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The Electronic News Net of the
SIAM Activity Group on Orthogonal Polynomials and Special Functions

http://math.nist.gov/opsf

OP-SF Net is distributed to OPSF Activity Group members and non-members alike through the OP-SF Talk listserv.

If you are interested in subscribing to the Newsletter and/or OP-SF Talk, or if you would like to submit a topic to the Newsletter or a contribution to OP-SF Talk, please send an email to the OP-SF Net Editors.

Editors:
Howard S. Cohl howard.cohl@nist.gov
Sarah Post spost@hawaii.edu

Topics:

Calendar of Events:

May 26-29, 2026
International Conference on Mathematics, Numerics and Applications (MNA2026),
Budva, Montenegro,
https://mat.mas.bg.ac.rs/mna2026

June 1-5, 2026
Alps Approximation School and Meeting (AASM 2026),
Villaggio Olimpico Bardonecchia, Bardonecchia, Italy
https://aasm2026.uninettunouniversity.net

June 8-12, 2026
Quantum Symmetric Pairs, Hecke Algebras, and Representations: Exploring Spherical Functions (Q-SPHERE 2026),
Radboud University, Nijmegen, The Netherlands
https://indico.imapp.ru.nl/event/345/

June 15–19, 2026
Orthogonal Polynomials, Special Functions and their Applications Summer School (OPSF-S11),
Universidad de Alcalá, Alcalá, Spain,
https://opsfa2026.web.uah.es

June 22–26, 2026
OPERA 2026 – Orthogonal Polynomials, Exponential Analysis, Rational Approximation, with Applications,
University of Stirling, Scotland, UK
https://www.opera2026.uk/

July 6– 10, 2026
2026 SIAM Annual Meeting (AN26), Cleveland, Ohio, USA,
https://www.siam.org/conferences-events/siam-conferences/an26/

July 8–18, 2026
Foundations of Computational Mathematics (FoCM 2026), University of Vienna, Vienna, Austria
https://focm2026.univie.ac.at/

Workshop related to SIAG/OPSF:
July 9–11: **Special Functions and Orthogonal Polynomials**
Organizers: Daan Huybrechs (KU Leuven), Erik Koelink (Radboud Universiteit) and Teresa Pérez (Universidad de Granada)

August 17–21, 2026
18th International Symposium on Orthogonal Polynomials, Special Functions and Applications
Muromachi Campus, Doshisha University, Kyoto, Japan
https://opsfa18.com/

September 2–5, 2026
Approximation Theory and Special Functions (ATSF 2026 – 9th Series)
TOBB University of Economics and Technology, Ankara, Türkiye
https://atsf2026.etu.edu.tr/

Topic #1 ——— OP – SF Net 33.3 ——— May 15, 2026

From: OP–SF Net Editors
Subject: Announcement: 2026 Class of SIAM Fellows: **Paul A. Martin** and **Peter David Miller**

Paul A. Martin and Peter David Miller have been elected in the 2026 Class of SIAM Fellows.

The SIAM Fellows Program recognizes members of SIAM who have been nominated in recognition of their outstanding research and service to the community. Through their various contributions, SIAM Fellows form a crucial group of individuals helping to advance the fields of applied mathematics, computational science, and data science.

Paul A. Martin, Colorado School of Mines: For seminal contributions to the theory and applications of integral equations and wave scattering and for outstanding service to applied mathematics.

Peter David Miller, University of Michigan: For contributions to nonlinear waves, Riemann–Hilbert problems, and the nonlinear Schrödinger equation.

The list of the 2026 Class of the Fellows of SIAM are available here:

https://www.siam.org/publications/siam-news/articles/siam-announces-2026-class-of-fellows/

Congratulations to Paul and Peter!

Topic #2 ——— OP - SF Net 33.3 ——— May 15, 2026

From: OP-SF Net Editors
Subject: Announcement: 2025 Class of AAAS Fellows: **Ken Ono**

Ken Ono has been elected to the 2025 Class of Fellows of the American Association for the Advancement of Science (AAAS), in the Section on Mathematics.

The AAAS Council elected 449 members as Fellows in 2025. Election as a Fellow is a distinguished honor, recognizing individuals whose contributions to the advancement of science or its applications in service to society have set them apart among their peers.

Becoming an AAAS Fellow is one of the highest distinctions in the scientific community, honoring scientists, engineers, and innovators for their scientifically or socially impactful work.

The full list of the 2025 AAAS Fellows is available here:
https://www.aaas.org/page/2025-fellows

Congratulations to Ken on this well-deserved honor!

Topic #3 ——— OP - SF Net 33.3 ——— May 15, 2026

From: OP-SF Net Editors
Subject: Announcement: 2026 SIAM Gábor Szegő Prize Recipient: **Benjamin Eichinger**

We are pleased to announce that Benjamin Eichinger (School of Mathematical Sciences, Lancaster University, UK) has been selected as the recipient of the 2026 SIAM Gábor Szegő Prize. This award recognizes his breakthrough contributions to orthogonal polynomials and special functions, including a landmark proof of universality limits of orthogonal polynomials on the real line, as well as a body of work that has opened new directions in the field.

He will receive the prize certificate at the OPSFA-18 meeting in Kyoto, Japan, where he will also deliver the corresponding prize plenary lecture.

For more information see here.

In connection with the awarding of the 2026 SIAM Gábor Szegő Prize, we would like to highlight the following recent publication:

"An Approach to Universality Using Weyl m-Functions," Annals of Mathematics **203** (2026), 471–510
https://doi.org/10.4007/annals.2026.203.2.2

Congratulations!

Howard Cohl, Wolter Groenevelt, Teresa Perez, S. Ole Warnaar, Ae Ja Yee
2026 SIAM Gábor Szegő Prize Selection Committee

From: OP-SF Net Editors
Subject: Announcement: SIAG/OPSF track to be held at SIAM AN26 in Cleveland, Ohio

We hope everyone is getting ready for the SIAM annual meeting AN26 in Cleveland, July 6-10, 2026. There are several plenary talks and mini-symposia we would like to bring to your attention.

AN26 Plenary Talk IP1: The Secret Life of Partitions
Speaker: **Ken Ono**, Axiom Math and University of Virginia, U.S.A.
Monday, July 6, 10:30 AM - 11:30 AM. Grand Ballroom A

Integer partitions form a mathematical universe based on child's play, yet they govern complex phenomena ranging from the statistical mechanics of Bose-Einstein condensation to the physics of black holes. For the applied mathematician, partitions offer a perfect case study in "emergent complexity": how simple, discrete rules generate explosive asymptotic growth and rich, continuous geometric structures, This talk explores the "secret life" of partitions through recent breakthroughs that bridge the discrete and the continuous. First, we discuss the "Yin": recasting the partition numbers $p(n)$ not merely as counts, but as geometric invariants. Second, we turn to the "Yang": the discovery that partition structures can be tuned to "detect" prime numbers. We will present explicit, computationally verifiable formulas that vanish precisely at the primes, effectively turning combinatorial generating functions into number-theoretic sieves. Join us to see how these ancient counting numbers continue to serve as a powerful lens into the fabric of mathematics through algebra, geometry, and their applications.

AN26 SIAG/OPSF Plenary Talk IP5: From Polynomials to Nonlinear Special Functions
Speaker: **Nalini Joshi**, University of Sydney, Australia
Wednesday July 7, 10:30 AM - 11:15 AM. Grand Ballroom A

Special functions are like the number π, found everywhere but hard to describe because they are transcendental. In this talk, I will provide an overview beginning with the questions of Kepler and Newton and leading to the construction of special functions now central in mathematics. As far back as 1893, Felix Klein said "It is well known that the central problem of the whole of modern mathematics is the study of the transcendental functions defined by differential equations." The most interesting transcendental functions of modern times are the ones defined by nonlinear difference equations, but many remain enigmatic. At the end of the talk, I hope to briefly describe recent results on discrete versions of the Riemann-Hilbert method for solving such difference equations.

MS 7, 23 & 133: From Orthogonal Polynomials to Nonlinear Special Functions with Applications

Organizers: Howard S. Cohl, National Institute of Standards and Technology, U.S.A.; and
Nasser Saad, University of Prince Edward Island, Canada.

Special functions sit at the heart of many models in mathematical physics: they emerge as exact solutions of differential, difference, and q-difference equations, and they often encode the structure of the underlying problem. This mini-symposium brings together recent advances in the theory of special functions and their uses across physics and applied mathematics. We invite talks spanning theory and applications, including (but not limited to) quantum mechanics; integrable and is monodromic phenomena (Painlevé equations, tau-functions); quantum field theory and statistical mechanics; orthogonal polynomials and random matrix methods; q-series and q-deformations; modular and elliptic phenomena; and asymptotic or computational approaches driven by physical questions. Our aim is to create a lively forum that connects communities and sparks new collaborations.

Part I, Monday July 6, 8:00 -10:00 AM. Room 9

- 8:00-8:25 Product Formulas for Basic Hypergeometric Series by Evaluations of Askey-Wilson Polynomials
  Howard S. Cohl, National Institute of Standards and Technology, U.S.A.; Michael Schlosser, University of Vienna, Austria
- 8:30-8:55 Eigenvalue Equations for Sieved Polynomials or Proving Askey Right Again
  Luc Vinet, Université de Montréal, Canada; Alexei Zhedanov, Renmin University of China, China
- 9:00-9:25 Exponentially-Improved Asymptotics for q-Difference Equations
  Nalini Joshi, University of Sydney, Australia; Adri B. Olde Daalhuis, University of Edinburgh, United Kingdom
- 8:30-8:55 From the Riemann Hypothesis to Bose-Einstein Condensation: Mathematical and Physical Applications of the Riemann Zeta Function
  Bonita V. Saunders, National Institute of Standards and Technology, U.S.A.

Part II, Monday July 6, 4:00 -6:00 PM. Room 9

- 4:00-4:25 Transition Asymptotics for the Real Solutions of the Sinh-Gordon Painlevé III
  Kenta Miyahara, Indiana University Indianapolis, U.S.A.
- 4:30-4:55 On Hypergeometric-type Solutions of Linear Differential Equations
  Nasser Saad, University of Prince Edward Island, Canada
- 5:00-5:25 Cycle Index Polynomials and Graph Zeta Functions in Quantum Information Theory
  Zachary P. Bradshaw, QodeX Quantum, U.S.A.
- 5:30-5:55 Orthogonal Polynomials and Orderings in the Heisenberg Algebra
  Robert Maier, University of Arizona, U.S.A.

Part III, Friday July 10, 8:00 -10:00 AM. Atrium Ballroom A

- 8:00-8:25 Large-Order Asymptotics of Special Families of Painlevé Functions Via Riemann-Hilbert Analysis
  Robert J. Buckingham, University of Cincinnati, U.S.A.
- 8:30-8:55 Identities Involving Central (q-)binomial Coefficients Via (q-)hypergeometric Series
  Lin Jiu, Duke Kunshan University, China; Shane Chern, University of Vienna, Austria; Karl Dilcher, Dalhousie University, Canada
- 9:00-9:25 The Past and Future of Mathematical Standardization
  Charles W. Clark, National Institute of Standards and Technology, U.S.A.

MS 8, 24 & 40: Recent Advances in Asymptotic Analysis and Special Functions

Organizers: Jonathan Stanfill, Ohio State University, U.S.A. and Ahmad Barhoumi Grinnell College, U.S.A.

A classical topic in analysis, asymptotics continue to play a central role in pure and applied mathematics. This minisymposium includes talks on basic research in special functions/orthogonal polynomials (broadly construed), modern techniques in their analysis, and their applications in mathematics and beyond.

Part I, Monday July 6, 8:00-10:00am. Atrium Ballroom A

- 8:00-8:25 Generalized Dek-Type Orthogonal Polynomials
  Rachel Bailey, Bentley University, U.S.A.

- 8:30–8:55 Asymptotic Evidence for Ferromagnetism in Non-abelian Spin Models
  Joe Webster, Grinnell College, U.S.A.

- 9:00–9:25 Ramanujan's Mock Theta Functions: a Unifying Theory and New Results
  Ovidiu Costin, Ohio State University, U.S.A.; Sergei Gukov, California Institute of Technology, U.S.A.; Gerald Dunne, University of Connecticut, U.S.A.

- 9:30–9:55 Parabolic Cylinder Functions Revisited Using Borel-Laplace Techniques
  Rodica Costin, Ohio State University, U.S.A.

Part II. Monday July 6, 4:00–6:00pm. Atrium Ballroom A

- 4:00–4:25 Greatest Root Statistic for Jacobi Ensembles with Rapidly Increasing Row Dimensions
  Aikaterini Gkogkou and Kenneth McLaughlin, Tulane University, U.S.A.; Gustavo Didier, Tulane University, U.S.A.; John Lopez, University of Manitoba, Canada

- 4:30–4:55 Orthogonal Polynomials, Matrix Models, and Map Enumeration
  Nathan Hayford, KTH Royal Institute of Technology, Sweden

- 5:00–5:25 q-Deformation of the Marchenko-Pastur Law
  Guido Mazzuca, Tulane University, U.S.A.; Yeong-Gwang Jung, Seoul National University, Korea; Sung-soo Byun, Korea Institute for Advanced Study, Korea

- 5:30–5:55 Asymptotic Analysis of Some Multiple Orthogonal Polynomials Arising in the Six-vertex Model
  Karl Liechty, DePaul University, U.S.A.

Part III. Tuesday July 7, 4:00–6:00pm. Atrium Ballroom A

- 8:00–8:25 Matrix Model for Mixed Multiple Orthogonal Polynomials
  Maksim Kosmakov, University of Cincinnati, U.S.A.

- 8:30–8:55 Orthogonal Polynomials and Mutually Unbiased Bases
  Brian Simanek, Baylor University, U.S.A.

- 9:00–9:25 Some Inequalities About the Norms of Wick Products with Respect to the Poisson Probability Measure
  Aurel I. Stan, Ohio State University at Marion, U.S.A.

- 9:30–9:55 Utilizing Special Functions in the Study of Spectral Zeta Functions
  Jonathan Stanfill, Ohio State University, U.S.A.; Guglielmo Fucci, East Carolina University, U.S.A.; Mateusz Piorkowski, KTH Royal Institute of Technology, Sweden

MS 58, 74 & 89: Orthogonal Polynomials and Special Functions in Mathematical Physics

Organizers: Cade Ballew, University of Washington, U.S.A.; Charbel Abi Younes, University of Washington, U.S.A.; and Deniz Bilman, University of Cincinnati, U.S.A.

Orthogonal polynomials and special functions arise naturally in a wide range of problems in mathematical physics, particularly in integrable systems and random matrix theory. This session aims to highlight recent work that applies these tools in the study of spectral theory, PDEs, Riemann–Hilbert problems, integrable probability, and related asymptotic analysis.

Part I Tuesday July 7, 4:00 PM – 6:00 PM. Atrium Ballroom A

- 4:00–4:25 Random Determinants and Quasimodular Forms
  Jonathan Novak, University of California, San Diego, U.S.A.

- 4:30–4:55 Special Functions for Structured Random Permutation Statistics
  John Peca-Medlin, University of California, San Diego, U.S.A.
- 5:00–5:25 Combinatorics of Even Valent Graphs on Riemann Surfaces
  Roozbeh Gharakhloo, University of California, Santa Cruz, U.S.A.; Tomas Lasic Latimer, University of Sydney, Australia

Part II. Wednesday July 8, 8:00 – 10:00 AM. Atrium Ballroom A

- 8:00–8:25 Large-Degree Asymptotics for Laguerre Rational Solutions of Painlevé V
  Trevor Johnson and Robert J. Buckingham, University of Cincinnati, U.S.A.
- 8:30–8:55 Sharp Long-Time Behavior of Solutions to the Kp I Equation
  Samir Donmazov, University of Michigan, U.S.A.
- 9:00–9:25 Wave Patterns Near Rogue Waves Formed Through Breather Synchronization
  Ethan Davis and Deniz Bilman, University of Cincinnati, U.S.A.

Part III. Wednesday July 8, 4:00 – 6:00 PM. Atrium Ballroom A

- 4:00–4:25 Numerical Methods for KdV and mKdV Soliton Gasses
  Cade Ballew and Thomas Trogdon, University of Washington, U.S.A.; Deniz Bilman, University of Cincinnati, U.S.A.
- 4:30–4:55 Asymptotics of Orthogonal Polynomials with Applications to Density Estimation of Random Matrices
  Charbel Abi Younes and Thomas Trogdon, University of Washington, U.S.A.; Xiucai Ding, University of California, Davis, U.S.A.
- 5:00–5:25 Orthogonal Polynomials, Painlevé Equations, and Map Enumeration
  Ahmad Barhoumi and Ahmad Barhoumi, Grinnell College, U.S.A.

MS 73 & 88 AI Assistance in Special Functions and Number Theory: A New Paradigm

Organizer: Tanay Wakhare, Massachusetts Institute of Technology, U.S.A.

This minisymposium brings together mathematicians and computer scientists exploring how modern AI assistance and formal theorem provers are changing the fundamental workflow of number theory, orthogonal polynomials, and special functions research. Talks will cover the usage of Large Language Models in theorem proving and conjecturing, the usage of formal theorem provers such as Lean in order to provide formally verified proofs, and the use of classical machine learning and AI techniques to discover new conjectures. The emphasis is on how AI systems can discover and prove increasingly sophisticated research level results, and will fundamentally transform research workflows over the next few years.

Part I. Wednesday July 8, 8:00 AM – 10:00 AM. Room 9

- 8:00–8:25 Autoformalization with Gauss
  Jared Lichtman, Stanford University, U.S.A.
- 8:30–8:55 Solutions to Open Math Problems with AI: Some Examples
  Ken Ono, Axiom, U.S.A.
- 9:00–9:25 Mathematics in the Age of AI
  Alex Kontorovich, Rutgers University, U.S.A.
- 9:30–9:55 The Art of System Prompting
  Tanay Wakhare, Massachusetts Institute of Technology, U.S.A.

Part II. Wednesday July 8, 4:00 AM – 6:00 PM. Room 9

- 4:00–4:25 Designing Datasets for Example-Based Conjecture Generation in AI for Math
  Henry Kvinge, Pacific Northwest National Laboratory, U.S.A.
- 4:30–4:55 Machine Learning for Number Theory and Combinatorics: Seq2Seq and Generative Approaches
  Alberto Alfarano, Axiom, U.S.A.
- 5:00–5:25 Confessions of a Vibe Prover
  Boon Suan Ho, National University of Singapore, Singapore
- 5:30–5:55 Benchmarking AI on Unsolved Math Problems
  Greg Burnham, Epoch, AI, U.S.A.

MS 104 & 120: The Hypergeometric Motive: Hypergeometric Functions in Geometry and Number Theory

Organizers: Michael Allen, Wesleyan University, U.S.A.; Adriana Salerno, National Science Foundation, U.S.A.; and Ursula Whitcher Mathematical Reviews, U.S.A.

The philosophy of hypergeometric motives holds that an underlying hypergeometric object can manifest in many ways, including cohomology, point counts, and finite field hypergeometric functions. The talks in this session will highlight some of the many problems in which hypergeometric functions provide useful insights and examples, with a particular focus on the ways hypergeometric functions arise in the study of K3 surfaces and Calabi–Yau manifolds. Our session connects experts and early-career researchers in number theory, geometry, and physics.

Part I. Thursday July 9, 8:00 – 10:00 AM. Atrium Ballroom A

- 8:00–8:25 The Hypergeometric Motive
  Adriana Salerno, National Science Foundation, U.S.A.
- 8:30–8:55 Parametric Variation of Hypergeometric Systems
  Christine Berkesch, University of Minnesota, U.S.A.
- 9:00–9:25 Hypergeometric Distributions and Étale Cohomology
  Hasan Saad, Louisiana State University, U.S.A.
- 9:30–9:55 On Some Hypergeometric Modularity Conjectures of Dawsey and McCarthy
  Brian Grove, Texas State University, San Marcos, U.S.A. AN26 Home 2026

Part II. Thursday July 9, 4:00 – 6:00 PM. Atrium Ballroom A

- 4:00–4:25 Hypergeometric Decompositions of K3 Surface Pencils
  Leah Sturman, Southern Connecticut State University, U.S.A.
- 4:30–4:55 Supercongruences and p-adic Hodge Theory
  Michael Allen, Wesleyan University, U.S.A.
- 5:00–5:25 Hypergeometric Functions, D-Modules, and Mirror Symmetry of Calabi-Yau Varieties
  Michael Schultz, Virginia Tech, U.S.A.
- 5:30–5:55 Reduction of Hypergeometric Systems for Periods of Calabi-Yau Families
  Kamryn Spinelli, Queen's University, Canada

MS 119 & 132 Hypergeometric Series and Modular Forms

Organizers: Hasan Saad, Louisiana State University, U.S.A. and Yifeng Huang. University of Southern California, U.S.A.

Hypergeometric series and modular forms are intimately related mathematical objects with geometric, combinatorial and arithmetic aspects and which possess multiple applications in mathematics and physics. In mathematical physics, they appear naturally in the enumerative geometry of Calabi-Yau three-folds, the computation of banana integrals, string theory, quantum black holes, and conformal field theory, often through explicit differential equations. In mathematics, hypergeometric series are the classical complex realization of hypergeometric motives and are intertwined with the p-adic aspect as well as the finite field or étale aspect. These hypergeometric series relate to modular forms via the modularity theorem and differential equations, and these modular forms appear in partition theory, Galois theory, representation theory, arithmetic statistics, arithmetic geometry, topology, and essentially pervade all of mathematics. Our minisymposium will bring together experts and early-career researchers in modular forms and hypergeometric series to explore applications of these perspectives to open problems and new connections across mathematics and physics.

Part I. Thursday July 9, 4:00 PM - 6:00 PM. Room 9

- 4:00-4:25 The Arithmetic of Hypergeometric Galois Representations in Low Dimensions
  Ling Long, Louisiana State University, U.S.A.
- 4:30-4:55 Computational Tools for Hypergeometric L-Functions
  Kiran S. Kedlaya, University of California, San Diego, U.S.A.
- 5:00-5:25 Is There An Algorithm for Proving Partition Identities?
  George E. Andrews, Pennsylvania State University, U.S.A.
- 5:30-5:55 Mock Atkin-Lehner Symmetry
  Frank Garvan, University of Florida, U.S.A.

Part II. Friday July 10, 8:00 - 10:00 AM. Room 9

- 8:00-8:25 q-t-Rogers-Ramanujan Identities
  Ole Warnaar, University of Queensland, Australia
- 8:30-8:55 q-Series in 3d Topology
  Josef Svoboda, California Institute of Technology, U.S.A.
- 9:00-9:25 Analytic Behavior of Multimodal Generating Functions
  Philip Cuthbertson, Michigan Technological University, U.S.A.
- 9:30-9:55 $\widehat{Z}$ -Invariants: From Open Dt Invariants to Quantum Modularity.
  Mrunmay Jagadale, California Institute of Technology, U.S.A.

MS 142: Computation of Special Functions

Organizer: Amparo Gil, Universidad de Cantabria, Spain and Javier Segura Universidad de Cantabria, Spain

Special functions are central to applied mathematics, physics, and engineering, arising in differential equations, statistical modeling, and numerical analysis. Their efficient and reliable computation is essential for a wide range of scientific and industrial applications. This minisymposium aims to bring together specialists to present and discuss recent progress in computational algorithms, high-precision techniques, asymptotic analysis, and software development related to special functions.

Part I. July 10, 3:00 - 5:00 PM. Room 9

- 3:00–3:25 Improving the Computation of Bessel Functions and Their Zeros
  Amparo Gil, Universidad de Cantabria, Spain
- 3:30–3:55 Computing Generalized Hypergeometric Functions via Rational-Algebraic Transformations
  John Lopez and Richard M. Slevinsky, University of Manitoba, Canada
- 4:00–4:25 Special Functions and the Numerical Solution of Initial-Boundary Value Problems
  Wietse Vaes and Thomas Trogdon, University of Washington, U.S.A.
- 4:30–4:55 Algorithmic and Ai-Driven Developments in Special Functions in Mathematica
  Tigran Ishkhanyan, Wolfram Research, Inc., Armenia

MS 143: Special Functions with Applications in Number Theory and Combinatorics

Organizer: Lin Jiu, Duke Kunshan University, China

Special functions appear in various fields and take multiple forms, including series expansions, integral representations, differential or difference equations arising from certain models. Therefore, the variety of their applications naturally extends, among other fields, to physics, engineering, probability and statistics. In number theory and combinatorics, notable examples include, but are not limited to, gamma function, zeta functions, Dirichlet series and L-functions, integer partition functions, q-series, modular forms, orthogonal polynomials, etc. Besides their computational and analytical properties such as convergence and asymptotic behavior, other key properties, such as algebraic structures and combinatorial and probabilistic interpretations, make these functions essential tools in related research. This minisymposium will highlight some applications of special functions in number theory and combinatorics. Speakers will present either results on related special functions with examples of applications, or show the usage of special functions in studying the main objects under consideration.

Part I. July 10, 3:00 – 5:00 PM. Atrium Ballroom A

- 3:00–3:25 Further Analogs of Andrews' Spt-Function Identity
  Rishabh Sarma, Pennsylvania State University, U.S.A.
- 3:30–3:55 High Rank Zeta Functions of Arithmetic Orders and Curve Singularities
  Yifeng Huang, University of Southern California, U.S.A.
- 4:00–4:25 Congruences and Cranks for Partitions with Bounded Largest Part
  Brandt Kronholm, University of Texas, Rio Grande Valley, U.S.A.
- 4:30–4:55 Estimating the Imaginary Parts of the Roots of $\zeta(s)$ and Other Partition Zeta Functions
  Robert Schneider, Michigan Technological University, U.S.A.

Topic #5 ——— OP – SF Net 33.3 ——— May 15, 2026

From: Roman Bessonov (roman.bessonov@imfm.si)
Subject: Announcement: Job vacancy for the position of Postdoctoral Researcher in Slovenia

Job Vacancy for the position of Postdoctoral Researcher
Institute of Mathematics, Physics and Mechanics, Jadranska ulica 19, 1000 Ljubljana, Slovenia.

We are announcing **one position** for the job of **Assistant with a Doctorate degree** (postdoctoral researcher).

The position is available at the **Department of Mathematics**.

The applicant is expected to take a leadership role in one of the following research directions:

- nonclassical action-angle variables for nonlinear integrable equations with rough initial data,
- convergence and stability estimates for NLFT-based numerical algorithms,
- asymptotic behavior of the prediction error for stationary Gaussian processes,
- quantitative universality for orthogonal polynomials and random matrices,
- scattering characterization of relativistic crystals (described by Dirac operators with potentials supported on a countable set).

Job Description:

- conducting scientific research in accordance with legislation in the field of scientific research and innovation activities,
- publishing scientific articles,
- applying for independent funding with IMFM as a host institution during the first year at IMFM.

Required education and title:

- completed Doctorate degree.

Successful candidate will be appointed to the title of Assistant with a Doctorate degree (in case she/he does not have this title at the moment of application) no later than the day of signing the employment contract.

We expect that the candidate:

- has strong results in spectral or scattering theory of Schrodinger, Dirac, Jacobi, or Krein operators, or has an exceptionally strong results in the broader area of one-dimensional complex analysis, operator theory, nonlinear integral equations, or probability,
- will publish high-impact research papers,
- is fluent in English.

What we offer:

- dynamic research work with opportunities for personal and professional development, in one of the above directions with the project leader Roman Bessonov and other members of analysis and spectral theory group in Ljubljana,
- competitive salary,
- good working conditions,
- generous financial support for participating in scientific events,
- employment for a **fixed term of 1 or 2 years**, with the anticipated start date of **January 1, 2027**.

Ensuring equal opportunities: The Institute of Mathematics, Physics and Mechanics ensures gender equality and prevents any form of discrimination among individuals applying for vacant positions.

Candidates are invited to submit their application as a **single PDF file**, to the email address: roman.bessonov@imfm.si, with the subject "Postdoctoral researcher at IMFM" no later than June 30, 2026.

The application should include:

- a cover letter mentioning basic facts on your education, work experience, and the preferred duration of the position at IMFM (1 or 2 years). Please also provide a contact detail of two academic referees able to write support letters upon request;
- a curriculum vitae with MathSciNet Author ID and the list of publications;

- proof of education.

The formal approval of the candidate and the official offer from IMFM is expected in August 2026. The selected candidates will be invited for an interview via email.

Ljubljana, March 16, 2026

Director, Prof. dr. Peter Šemrl

Topic #6 ——— OP – SF Net 33.3 ——— May 15, 2026

From: OP-SF Net Editors
Subject: Retraction Watch Reprint: 45 Editors Resign from Journal of Approximation Theory

[This article is reprinted with permission from Retraction Watch.]

45 Editors Resign from Math Journal, Former EIC Calls Elsevier Publisher a 'Mini-dictator'

Forty-five[1] of 48 members of the editorial board of the *Journal of Approximation Theory* resigned earlier this month for what they called Elsevier's "concerning and potentially detrimental" decisions regarding the publication.

Paul Nevai, formerly a professor at The Ohio State University, was appointed editor-in-chief of *JAT* in 1990 and held the position for 35 years until December. That's when he reached the end of his term and Elsevier informed him they'd be filling the position with someone else.

The mass resignation came after what Nevai said were several years of bad blood between the editors of the journal (including him) and the publisher, Giampiero Accardo. A representative for Elsevier told us designated publishers like Accardo are Elsevier employees who "oversee a portfolio of academic journals within a subject area, working closely with editors, authors, and research communities to support their development and long-term success."

An April 3 email signed by 45 editors and both former editors-in-chief states: "While the publisher may seek to continue the journal under its existing name, in our view, the journal as we have known it has effectively ceased to exist."

The journal was founded in 1968 and published by Academic Press until it was acquired by Elsevier in 2001.

Elsevier "made a series of decisions that a substantial majority of the editors found deeply concerning and potentially detrimental to the journal's future," the group resignation letter reads. "Despite efforts to address these concerns through discussions with the publisher, a mutually satisfactory resolution could not be reached."

The letter doesn't explicitly detail which decisions Elsevier made that the editors found problematic. Nevai told us the publisher increased oversight, employed heavy-handed involvement in editorial decisions and attempted to speed up the article production process.

Only three editors remain on the journal's website. Retraction Watch reached out to them for comment but they did not respond.

"Editorial succession and rotation are important factors in ensuring the long-term health and sustainability of journals; by rotating editors, fresh approaches and perspectives can be brought to the journal and its community, helping to ensure it continues to serve its field effectively and sustainably," Elsevier's

[1] Paul Nevai: The article is mostly accurate but not everything is so. For instance, "45 editors resign" is actually "51 editors resign" because some of the editors submitted their resignations with some delay, see https://jat.nevai.us.

representative told us.

"We typically manage these transitions in close partnership with existing editors, often involving them in the nomination of their potential successors over a transition period," they added.

The April 3 resignation wasn't the first for the journal. Barry Simon, a prominent mathematical physicist, stepped away earlier this year in protest, Nevai said. Simon did not respond to our request for comment.

Nevai told us that, before Accardo took on the role of publisher, "everything was perfect," and likened the publisher to a "mini-dictator." Before the change, Nevai said, he and co-editor-in-chief Amos Ron had authority to appoint editors. But Elsevier was focused on expanding the editorial board to include researchers from a wider range of countries, according to Nevai.

Mathematics is a "completely merit based system," he said, objecting to the move.

Nevai and Ron reached the end of their three-year terms in December. Nevai told us he expected his contract to be renewed and that he would decide when to retire.

Figure 1: March 2026 Cover of JAT.

Elsevier told us they had proposed a "collaborative process that included a one-year extension to allow for the identification of suitable successors, with input from the Editorial Board and the wider community. We were unfortunately unable to reach agreement on these points."

Although Nevai told us he worked as an associate editor after the end of his term, the Elsevier spokesperson said there was "no formal agreement or appointment for him to take on an Associate Editor role. His position remained Editor-in-Chief during the discussions and following the conclusion of these discussions in late March, his access to the editorial system was removed."

Nevai understands himself to have been effectively fired as associate editor at the end of March via an email from journal manager Priyadharsini Muthukumar "reassigning" four articles he had been given to review.

The journal joins our Mass Resignation List and is the second math journal in less than a month to do so. In March, we covered another instance of a mathematics journal's editorial board who resigned en masse due to editorial changes enforced by Taylor & Francis.

From: Benjamin Eichinger (b.eichinger@lancaster.ac.uk)
Subject: Report: Spectral Theory by the Lakes by **Benjamin Eichinger**

Figure 2: Spectral Theory by the Lakes group photo. Left-to-right: Benedikt Buchecker, Benjamin Eichinger, Jiyu Fan, Luke Mader, Catherine Drysdale, Subhajyoti Bid, Jakob Reiffenstein, Eugene Shargorodsky, Gordon Blower, Leonid Parnovski, Alexander Pushnitski, Ghada Jameel, Noema Nicolussi, Hugh Wark, Leonid Pastur, Sukrid Petpradittha, Yan-Long Fang. Photograph taken by Daniel Elton.

Spectral Theory by the Lakes brought together researchers at Lancaster University, Lancaster, UK on 9–10 April for two days of talks and discussion.

The first day opened with Eugene Shargorodsky (King's College, UK) on Morse index estimates for Stokes waves, followed by Sukrid Petpradittha (Durham University, UK) on Lieb–Thirring inequalities for Schrödinger operators with complex potentials and Mira Shamis (Queen Mary University of London, UK & Holon Institute of Technology, Israel) on Area Law for the entanglement entropy of free Fermions in non-random ergodic field. The afternoon featured a double session by Alexander Pushnitskii (King's College, UK) and Leonid Pastur (King's College, UK) on periodic and ergodic Hankel operators, with Jakob Reiffenstein (Stockholm University, Sweden) closing the day on eigenvalues of self-adjoint exit space extensions.

Day two began with Catherine Drysdale (Lancaster University, UK) on universal methods for computing spectra of linear and nonlinear Eigenvalue Problems, then Benedikt Buchecker (TU Wien, Austria) on upper bounds for Widom factors for Chebyshev polynomials for Jordan arcs. Leonid Parnovski (University College London, UK) offered a modern take on classical spectral asymptotics, and Yan-Long Fang discussed scattering resonances of transmission problems. The workshop concluded with Ghada Jameel (Cardiff University, UK) on perturbed periodic Dirac operators and Noema Nicolussi (University of Innsbruck, Austria) on optimal eigenvalues for metric graphs with densities.

Throughout, the atmosphere was warm and interactive. Some participants also made time to explore the nearby Lake District.

Figure 3: Leonid Pastur in the Lake District.

Topic #8 ——— OP – SF Net 33.3 ——— May 15, 2026

From: Frank Garvan (fgarvan@ufl.edu) and Ali Uncu (aku21@bath.ac.uk)
Subject: Report: ALLADI70: International Number Theory Conference by **Frank Garvan** and **Ali Uncu**

The 2026 Gainesville International Number Theory Conference ALLADI70, held in honor of Krishna Alladi's 70^{th} birthday, was a five-day event during March 18–22, 2026, hosted by the Department of Mathematics of the University of Florida, Gainesville. The main organizers were George Andrews (The Pennsylvania State University), Frank Garvan (University of Florida) and Andrew Sills (Georgia Southern University). The scientific committee for the conference also included Alexander Berkovich, Jeremy Booher, Cyndi Garvan, Kevin Keating, and Ali Uncu.

The conference covered a wide variety of topics. In five broad headlines, these were: partitions, q-series and modular forms; analytic number theory; Diophantine approximations and transcendence; algebraic number theory and arithmetic geometry; computational number theory. There were over 100 speakers, and there were five special lectures:

- Opening Conference Lecture: **Peter Sarnak**
  Institute for Advanced Study, Princeton and Princeton University
  "*On indefinite ternary quadratic forms*"
- Erdős Memorial Lecture: **Dorian Goldfeld**
  Columbia University
  "*A Generalization of Dedekind's eta function for Hecke groups over a real quadratic field*"
- Straus Memorial Lecture: **Carl Pomerance**
  Dartmouth College
  "*The Erdős-Straus Conjecture*"

- Ramanujan Colloquium: **Maksym Radziwiłł**
  Courant Institute, New York University
  "*The Fyodorov-Hiary-Keating conjecture*"

- Alladi Ramakrishnan Memorial: **Sergei Suslov**
  Arizona State University
  "*One century of the wave mechanics discovery by Louis de Broglie, Werner Heisenberg, Erwin Schrödinger, and Paul A.M. Dirac*"

Many world-renowned researchers attended the conference as speakers, among whom were the recent SASTRA Ramanujan prize recipients Jack Thorne (2018), Shai Evra (2020), Yunqing Tang (2022), Ruixiang Zhang (2023), and Alex Dunn (2024).

A complete list of speakers and abstracts can be found at the conference website. More than 150 participants from 15 countries attended the conference.

Figure 4: Group Photo of the Alladi 70th Conference at Little Hall

The social events included a welcome reception, a banquet, a piano recital by Christian Krattenthaler, and a conference dinner hosted by the Alladi family.

The conference was supported by The University of Florida, The Number Theory Foundation, and The National Science Foundation (Award Abstract Number 2601309). Frank Garvan and Jeremy Booher served as Co-Principal Investigators of these awards.

World Scientific will publish the refereed conference proceedings.

From: Clemente Cesarano (clemente.cesarano@uninettunouniversity.net)
Subject: Report: Fourth Meeting Gruppo di Attività ANA&A – SIMAI by **Clemente Cesarano**

Figure 5: The Fourth Meeting of the SIMAI Activity Group on Numerical and Analytical Approximation of Data and Functions with Applications (ANA&A), Department of Mathematics, The University of Turin, Turin, Italy, took place on April 9–10, 2026. The meeting was hosted from left-to-right: Alessandra De Rossi (University of Turin, Italy), Dajana Conte (University of Salerno, Italy), Susanna Terracini (University of Turin, Italy, Director Department of Mathematics), Clemente Cesarano (Uninettuno University, Italy).

The fourth meeting of the SIMAI Activity Group on Numerical and Analytical Approximation of Data and Functions with Applications (ANA&A) took place on April 9–10, 2026 in Turin, Italy. The meeting was held at the Department of Mathematics of the University of Turin, Turin, Italy. The group was established in June 2022, with previous meetings held in 2023, 2024, and 2025.

The SIMAI ANA&A Activity Group focuses on Approximation Theory and its numerous applications.

Its main research activities concern the theoretical and practical development of effective methods for a wide range of emerging mathematical models in industry and applied sciences. Thanks to the flexible tools offered by Approximation Theory and Special Functions, this research extends to industrial mathematical applications, including the development of dedicated software solutions.

At the heart of these studies is the integration of complementary research directions—Approximation Theory, Numerical Analysis, and related areas—aimed at the efficient modeling and numerical treatment

of complex real-world phenomena.

The meeting brought together researchers and professionals from academia and industry working on mathematical and numerical models and their applications to industrial and real-world problems. The goal is to stimulate interdisciplinary collaboration in applied mathematics and promote interaction between the scientific community and industry.

There was also a specific session dedicated to industry, in which doctoral students and young researchers interested in networking with participating companies also interacted with researchers and companies.

Topic #10 ——— OP - SF Net 33.3 ——— May 15, 2026

From: OP-SF Net Editors
Subject: Preprints in arXiv.org

The following preprints related to the fields of orthogonal polynomials and special functions were posted or cross-listed to one of the subcategories of arXiv.org during March and April 2026. This list has been separated into two categories.

OP-SF Net Subscriber E-Prints

http://arxiv.org/abs/2603.00939
Bispectrality and the ad conditions
F. Alberto Grünbaum

http://arxiv.org/abs/2603.01112
Inequalities for the number of t-hooks in two partition classes arising from sum-product identities
Aritram Dhar, Byungchan Kim, Eunmi Kim, Ae Ja Yee

http://arxiv.org/abs/2603.01132
Krall-type orthogonal polynomials and integrable isomonodromic deformations
Luc Haine

http://arxiv.org/abs/2603.04137
Some remarks about q-Narayana polynomials for $q = -1$
Johann Cigler

http://arxiv.org/abs/2603.05849
On indefinite integral ternary quadratic forms
Alexander Gamburd, Amit Ghosh, Peter Sarnak, Junho Peter Whang

http://arxiv.org/abs/2603.07258
Blaschke products and unwinding in higher dimensions
Ronald R. Coifman, Jacques Peyrière

http://arxiv.org/abs/2603.07793
A trigonometric approach to an identity by Ramanujan
C. Vignat

http://arxiv.org/abs/2603.08381
The triplication method for constructing strong starters
Oleg Ogandzhanyants, Sergey Sadov, Margo Kondratieva

http://arxiv.org/abs/2603.08437
On odd-spin $A_1^{(1)}$-string functions, cross-spin identities, and mock theta conjecture-like identities
Stepan Konenkov, Eric T. Mortenson

http://arxiv.org/abs/2603.08543
Yet Another Characterisation of Classical Orthogonal Polynomials?
K. Castillo, G. Gordillo-Núñez

http://arxiv.org/abs/2603.08834
Spectral transitions in some Rabi models
Grzegorz Świderski, Lech Zieliński

http://arxiv.org/abs/2603.08864
The p-Hardy-Rellich-Birman inequalities on the half-line
František Štampach, Jakub Waclawek

http://arxiv.org/abs/2603.11628
T-systems: a theory of orthonormal functions with a tridiagonal differentiation matrix
Arieh Iserles, Marcus Webb

http://arxiv.org/abs/2603.12164
Le Roy, Lerch and Legendre chi functions and generalised Borel-Le Roy transform
Giuseppe Dattoli, Roberto Ricci

http://arxiv.org/abs/2603.12700
Bijections for rhombic alternative tableaux
Sylvie Corteel, Jang Soo Kim, Olya Mandelshtam, Philippe Nadeau

http://arxiv.org/abs/2603.13002
Classes of Universal Epi- and Monomorphisms in Quasi-Abelian Categories
Max Zinchenko

http://arxiv.org/abs/2603.15595
Ruijsenaars-van Diejen-Takemura Hamiltonians as rational Heun operators
Satoshi Tsujimoto, Luc Vinet, Alexei Zhedanov

http://arxiv.org/abs/2603.18842
Decorated Local Systems and Character Varieties
Benedetta Facciotti, Marta Mazzocco, Nikita Nikolaev

http://arxiv.org/abs/2603.21021
More minor summation formulae
Shane Chern, Theresia Eisenkölbl, Ilse Fischer, Moritz Gangl, Mona Gatzweiler, Álvaro Gutiérrez, Christian Krattenthaler, Nishu Kumari, Markus Reibnegger, Marcus Schönfelder, Atsuro Yoshida

http://arxiv.org/abs/2603.21345
Bidiagonal Factorization of Banded Recursion Matrices for Mixed-Type Multiple Orthogonal Polynomials
Amílcar Branquinho, Ana Foulquié-Moreno, Manuel Mañas

http://arxiv.org/abs/2603.21468
Zeros of Laurent multiple orthogonal polynomials on the unit circle
Rostyslav Kozhan, Marcus Vaktnäs

http://arxiv.org/abs/2603.22836
The Benjamin-Feir instability in KdV-like equations with general dispersion and monomial nonlinearity
Bhavna Kaushik, Bernard Deconinck

http://arxiv.org/abs/2603.23732
Orthogonal polynomials for the de Rham complex on the disk and cylinder
Sheehan Olver

http://arxiv.org/abs/2603.24315
Counting (and Randomly Generating) Hamiltonian Cycles in Rectangular Grids
Pablo Blanco, Doron Zeilberger

http://arxiv.org/abs/2603.24462
Continuum Fibonacci Schrödinger Operators in the Strongly Coupled Regime
David Damanik, Mark Embree, Jake Fillman, Anton Gorodetski, May Mei

http://arxiv.org/abs/2603.24646
2- and 3-Dissections of Second-, Sixth-, and Eighth-Order Mock Theta Functions
Frank Garvan, Hemjyoti Nath

http://arxiv.org/abs/2603.24845
A further q-analogue of Gosper's strange series
John M. Campbell, Yuka Yamaguchi

http://arxiv.org/abs/2603.25506
An integrality phenomenon
Florian Fürnsinn, Danylo Radchenko, Wadim Zudilin

http://arxiv.org/abs/2603.26302
Special N-extremal solutions to indeterminate moment problems
Christian Berg, Ryszard Szwarc

http://arxiv.org/abs/2603.28510
Zeros in the character table of the symmetric group
Sarah Peluse, Kannan Soundararajan

http://arxiv.org/abs/2603.29280
Graph Eigenvalues and Projection Constants
Tanay Wakhare

http://arxiv.org/abs/2604.02239
On congruence conjectures of Andrews and Bachraoui
Koustav Banerjee, Kathrin Bringmann, Mohamed El Bachraoui

http://arxiv.org/abs/2604.04268
Bernstein inequality on parabolic domains
Yuan Xu

http://arxiv.org/abs/2604.04471
From hyperbolic to complex Euler integrals
N. M. Belousov, G. A. Sarkissian, V. P. Spiridonov

http://arxiv.org/abs/2604.04824
Hall-Littlewood-positive harmonic functionals on the algebra of symmetric functions
Cesar Cuenca, Grigori Olshanski

http://arxiv.org/abs/2604.07170
A spectral method for the rapid evaluation of hyperbolic potentials in two dimensions using windowed Fourier projection
Nour G. Al Hassanieh, Leslie Greengard, Alex H. Barnett

http://arxiv.org/abs/2604.08416
The two-weight fractional Poincaré-Sobolev sandwich
Emiel Lorist, Carel Wagenaar

http://arxiv.org/abs/2604.09883
Banded Hermitian Matrices, Matrix Orthogonal Polynomials, and the Toda Lattice
Charbel Abi Younes, Thomas Trogdon

http://arxiv.org/abs/2604.12226
Higher-order asymptotics for the energy of greedy sequences on the unit circle
Abey López-García, Erwin Miña-Díaz

http://arxiv.org/abs/2604.12393
The parity operator for parafermions and parabosons
N. I. Stoilova, J. Van der Jeugt

http://arxiv.org/abs/2604.13238
A quadratic form generalization of rational dinv
Yifeng Huang

http://arxiv.org/abs/2604.13782
On the discrete Painlevé equivalence problem, non-conjugate translations and nodal curves
Anton Dzhamay, Galina Filipuk, Alexander Stokes

http://arxiv.org/abs/2604.14118
Complex Interpolation of Matrices with an application to Multi-Manifold Learning
Adi Arbel, Stefan Steinerberger, Ronen Talmon

http://arxiv.org/abs/2604.14429
On the orthogonality of solutions for higher-order non-Hermitian difference equations
Sergey M. Zagorodnyuk

http://arxiv.org/abs/2604.15285
Structural interpretability in SVMs with truncated orthogonal polynomial kernels
Víctor Soto-Larrosa, Nuria Torrado, Edmundo J. Huertas

http://arxiv.org/abs/2604.17832
Duality Between Prime Factors and The Prime Number Theorem For Arithmetic Progressions – Higher Order Dualities
Krishnaswami Alladi, Sroyon Sengupta

http://arxiv.org/abs/2604.18442
Wave operators for Jacobi matrices
Sergey A. Denisov, Giorgio Young

http://arxiv.org/abs/2604.18629
A note on the multiple generating functions for multivariate Laguerre polynomials
Liang-Jia Guo, Min-Jie Luo, Ravinder Krishna Raina, Jia-Jun Wang

http://arxiv.org/abs/2604.20034
On Uniqueness of Mock Theta Functions
Ovidiu Costin, Gerald V. Dunne, Ali Saraeb

http://arxiv.org/abs/2604.21340
Spherical Cap L_2 Discrepancy – Blessing of Dimensionality and a Balanced Large-Cap Variant
Johann S. Brauchart, Josef Dick, Friedrich Pillichshammer

http://arxiv.org/abs/2604.24207
Continued fractions related to Narayana polynomials
Johann Cigler

http://arxiv.org/abs/2604.24748
A mixed interpolation-regression method for numerical integration on some planar domains
Ruymán Cruz-Barroso, Lidia Fernández, Francisco Marcellán, Juan Antonio Villegas

http://arxiv.org/abs/2604.24799
The Inverse Cube Force Law
John C. Baez

http://arxiv.org/abs/2604.25078
Gegenbauer polynomials and fluctuation properties of the one-dimensional Riesz gas
Peter J. Forrester

http://arxiv.org/abs/2604.25242
Stability of Multiplicities in Symmetry Breaking: The sl_2 Case
Toshiyuki Kobayashi

http://arxiv.org/abs/2604.25246
Chebyshev quotients, Demazure multiplicities, and Dyck-path models
Rekha Biswal, Ken Ono, Jujian Zhang

http://arxiv.org/abs/2604.25692
Interlacing of zeros of polynomials completed with two additional points
Kerstin Jordaan, Vikash Kumar

http://arxiv.org/abs/2604.25811
Subword enumeration up to stack-sorting equivalence
John M. Campbell, Narad Rampersad

http://arxiv.org/abs/2604.26122
The dynamical algebra of the generic superintegrable model on the two-sphere
Nicolas Crampé, Quentin Labriet, Lucia Morey, Satoshi Tsujimoto, Luc Vinet, Alexei Zhedanov

http://arxiv.org/abs/2604.26187
Special classes of functions
James Freitag, Léo Jimenez, Joel Nagloo

http://arxiv.org/abs/2604.26354
On enumeration of b-angulations of surfaces from an integrability perspective
Elba Garcia-Failde, Jianghao Xu, Di Yang, Don Zagier

http://arxiv.org/abs/2604.26944
Fractions of Recurrence Operators for Generalized Fourier Series in Classical Orthogonal Polynomials
Alexandre Benoit, Nicolas Brisebarre, Bruno Salvy

http://arxiv.org/abs/2604.27698
A divisor function of Wigert and higher degree forms
Debika Banerjee, Atul Dixit, Rajat Gupta

Other Relevant OP-SF E-Prints

http://arxiv.org/abs/2603.00673
Another proofs of Zagier's formula for multiple zeta values and Murakami's formula for multiple t-values
Jinmin Yu, Shaofang Hong

http://arxiv.org/abs/2603.01148
Weighted averages of p-adic hypergeometric functions and traces of Frobenius of elliptic curves
Riya Mandal, Neelam Saikia

http://arxiv.org/abs/2603.01684
A Dynamical Fekete-Szegő Theorem
Turgay Bayraktar, Melike Efe

http://arxiv.org/abs/2603.01711
Lower bounds for the large deviations and moments of the Riemann zeta function on the critical line
Louis-Pierre Arguin, Nathan Creighton

http://arxiv.org/abs/2603.02021
ℓ^1 mapping properties, smoothness and decay for $SU(2)$-valued nonlinear Fourier transform
Gevorg Mnatsakanyan

http://arxiv.org/abs/2603.02144
Weighted Norm Inequalities for the Strichartz Fourier transform on the Heisenberg Group
Aparajita Dasgupta, Prerna Gulia, Sanjoy Pusti, Sundaram Thangavelu

http://arxiv.org/abs/2603.03156
Twisted dynamical zeta functions and the Fried's conjecture
Polyxeni Spilioti

http://arxiv.org/abs/2603.04295
Plane geometry of q-rationals and Springborn Operations
Perrine Jouteur, Olga Paris-Romaskevich, Alexander Thomas

http://arxiv.org/abs/2603.06191
Szegő type correlations for two-dimensional outpost ensembles
Yacin Ameur, Ena Jahic

http://arxiv.org/abs/2603.06268
Gaussian free field convergence of the six-vertex model with $-1 \leq \Delta \leq -\frac{1}{2}$
Hugo Duminil-Copin, Karol Kajetan Kozlowski, Piet Lammers, Ioan Manolescu

http://arxiv.org/abs/2603.08439
Finiteness of specializations of the q-deformed modular group at roots of unity
Takuma Byakuno, Xin Ren, Kohji Yanagawa

http://arxiv.org/abs/2603.09439
Spectral rigidity among ellipses, Bialy's conjecture and local extrema of Mather's beta function
Corentin Fierobe

http://arxiv.org/abs/2603.10439
Zeros of complete elliptic integrals and its application to Melnikov functions
Jihua Yang

http://arxiv.org/abs/2603.11951
The "good" Boussinesq equation on the half-line: a Riemann-Hilbert approach
Christophe Charlier, Jonatan Lenells

http://arxiv.org/abs/2603.12794
A Fractional Fox H-Function Kernel for Support Vector Machines: Robust Classification via Weighted Transmutation Operators
Gustavo Dorrego

http://arxiv.org/abs/2603.13550
A cyclic flat embedding theorem for transversal q-matroids
Andrew Fulcher

http://arxiv.org/abs/2603.13610
Multi-floor generalization of TASEP
Yuliy Baryshnikov, Alexander Stolyar

http://arxiv.org/abs/2603.14274
On the q-analogue of Duhamel's principle
Mohammed Elamine Sebih, Serikbol Shaimardan, Irfan Ali

http://arxiv.org/abs/2603.14562
A mathematical model of tumor growth using fractional derivatives
Karen Escutia, Carlos Islas, Pablo Padilla

http://arxiv.org/abs/2603.15197
Variance of $GL(2)$ Fourier coefficients in arithmetic progressions
Laurent Montaigu

http://arxiv.org/abs/2603.15275
Large time behaviour of the fractional heat equation associated with the Dunkl Laplacian
Suman Mukherjee

http://arxiv.org/abs/2603.15536
q-Numerical Ranges and Spectral Sets
Ryan O'Loughlin, Jyoti Rani

http://arxiv.org/abs/2603.16282
Finite orthogonal polynomials on a cone
Ömer Faruk Et, Esra Çekirdek, Rabia Aktaş Karaman

http://arxiv.org/abs/2603.17059
q-Numerical Radius Estimates in Semi-Hilbertian Spaces and Their Relations with Matrix Means for Sectorial Matrices
Jyoti Rani

http://arxiv.org/abs/2603.17978
On rank 2 hypergeometric motives
Franco Golfieri Madriaga, Ariel Pacetti, Fernando Rodriguez Villegas

http://arxiv.org/abs/2603.17983
A new class of orthogonal polynomials
Stefan Kahler, Josef Obermaier

http://arxiv.org/abs/2603.18490
The minimax optimal convergence rate of posterior density in the weighted orthogonal polynomials
Yiqi Luo, Xue Luo

http://arxiv.org/abs/2603.19202
Gamma positivity, PL homeomorphism types, and orthogonal polynomials
Soohyun Park

http://arxiv.org/abs/2603.19391
Mutation of theta functions
Nathan Reading, Salvatore Stella

http://arxiv.org/abs/2603.20053
On the q-multiplicity of sums of distinct simple roots of $\mathfrak{sl}_{r+1}(\mathbb{C})$
Matt McClinton

http://arxiv.org/abs/2603.20550
Evaluation of the symmetrized Mordell-Tornheim zeta function
Przemysław Dobrowolski

http://arxiv.org/abs/2603.20555
Hörmander's multiplier theorem on H^p-spaces in the rational Dunkl setting
Jacek Dziubański, Agnieszka Hejna-Łyżwa

http://arxiv.org/abs/2603.20924
Deligne-Lusztig varieties, toric orbifolds, and the q-Klyachko algebra
Ruizhen Liu

http://arxiv.org/abs/2603.21391
A Constructive Approach to q-Gaussian Distributions: α-Divergence as Rate Function and Generalized de Moivre-Laplace Theorem
Hiroki Suyari, Antonio M. Scarfone

http://arxiv.org/abs/2603.24313
Class number zeta function of imaginary quadratic fields
Igor V. Nikolaev

http://arxiv.org/abs/2603.26223
A further q-generalization of the (C.2) and (G.2) supercongruences of Van Hamme
Song-Xiao Li, Su-Dan Wang

http://arxiv.org/abs/2603.26453
The Schwartz space for the (k, a)-generalized Fourier transform and the minimal representation of the conformal group
Tatsuro Hikawa

http://arxiv.org/abs/2603.27198
Constructive existence proofs and stability of stationary solutions to parabolic PDEs using Gegenbauer polynomials
Maxime Breden, Matthieu Cadiot, Antoine Zurek

http://arxiv.org/abs/2603.27466
English translation of Frobenius' and Stickelberger's "On the theory of elliptic functions"
Ferdinand Georg Frobenius, Ludwig Stickelberger

http://arxiv.org/abs/2603.27875
Estimating an initial telomere length distribution from the Laplace transform of its senescence times distribution
Jules Olayé

http://arxiv.org/abs/2603.28154
Some new results on Andrews' and Warnaar's q-identities
Qi Chen

http://arxiv.org/abs/2603.28170
Stabilization time of finite configurations with a second class particle in discrete TASEP
Bori Anna Mészáros, Bálint Vető

http://arxiv.org/abs/2603.28632
Geometry of the Ising persistence problem and the universal Bonnet-Manin Painlevé VI distribution
Ivan Dornic, Robert Conte

http://arxiv.org/abs/2603.29082
Superelliptic Affine Lie algebras and orthogonal polynomials II
Felipe Albino dos Santos, Mikhail Neklyudov, Vyacheslav Futorny

http://arxiv.org/abs/2604.02723
Explicit hypergeometric modularity of certain weight two and four Hecke eigenforms
Sipra Maity, Rupam Barman

http://arxiv.org/abs/2604.02918
Some results on the Dunkl-Williams constant
Javier Alonso, Pedro Martín

http://arxiv.org/abs/2604.04053
Explicit Formulas for the One-Parameter Group Generated by the Dunkl Operator on $\mathbb{R}$
Temma Aoyama

http://arxiv.org/abs/2604.04463
A degeneration of the q-Garnier system of fourth order arises from confluences in quivers
Kazuya Matsugashita, Takao Suzuki, Satoshi Tsuchimi

http://arxiv.org/abs/2604.05421
A Generalized Fourier Transform and a Smooth Analogue of Dunkl Operators
Temma Aoyama

http://arxiv.org/abs/2604.05559
Some analytic properties of the partial theta function
Vladimir Petrov Kostov

http://arxiv.org/abs/2604.05733
Small gaps between consecutive zeros of the Riemann zeta-function
Shōta Inoue

http://arxiv.org/abs/2604.05895
Asymptotic expansions of integrals and Nielsen's polylogarithms
Markus Kuba, Moti Levy

http://arxiv.org/abs/2604.06238
Order drop, Hecke descent, and a mod p^4 supercongruence for symmetric-cube hypergeometric coefficients
Alex Shvets

http://arxiv.org/abs/2604.06532
Random permutations from q-Demazure products
Mikhail Tikhonov

http://arxiv.org/abs/2604.06843
Fast and accurate noise removal by curve fitting using orthogonal polynomials
Andrea Gallo Rosso

http://arxiv.org/abs/2604.08776
Dedekind zeta functions of non-Galois torsion fields of elliptic curves
Robert Pollack, Tom Weston

http://arxiv.org/abs/2604.08984
Adams type Dunkl Stein-Weiss inequality on Dunkl Morrey spaces on the real line
Sourav Dutta, Saswata Adhikari

http://arxiv.org/abs/2604.10276
Geronimus transformation and Sobolev-type orthogonal polynomials
N. Neha

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Pierre-Guy Plamondon, Salvatore Stella

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Fueter trees for Dunkl-regular functions over alternative *-algebras
Alessandro Perotti

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Deferred Cyclotomic Representation for Stable and Exact Evaluation of q-Hypergeometric Series
Seth K. Asante

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Kilian Pioch, Lars Grüne, Thomas Kriecherbauer, Michael Margaliot

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Jennifer S. Balakrishnan, Francesca Bianchi, Netan Dogra

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Shinsuke Iwao, Kohei Motegi, Ryo Ohkawa

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Costanza Benassi, Marta Dell'Atti

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Daxiong Piao

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New infinite families of q-analogs of group divisible designs with arbitrary block dimension
Yakun Wu, Junling Zhou, Xiaoran Wang

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Guo-Niu Han, Kathy Q. Ji, Huan Xiong

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Hayaki Kudo, Yuto Nogata

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Michel Bataille, Robert Frontczak

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Zhenjie Ren, Xiaoli Wei, Xiang Yu, Xun Yu Zhou

http://arxiv.org/abs/2604.27378
Continuous-time q-learning for mean-field control with common noise, part-II: q-learning algorithms
Zhenjie Ren, Xiaoli Wei, Xiang Yu, Xun Yu Zhou

Topic #11 ——— OP - SF Net 33.3 ——— May 15, 2026

From: OP-SF Net Editors
Subject: Submitting contributions to OP-SF NET and SIAM-OPSF (OP-SF Talk)

To contribute a news item to OP-SF NET, send e-mail to one of the OP-SF Editors
howard.cohl@nist.gov, or spost@hawaii.edu.

Contributions to OP-SF NET 33.4 should be sent by July 1, 2026.

OP-SF NET is the electronic newsletter of the SIAM Activity Group on Special Functions and Orthogonal Polynomials (SIAG/OPSF). We disseminate your contributions on anything of interest to the special functions and orthogonal polynomials community. This includes announcements of conferences, forthcoming books, new software, electronic archives, research questions, and job openings as well as news about new appointments, promotions, research visitors, awards and prizes. OP-SF Net is transmitted periodically through a post to OP-SF Talk which is currently managed and moderated by Howard Cohl (howard.cohl@nist.gov). Anyone wishing to be included in the mailing list (SIAG/OPSF members and non-members alike) should send an email expressing interest to him. Bonita Saunders also posts the Newsletter through SIAM Engage (SIAG/OPSF) which is received by all SIAG/OPSF members.

OP-SF Talk is a listserv associated with SIAG/OPSF which facilitates communication among members, non-members and friends of the Activity Group. To post an item to the listserv,
send e-mail to howard.cohl@nist.gov.

WWW home page of this Activity Group:
http://math.nist.gov/opsf

Information on joining SIAM and this activity group: service@siam.org

The elected Officers of the Activity Group (2025-2027) are:
Howard Cohl, Chair
Kerstin Jordaan, Program Director
Tom Trogdon, Secretary

The appointed officers are:
Howard Cohl, OP-SF NET co-editor
Sarah Post, OP-SF NET co-editor
Bonita Saunders, Webmaster and SIAM Engage (SIAG/OPSF) moderator

Topic #12 ——— OP - SF Net 33.3 ——— May 15, 2026

From: OP-SF Net Editors
Subject: Thought of the Month by **Charles Babbage**

"The whole of the developments and operations of analysis are now capable of being executed by machinery .... As soon as an Analytical Engine exists, it will necessarily guide the future course of science."

Charles Babbage (1792-1871), *Passages from the Life of a Philosopher*, 1864 (London: Longman). Senechal, M., Alan Mackay: A Portrait in Quotations. Math. Intelligencer **47**, 249-251 (2025).

Contributed by Tom H. Koornwinder on 2026-04-20.