alexander De la cruz Guerrero received his PhD from Universidad Nacional de Colombia in 2015. He currently works at the Universidad Pedagógica y Tecnológica de Colombia. His research interests include, among others, Partial Differential Equations and Applied Mathematics.



### Serap Oztop Kaptanoglu

Serap Oztop Kaptanoglu received her Ph.D. in 1996 at Ondokuz Mayıs University in Samsun, Turkey. She did postdoctoral work at Université de Mons-Hainaut in Mons, Belgium, in 1997–1998. She worked at Galatasaray University in Istanbul, Turkey, in 1999–2000. She then joined İstanbul University in 2000 and continues to work there. She has been the chairperson of the Department of Mathematics since 2017. She visited Joseph Fourier University in Grenoble, France, several times, University of Vienna, Austria, and Univeristy of Turin, Italy. She spent 2011–2012 at the University of Waterloo, Canada, as a visiting professor on sabbatical leave. She has graduated 3 doctoral students and has 4 other doctoral students coming up. She has written an introductory book on analysis and a research book on Orlicz spaces, both in Turkish. She has 27 papers and 95 citations in MathSciNet under the name Serap Oztop and 126 citations in Web of Science. Her web page is at <https://profil.istanbul.edu.tr/tr/p/oztops/>



### David Kimsey

David Kimsey received his PhD from Drexel University (USA) in 2011. Currently he is Reader in Pure Mathematics at Newcastle University (U.K.). His research interests center around investigating connections between operator theory on quaternionic (complex) Hilbert spaces and quaternion-valued (complex-valued) function theory. In particular, multidimensional moment problems, orthogonal matrix polynomials and related asymptotics and spectral theory for operators on a quaternionic Hilbert space.

### Gerhard Schindl

2010–2014, Mathematics–doctorate, University of Vienna

PhD–thesis with title „Exponential laws for classes of Denjoy–Carleman differentiable mappings“.

My main research topics and interests are:

Classes of ultradifferentiable and ultraholomorphic functions and (non–)quasianalytic classes of smooth functions, injectivity and surjectivity of the Borel map and the image of the Borel map, Whitney–extension theorems in the ultradifferentiable setting, non–linear Functional Analysis and convenient setting, growth properties for weight functions and weight sequences, weighted structures and spaces in Functional Analysis.



### Lin Kelsee Won

2018 – 2023 Carleton University (Ottawa, CA) Ph.D in Mathematics – November, 2023

May 2024 – Present Course Director, York University (Toronto, CA)

May 2017 – Aug 2023 Research Assistant, Carleton University (Ottawa, CA)

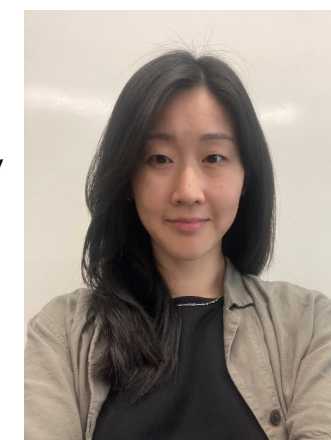
Sep 2018 – Apr 2019 Teaching Assistant, Carleton University (Ottawa, CA)

Jun 2015 – Sep 2015 YUSTART–Advising Assistant, York University (Toronto, CA)

Some recent publications:

A. Moameni and K. L. Wong. Existence and symmetry breaking results for positive solutions of supercritical elliptic Hamiltonian systems. Accepted for publication.

A. Moameni and K. L. Wong. Existence of solutions for supercritical (p, 2)–Laplace equations, Mediterranean Journal of Mathematics, (2023) 20:140.



And we arrive to the end of this year newsletter...



*To all a Merry Christmas and a Happy New Year 2025*