
Annual Meeting

2026

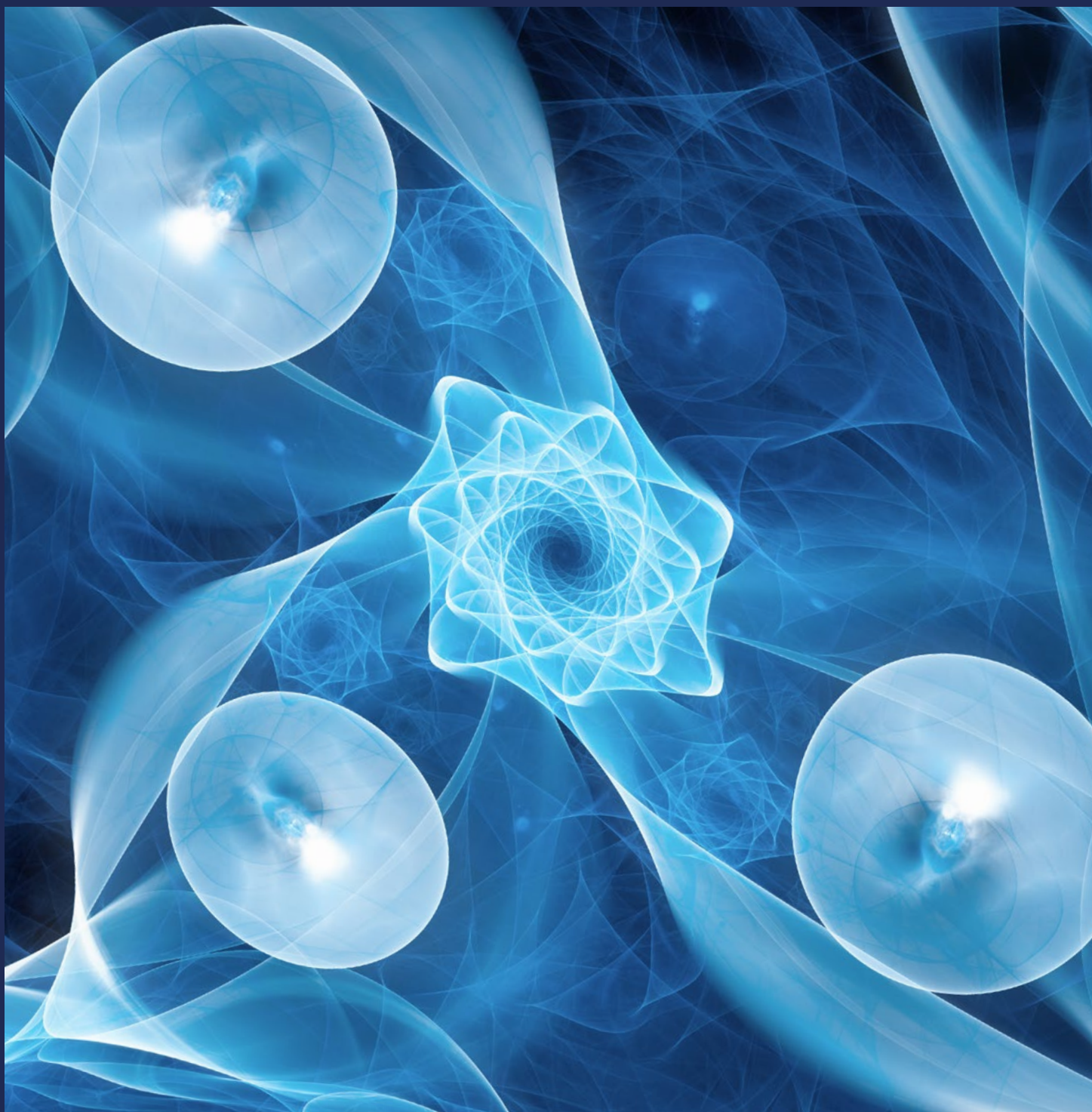


Table of Contents

3 Welcome

4 Meeting Information

5 Meeting Agenda

6 Venue Information

7 Hotel & Travel Information

8 Annual Meeting Dinner

9 Speaker Profiles

19 MPS Scientific Board

20 Scientific Advisory Board

21 MPS Staff

23 Summary of MPS Programs

34 MPS Budget

36 The 2026 International Congress for Mathematicians (ICM)

Welcome

Dear Colleagues and Friends,

We are delighted to welcome you to the 2026 Annual Meeting of the Mathematics and Physical Sciences Division. The MPS division remains committed to identifying and supporting excellence in mathematics and the physical sciences, and this past year has been an extraordinary one for our community.

In July, mathematicians from around the world gathered in Philadelphia for the International Congress of Mathematicians, the first ICM in the United States since 1986. The Simons Foundation was the main supporter and organizer of this congress. Marilyn Simons presented Fields medals to Yu Deng (PI of a Simons Collaboration in MPS), John Pardon (Professor at the Simons Center for Geometry and Physics), Jacob Tsimerman (Simons Investigator), and Hong Wang, as well as the Abacus medal to Shayan Oveis Gharan (Simons Investigator). David Spergel led a special evening honoring the legacy of Jim Simons and his lifelong dedication to basic science and mathematics. Meghan Fazzi and her team excelled at the ICM logistics of gargantuan scale. To all who took part in organizing, speaking at, or simply attending the congress: thank you!

Our grant programs have continued to grow. In early summer, we announced new Simons Collaborations in Mathematics and Physics (Universal statistics in number theory, Virtues of defects, and Discrete subgroups of Lie groups), the second cohort of Simons Dissertation Fellows in Mathematics, this year's Travel Support for Mathematicians awardees, as well as funding for twelve Targeted Simons Research Groups in math and physics. The first Simons Empire Faculty Fellows are now arriving to campuses across New York state, and new Scientific Software Research Faculty Fellows are beginning their appointments. The Simons Observatory has officially completed its construction and commissioning, and has smoothly transitioned to the Initial Science Operations, with all four telescopes acquiring survey data and achieving or exceeding planned specifications.

There have been some administrative changes: Greg Gabadadze has been appointed as the Chief Science Officer of the foundation. He will remain in charge of the Physics program in MPS and will also oversee science programs such as our in-house research division, the Flatiron Institute. We are happy to report that Jill Pipher (Andrews Professor at Brown University and a Simons Foundation Board of Trustees member) has joined the MPS SAB, while Lars Bildsten (Professor and Director of the Kavli Institute for Theoretical Physics at the University of California, Santa Barbara) and Emily Carter (Andlinger Professor in Energy and the Environment at Princeton University and the lead PI of the MPS Solar Radiation Management program) have joined the foundation's Board.

We wish you continued success in your work, in pursuing many new ideas and projects, and good health!



Yuri Tschinkel, Executive Vice President, MPS



Greg Gabadadze, Executive Vice President, Chief Science Officer

Meeting Information



Agenda

Thursday, October 15

8:30 AM	Check-in & Breakfast
9:30 AM	Alexei Borodin How Quantum Integrability Shapes Random Geometry
10:30 AM	Break
11:00 AM	Vicky Kalogera Toward Trustworthy AI for Astrophysics: Stars, Binaries, and Sky Surveys
12:00 PM	Lunch
1:30 PM	Giorgio Gratta Testing Gravity at Ever Shorter Scale: A Trip into Exotic Experimental Physics
2:30 PM	Break
3:00 PM	Ran Raz Multi-Prover Games and Parallel Repetition
4:00 PM	Break
4:30 PM	Emily Carter From Quantum Embedding to Transfer Learning for Sustainability Science
5:30 PM	Scientific Program Concludes
5:40 PM	Walk to Altman Building
6:00 PM	Cocktails Altman Building
7:00 PM	Dinner Altman Building

Friday, October 16

8:30 AM	Check-in & Breakfast
9:30 AM	June Huh A Decomposition Theorem for Lefschetz Modules
10:30 AM	Break
11:00 AM	Zohar Komargodski The Arrow of Scale
12:00 PM	Lunch
1:00 PM	Ulrike Tillman From Topology via Complex Data to Representation Theory
2:00 PM	Meeting Concludes

Venue Information



GERALD D. FISCHBACH AUDITORIUM

Simons Foundation

160 Fifth Avenue (at 21st Street)
New York, NY 10010
Tel.: (646) 654-0066
www.simonsfoundation.org

AUDITORIUM

The Gerald D. Fischbach Auditorium is ADA accessible with a microphone and AC power connection located at each seat. Food and beverages are not allowed in the auditorium.

Wi-fi at the auditorium:

Network name: SimonsGuests160
Password: simonsnyc

Hotel & Travel Information



RENAISSANCE NEW YORK CHELSEA HOTEL

112 West 25th Street
New York, NY 10001
+1 212 206 1522
<https://www.marriott.com/en-us/hotels/nycmm-renaissance-new-york-chelsea-hotel/overview/>

Check-in: 4:00 p.m.
Check-out: 12:00 p.m.

SERVICE AND FACILITIES

Wi-fi is complimentary in each guest room and throughout the hotel. The fitness center is open 24 hours a day.

LUGGAGE

Those departing from the Gerald D. Fischbach Auditorium after the conclusion of the annual meeting should bring their luggage to the meeting.

CONTACT INFORMATION

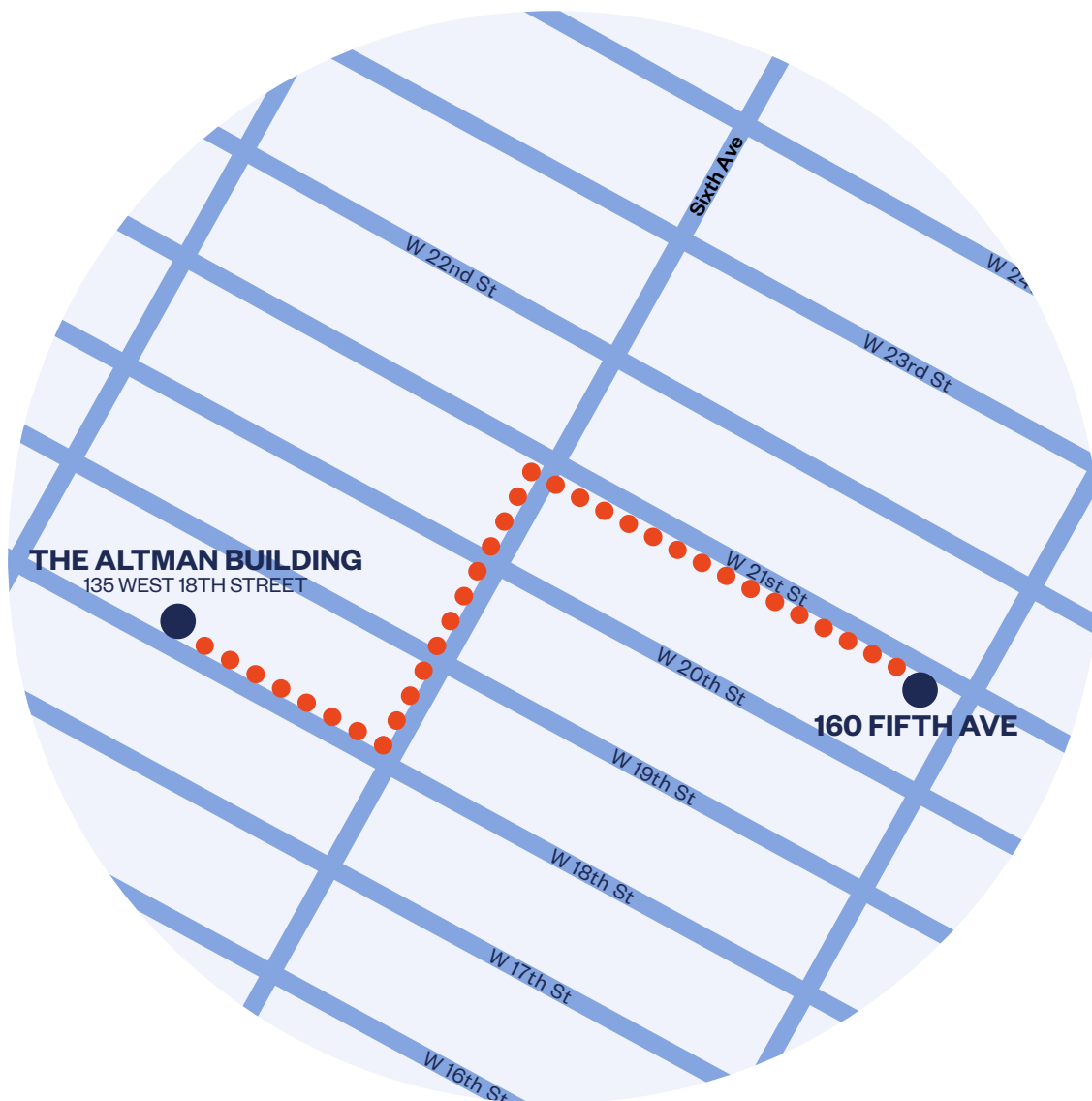
General Meeting Inquiries:

Meghan Fazzi
Senior Manager for Events and Administration, MPS
mfazzi@simonsfoundation.org

Hotel & Travel Information:

FCM Travel Meetings & Events
SimonsFoundationEventTravel@us.fcm.travel

Annual Meeting Dinner



THE ALTMAN BUILDING

135 West 18th Street
New York, NY 10011
Between 6th Ave and 7th Ave
<https://www.altmanbldg.com/>

Cocktails: 6:00–7:00 p.m.

Dinner: 7:00–9:30 p.m.

Speaker Profiles





Alexei Borodin

Massachusetts Institute
of Technology

How Quantum Integrability Shapes Random Geometry

The Kardar–Parisi–Zhang (KPZ) universality class has organized our understanding of (1+1)-dimensional random growth for over 40 years. Only recently did mathematicians succeed in describing its complete, universal large-scale space-time fluctuation field, now known as the directed landscape. The goal of this talk is to explain how quantum integrability — a profound algebraic framework originally developed in physics for entirely different purposes — provides a beautiful and unexpected mathematical path from classical combinatorics to this universal limit.

Tracing this journey from Ulam’s classic longest increasing subsequence problem, we will see how commuting difference operators and the Yang–Baxter equation serves as hidden engines of exact solvability. Remarkably, repeated applications of the Yang–Baxter equation induce a radical geometric transformation: they convert the bulk behavior of (1+1)-dimensional non-equilibrium stochastic dynamics into the edge behavior of 2-dimensional equilibrium Gibbsian line ensembles. Under KPZ scaling, this spatial equilibrium is rigid enough to

single out a unique limiting line ensemble — and with it, an explicit geometric characterization of the directed landscape.

Alexei Borodin is a professor of mathematics at the Massachusetts Institute of Technology. He studies problems on the interface of representation theory and probability that link to combinatorics, random matrix theory, and integrable systems. His most recent work carries over the ideas and techniques of the theory of symmetric functions to solvable lattice models of statistical physics.



Emily Carter

Princeton University

From Quantum Embedding to Transfer Learning for Sustainability Science

For nearly two decades, Emily Carter has put her theoretical physical chemistry expertise to work on research problems aimed at helping mitigate climate change and its disastrous effects, most recently to help develop a circular carbon economy. Carter's lecture will feature selected examples from quantum-based, multiphysics, multiscale computer simulations that provide accurate thermodynamics, kinetics, dynamics, and insights into carbon dioxide conversion into chemical feedstocks, fuels, and mineral carbonates, by means of light or electricity as energy sources instead of conventional fossil-fuel-derived heat.

The theoretical work starts, as nearly all such simulations do today, with standard density functional theory (DFT). However, there are a range of phenomena where pure DFT is unsuitable because of inherent (self-interaction, delocalization) errors in the (necessarily approximate) DFT exchange-correlation functionals. These phenomena include ones critical to chemical conversions of concern here: photochemistry, electron transfer, reactions of ions in solution, etc. Such theoretical limitations have continuously motivated Carter and her group's

development of new quantum-mechanics-based methods over multiple decades. Here, a divide-and-conquer strategy is used, going beyond DFT using the group's density functional embedding theory (DFET) and embedded correlated wavefunction (ECW) theory to refine DFT predictions. DFET delivers a unique, exact interaction (embedding) potential between subsystems, typically comprised of a region of interest and its surroundings. That embedding potential then replaces the extended environment, allowing for a refined description of the region of interest with ECW theory. Because ECWs incorporate exact exchange and dynamic correlation, they overcome pure DFT's various limitations so that all the phenomena mentioned above can be treated properly. Beyond quantum-level simulations, DFET/ECW theory can improve DFT-based machine-learned force fields through transfer learning, thereby enabling longer time, larger length scale atomistic dynamics simulations with substantially improved accuracy, as will be illustrated.

Time permitting, Carter will also briefly mention a Simons Foundation initiative she helped launch and lead, on solar radiation management science —

the science of aerosol-cloud-light interactions — as another climate intervention strategy we may need to consider in the years ahead.

Emily A. Carter is the inaugural Gerhard R. Andlinger Professor in Energy and the Environment, Andlinger Center for Energy and the Environment, and a professor of mechanical and aerospace engineering at the Applied & Computational Mathematics program at Princeton University. Carter earned a BS in chemistry from the University of California, Berkeley and a PhD in physical chemistry from the California Institute of Technology, followed by a brief postdoc at University of Colorado, Boulder. She spent 16 years on the chemistry faculty at the University of California, Los Angeles (UCLA) before moving to join Princeton's mechanical and aerospace engineering and applied and computational mathematics faculty for the next 15 years. She was founding director of Princeton's Andlinger Center for Energy and the Environment, then Princeton's dean of engineering and applied science, then rejoined UCLA as executive vice

chancellor and provost, and as distinguished professor of chemical and biomolecular engineering, before returning to Princeton's faculty and joining the Department of Energy's Princeton Plasma Physics Laboratory as senior strategic advisor and member of its executive management team in 2022. Carter maintains an active research presence, developing and applying quantum mechanical simulation techniques to enable discovery and design of materials and processes for sustainable production of fuels, chemicals, and materials. The author of nearly 500 publications and patents, a devoted mentor to over 100 students and postdocs, Carter has delivered over 600 invited, keynote, and plenary lectures worldwide, and serves on boards and works with foundations spanning a wide range of disciplines. She is the recipient of numerous honors, including election to the National Academy of Sciences, American Academy of Arts and Sciences, National Academy of Inventors, National Academy of Engineering, European Academy of Sciences, and Great Britain's Royal Society.



Giorgio Gratta

Stanford University

Testing Gravity at Ever Shorter Scale: A Trip into Exotic Experimental Physics

Since the times of Henry Cavendish and John Mitchell, the strength of gravity has been measured by comparing it to the reaction of a calibrated mechanical spring. While in the last 60 years planetary measurements (with natural and artificial bodies) have provided remarkable accuracy at large distances, measurements in the lab have continued to rely on various incarnations of the good old mechanical springs, in many cases resulting in superb experiments and results.

In this talk, Gratta will explore several drastically different techniques recently developed specifically to tackle the short distance regime, where many theories suggest something exotic may be happening. This will be a trip into atomic, molecular, and optical physics and high-resolution nuclear spectroscopy. While science results are gradually appearing, he hopes to convince the audience that, as is often the case with new techniques, a new and exciting array of questions and applications are also emerging!

Giorgio Gratta is an experimental physicist interested in pushing the boundary of fundamental knowledge. After postdoc work on collider physics, since 1995 he has been active in neutrino physics: first leading some of the experiments observing neutrino oscillations and later pioneering some of the searches for neutrinoless double-beta decay. In the last decade, Gratta has also initiated a program to test the inverse square law of gravity at progressively shorter distances.



June Huh

Princeton University

A Decomposition Theorem for Lefschetz Modules

The decomposition theorem of Beilinson, Bernstein, Deligne, and Gabber is among the deepest known facts about the topology of complex projective varieties. For a map from a smooth complex projective variety X to a projective variety Y , the theorem imposes strong structural constraints on the cohomology $H(X)$ as an $H(Y)$ -module. We show that many of these constraints are linear-algebraic consequences of classically known properties of $H(X)$. By formalizing this structure through the notion of Lefschetz modules, we obtain analogous decomposition statements in settings where the classical decomposition theorem does not apply, such as in combinatorial Hodge theory and for Chow rings modulo numerical equivalence. This is joint work with Omid Amini and Matt Larson.

June Huh is a professor of mathematics at Princeton University. His work connects algebraic geometry and combinatorics, bringing geometric ideas to longstanding problems about discrete structures. He received his BS and MS from Seoul National University and his PhD from the University of Michigan in 2014. He previously held appointments at Stanford University (2020–2021), the Institute for Advanced Study (2019–2020), and the Clay Mathematics Institute (2014–2019). His honors include a Simons Investigator Award (2021), a MacArthur Fellowship (2022), and the Fields Medal (2022).



Vicky Kalogera
Northwestern University

**Toward Trustworthy AI for Astrophysics:
Stars, Binaries, and Sky Surveys**

Sky surveys continue to reshape astrophysics. The Rubin Observatory's LSST will soon deliver millions of transient and variable-source alerts each night, revolutionizing time-domain observations across the electromagnetic spectrum and gravitational-wave detections of compact-object mergers. Extracting physics from data of this scale and complexity is a challenge no single method — and no single field — can meet alone. The NS-Simons AI Institute for the Sky (SkAI) was founded on this premise: a community of astrophysicists and AI researchers advancing both fields in collaboration, pursuing trustworthy AI for problems across all cosmic scales — from neutron stars, black holes and stellar explosions to galaxy evolution, dark matter, and dark energy — through enhanced inference from survey data, AI-accelerated multiscale simulations, and learning-based survey and instrument design, while driving advances in foundational AI itself. Following an overview of this landscape, Kalogera will focus on her group's work: physics-based deep learning that embeds the equations of stellar structure and evolution into neural solvers, preserving the detailed physics of single and binary stars while enabling the population-scale

modeling needed to interpret survey observations of transients and gravitational-wave sources.

Vicky Kalogera's research focuses on the formation and evolution of compact objects as electromagnetic and gravitational-wave sources. Her work spans modeling, population inference, and the development of data-analysis methods for extracting physical information from gravitational waves and detector characterization. She is a senior member of the LIGO Scientific Collaboration and recently chaired a national committee guiding the future of ground-based gravitational-wave detectors in the United States. Kalogera directs the Center for Interdisciplinary Exploration and Research in Astrophysics (CIERA) and the NSF-Simons National AI Institute for the Sky (SkAI Institute). Among her honors are the Bethe and Heineman Prizes, a Guggenheim Fellowship, and fellowships from the American Association for the Advancement of Science, the American Astronomical Society, and the American Physical Society. She is a member of the National Academy of Sciences and the American Academy of Arts and Sciences.



Zohar Komargodski

Stony Brook University

The Arrow of Scale

Many laws of nature look impossibly complicated up close. A glass of water contains an astronomical number of molecules, a magnet contains countless interacting spins, and the vacuum of quantum field theory is alive with fluctuations at every scale. Yet from far away, these systems often become simple: water flows like a smooth fluid, magnets are described by a few collective variables, and quantum fields organize themselves into universal patterns. The renormalization group is the mathematical language for this miracle of “zooming out”: it keeps what matters at long distances while systematically forgetting microscopic details.

This long-distance viewpoint is also where many of nature’s most striking phenomena appear. Superconductivity, magnetism, fluid flow, phase transitions, and even the particles we observe at low energies are emergent long-distance miracles, born from the collective behavior of many degrees of freedom rather than being obvious in the microscopic equations themselves.

We will discuss how this process of forgetting is not arbitrary, and how it can sometimes be understood as a kind of gradient flow. This reveals a hidden arrow of scale, analogous in spirit to the arrow of time in thermodynamics: quantum field theories cannot flow in circles, cannot recover lost microscopic information, and must become, in a precise sense, simpler in the infrared — while remaining rich enough to account for the macroscopic phenomena we observe.

Zohar Komargodski is a theoretical physicist and professor at the Simons Center for Geometry and Physics at Stony Brook University. His work focuses on quantum field theory and related problems at the interface with condensed matter and statistical physics. Komargodski received his PhD from the Weizmann Institute of Science in 2008 and was later a postdoctoral member at the Institute for Advanced Study before joining the Simons Center. His contributions have been recognized by several awards.



Ran Raz

Princeton University

Multi-Prover Games and Parallel Repetition

Multi-prover games are a central notion that has transformed theoretical computer science and led to milestone achievements such as the PCP theorem, delegation of computation, and the theory of hardness of approximation. The same framework also plays a fundamental role in the study of quantum entanglement and has connections to several topics in mathematics.

In a k -player game, a referee samples k questions from a publicly known joint distribution and sends the i -th question to the i -th player. Each player returns an answer, with no communication allowed between the players after they receive their questions. The players win if a publicly known predicate of the questions and answers is satisfied. The value of the game is the maximum winning probability achievable by any joint strategy of the players.

In the n -fold parallel repetition of a multi-prover game, the players try to win n copies of the original game simultaneously. A long-standing open problem is to prove that for general multi-prover games with value strictly smaller than 1, the value of the n -fold parallel repetition decays exponentially fast with n .

Ran Raz will introduce multi-prover games and discuss their connections to theoretical computer science, mathematics, and physics, focusing on parallel repetition and its applications, and along the way present some old and new bounds on the value of n -fold parallel repetition.

Ran Raz is a professor of theoretical computer science at Princeton University. He received his BSc in mathematics and physics and his PhD in mathematics from the Hebrew University of Jerusalem and was a postdoctoral researcher in the Department of Computer Science at Princeton University. He was a faculty member at the Weizmann Institute of Science for more than two decades. He has also held visiting professor positions at Microsoft Research and at the Institute for Advanced Study.

Raz's research is in computational complexity theory, a mathematical field that studies the resources needed to solve computational problems and the relationships between different models of computation. His work focuses on proving lower bounds for computational models, and spans Boolean and algebraic circuit complexity, communication complexity, randomness and derandomization, probabilistically checkable proofs, interactive proof systems, and quantum computation and communication. In recent years, he has also studied unconditional lower bounds on the number of samples needed for learning under memory constraints.



Ulrike Tillman

University of Cambridge

From Topology via Complex Data to Representation Theory

Topological data analysis (TDA) has proved an effective tool to study complex data. A most prominent method is persistent homology and its multi-parameter variant. Assuming little more than linear algebra, Ulrike Tillman will introduce these theories and present recent applications. Tillman will then explain how this led to the introduction and study of a new invariant of quiver representations building on ideas coming from geometric invariant theory.

The hope with this talk is to exemplify how ideas from pure mathematics have provided new tools for data analysis and led to interesting applications, and vice versa, how these applications have driven new theory that may be of interest also from a purely mathematical point of view.

This is based on joint work with members of the Oxford Centre for Topological Data Analysis.

Ulrike Tillmann is a professor of mathematics at the University of Oxford. Her research focuses on topology and its applications, broadly conceived. Her well-known work on moduli spaces has been motivated by problems in quantum physics and string

theory, while some of her more recent work in applied topology addresses challenges in data science.

Born and raised in Germany, Tillmann studied at Brandeis University as a Wien Scholar and later received her PhD from Stanford University. Following a postdoctoral position in Cambridge, she spent most of her career in Oxford and at Merton College. For the past five years, she has been the director of the Isaac Newton Institute in Cambridge. For her work, she was awarded the Whitehead Prize and the Bessel-Humboldt Forschungspreis and was elected a Fellow of the Royal Society, an inaugural Fellow of the American Mathematical Society, and a Member of the Leopoldina.

Throughout her career, she has served on the scientific boards of several international institutions, including the Fields Institute in Toronto, the Mathematisches Forschungsinstitut Oberwolfach, and the Alan Turing Institute in London. She served as the president of the London Mathematical Society 2022–2024 and as a member of Council of the Royal Society 2017–20. Currently, she is a vice-president of the International Mathematical Union and will begin her term as president in 2027.

MPS Scientific Board



Scientific Advisory Board

MATHEMATICS



Sergiu Klainerman
Princeton University



Bryna Kra
Northwestern University



Robin Pemantle
University of Pennsylvania



Jill Pipher
Brown University



Bjorn Poonen
Massachusetts Institute of
Technology

THEORETICAL PHYSICS



Dimitra Karabali
Lehman College, CUNY

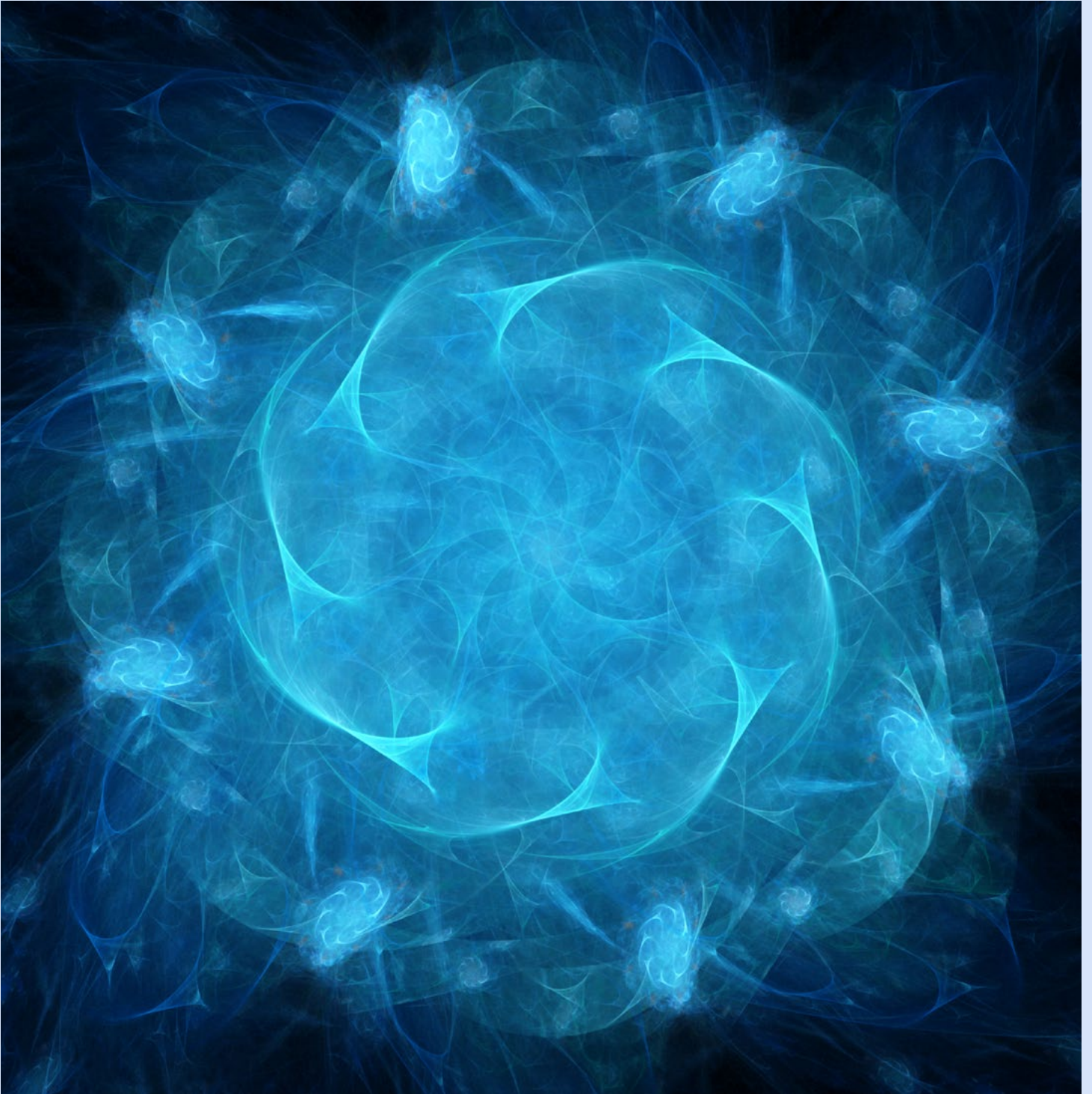


Angela Olinto
Columbia University



Peter Schiffer
Princeton University

MPS Staff





Yuri Tschinkel
Executive Vice President



Gregory Gabadadze
Executive Vice President,
Chief Science Officer



Meghan Fazzi
Senior Manager,
Events & Administration



Elizabeth Roy
Senior Manager,
Programs & Administration

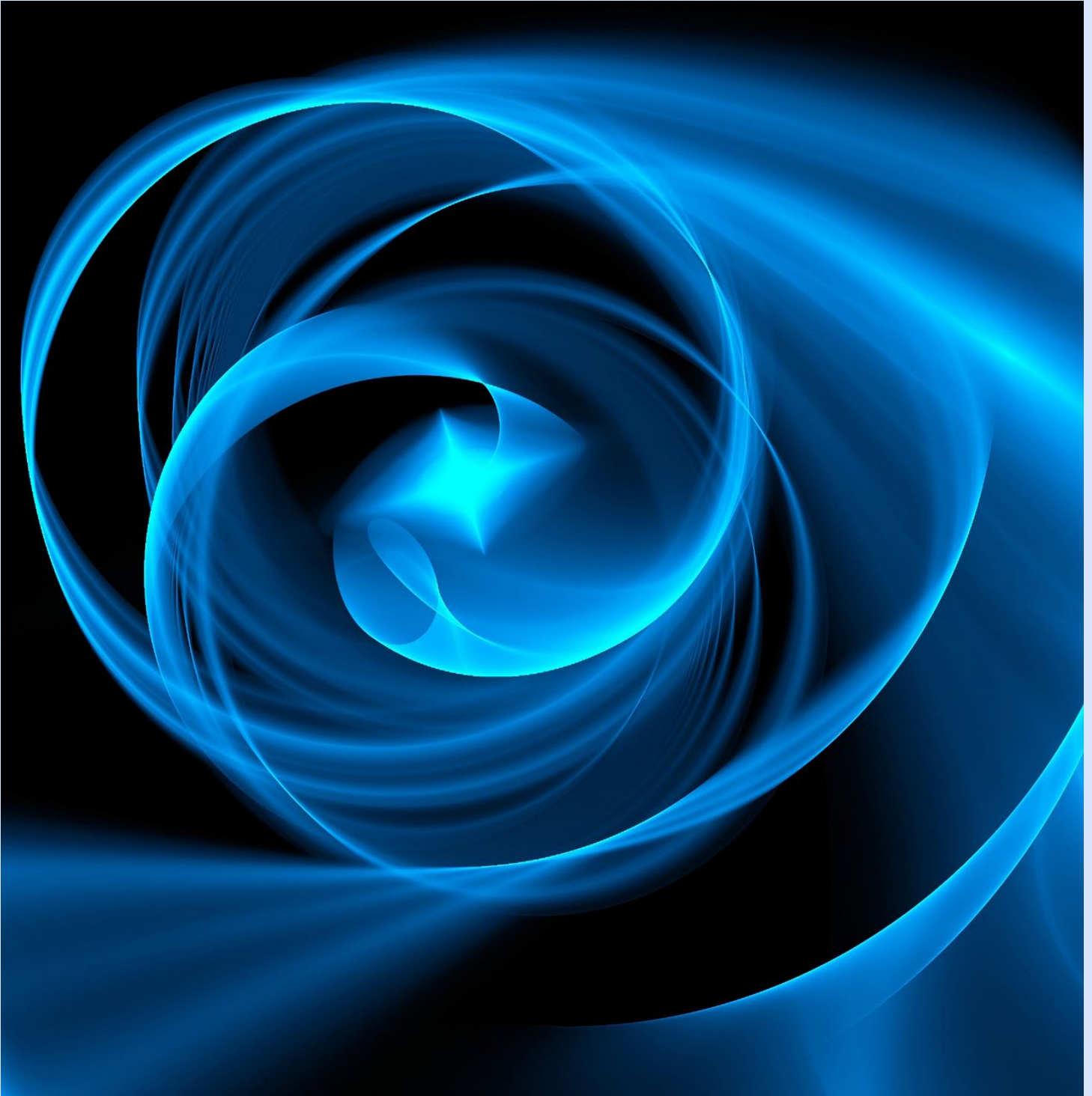


Christina Darras
Event Manager



Michelle Pantaleon
Coordinator

Summary of MPS Programs



Grants to Individuals

SIMONS INVESTIGATORS

Additional five years of funding has been provided in 2026 to our current Investigators, via new grants from Simons Foundation International (SFI).

Math

Nets Katz
Lin Lin
Assaf Naor
Fernando Codá Marques
Zhiwei Yun

Physics

Claudia de Rham
Shanhui Fan
L. Mahadevan
Ilya Nemenman
Surjeet Rajendran

Computer Science

Maria-Florina Balcan
David Blei
Amit Sahai
David Woodruff

Simons Investigators are outstanding theoretical scientists who receive a stable base of research support from the foundation, enabling them to undertake the long-term study of fundamental questions.

SIMONS FELLOWS IN MATHEMATICS

The Simons Fellows program enables the extension of sabbatical leaves from a semester or quarter to a full year, allowing awardees to spend substantial time away from teaching and administrative duties, focusing only on their research.

In 2026, MPS received 154 applications and made 50 awards, funded by SFI.

TRAVEL SUPPORT FOR MATHEMATICIANS

The Travel Support for Mathematicians program provides funds for travel to facilitate collaboration opportunities for mathematicians who do not have access to significant funding from other grants. The program began in 2011 and has since supported over 2,000 mathematicians. It is one of the MPS division's most popular programs, with over 5,000 applications received since 2011.

MPS received 638 applications for the Travel Support for Mathematicians program and made 141 awards in 2026.

SCIENTIFIC SOFTWARE RESEARCH FACULTY AWARD

The Scientific Software Research Faculty Award program supports new research professor positions in existing academic departments to be filled by scientific software-focused researchers. The aim of this program is to stimulate the development and maintenance of core scientific software infrastructure in academic environments through creating a new, long-term, faculty-level career path.

In 2026, we made a number of new awards, announced in January and July.

SOLAR RADIATION MANAGEMENT

The objective of the Solar Radiation Management (SRM) program is to fill fundamental scientific knowledge gaps in this field.

Click [here](#) to learn more about current awardees. A new [RFA](#) was launched this year, with funding to begin in 2027.

SIMONS DISSERTATION FELLOWSHIP IN MATHEMATICS

The program provides research support to excellent graduate students in the final years of their Ph.D. studies. This program was created to honor the work of our late founder, Jim Simons, and his commitment to supporting the field of mathematics.

Click to see the [names of the awardees](#) selected in 2026.

Grants to Institutions

TARGETED GRANTS TO INSTITUTES

Currently, the Simons Foundation and SFI supports over 30 institutes worldwide, including nine new awards in 2026.

THE AFRICAN ACADEMY OF SCIENCES (AAS)

Simons Foundation International has provided funding to the AAS to organize and grow African continental collaborations in the mathematical foundations of two frontier technologies: (1) semiconductors focusing on mathematical structures and AI frameworks for semiconductor science and technology and (2) quantum computing, focusing on quantum physics and related mathematical fields.

AFRICAN SCHOOL OF FUNDAMENTAL AND APPLIED PHYSICS (ASP)

SFI provides support towards the sustainability of the ASP activities. This includes a two-week intensive summer school, a forum to engage policy makers in physics education and research, a mentorship program, an international physics conference, and the short-term visits for alumni of ASP to go to U.S. labs for 4–6 months of additional research training.

CENTRE INTERNATIONAL DE RENCONTRES MATHÉMATIQUES (CIRM)

Funding will support two long-standing programs, the CIRM Global South Chair and the Jean Morlet Chair, facilitating exchanges between established and young researchers and encouraging collaboration between the international scientific community and researchers from developing countries.

ICTP SOUTH AMERICAN INSTITUTE FOR FUNDAMENTAL RESEARCH (SAIFR)

SFI will continue SF's funding to the ICTP-SAIFR to fund two Simons-FAPESP (São Paulo State Research Funding Agency) tenure-track professors for three additional years.

INITIATIVE FOR THE THEORETICAL SCIENCES (ITS) AT THE CUNY-GRADUATE CENTER

SFI funding will allow the ITS to expand collaborations nationally and internationally through conferences, scholar exchanges, visiting programs, and postdoctoral support.

INTERNATIONAL CENTRE FOR INTERDISCIPLINARY SCIENCE AND EDUCATION (ICISE)

The grant will help build on the success of previous funding provided to the Simons Astrophysics Group at ICISE, facilitating robust collaborative research in theoretical physics and astrophysics in Vietnam.

KAVLI INSTITUTE FOR THEORETICAL PHYSICS (KITP)

SFI is providing funding for the Simons Visiting Scientist Program at the KITP. This program provides support to scientists leaving their home institutions for extended periods of time to visit the KITP and participate in its programs.

MCWILLIAMS CENTER FOR COSMOLOGY & ASTROPHYSICS AT CARNEGIE MELLON UNIVERSITY

SFI funding will go towards running the Keystone Astronomy & AI Fellows, a mentored, international visiting-postdoc program. The program will extend the ongoing activities of the McWilliams Center by catalyzing the development and application of AI methods to advance computational and data-intensive astrophysics and providing a forum for rapid international collaboration and dissemination of those methods.

OBERWOLFACH RESEARCH INSTITUTE FOR MATHEMATICS (MFO)

SFI will continue SF's support of the Simons Visiting Professors Program at the Oberwolfach Research Institute for Mathematics which, each year, supports 40 Simons Visiting Professors, distinguished scientists from outside Europe, who wish to combine an invitation to a workshop at MFO with a research visit to a European university.

PACIFIC INSTITUTE FOR THE MATHEMATICAL SCIENCES (PIMS)

PIMS at the University of British Columbia will continue to receive support for postdoctoral fellows, a summer research program in mathematics, and a travel award and institute exchange program.

Targeted Grants support high-risk projects of exceptional promise and scientific importance for up to five years.

[Read more](#) about our support for the Research Corporation for Science Advancement's Scialog program starting in 2026.

Click [here](#) to learn more about active projects.

Targeted Grants in MPS

Targeted Grants support high-risk projects of exceptional promise and scientific importance for up to five years.

[Read more](#) about our support for the Research Corporation for Science Advancement's Scialog program starting in 2026.

Click [here](#) to learn more about active projects.

Targeted Simons Research Groups

The MPS division is supporting [12 Targeted Simons Research Groups](#). These three-year collaborative projects explore fundamental questions in math and physics, such as the nature of dark matter, the properties of exoplanet clouds, and the role of geometry and physics in shaping the morphology of life.

Simons Observatory

The Simons Observatory is pursuing a groundbreaking scientific program designed to transform our understanding of the universe. The observatory's current configuration comprises a 6-meter Large Aperture Telescope (LAT) and three 0.5-meter Small Aperture Telescopes (SATs). These instruments are exceeding baseline sensitivity requirements set forth by the program's original science forecasts.

The LAT survey will cover half of the sky with unprecedented resolution and depth. The SAT survey will cover 15% of the sky in search of B-modes, a tracer of gravitational waves which could be induced by cosmic inflation.

While operations are in progress, Simons Observatory is expanding thanks to additional investments from U.S., U.K., and Japanese funding agencies. In January 2026, seven additional optics tubes (OTs) were installed in the cryogenic receiver of the LAT, including four Mid-Frequency (MF, 90 & 150 GHz) and two Ultra-High-Frequency (UHF, 220 & 280 GHz) OTs, all produced as part of the NSF-funded Advanced SO construction project. One Low-Frequency (LF, 30 & 40 GHz) OT was installed as well. These added to the four MF and two UHF OTs which have been surveying the sky since 2025. This exciting hardware enhancement, which doubles the number of LAT detectors, was completed more than a year ahead of schedule. The NSF also provided funds to install a photovoltaic array, which started providing power to the observatory in

August 2026. The PVA significantly enhances the observatory's energy security and greatly reduces its reliance on diesel generators. Of the three operating SATs, two are MF and one is UHF. Public research funding from the U.K. and Japan will support the addition of two more MF SATs (UK) and one LF SAT (Japan) in 2027.

All four telescopes are surveying the sky now. Based on the data already obtained, the observatory expects to publish scientific results during this calendar year, and to produce field leading cosmology results as soon as in 2027.

[Read more](#)

Simons Collaborations in MPS

The aim of the Simons Collaborations in MPS program is to stimulate progress on the fundamental scientific questions of major importance in the broad areas of mathematics, theoretical physics, and theoretical computer science. Supported collaborations address questions both concrete and conceptual with the hope that with answers come major scientific milestones. Among research activities of these collaborations are small workshops and annual meetings held at the foundation. Collaborations are supported initially for four years.

In 2026, the foundation awarded three new collaborations:

SIMONS COLLABORATION ON UNIVERSAL STATISTICS IN NUMBER THEORY

Director: Jon Keating, University of Oxford

The Simons Collaboration on Universal Statistics in Number Theory will explore randomness and correlations in number theory, tackling problems related to the Riemann zeta function, prime numbers and other major questions in the field.

[Read more](#)

SIMONS COLLABORATION ON DISCRETE SUBGROUPS OF LIE GROUPS

Director: Yair Minsky, Yale University

The Simons Collaboration on Discrete Subgroups of Lie Groups will investigate the symmetries described by the fundamental mathematical objects of Lie groups via the interconnected subfields of randomness, representation theory, and geometry and dynamics.

[Read more](#)

SIMONS COLLABORATION ON THE VIRTUE OF DEFECTS

Director: Jaume Gomis, Perimeter Institute

The Simons Collaboration on the Virtue of Defects will explore nonlocal observables, or defects, in theoretical physics.

[Read more](#)

Infrastructure

arXiv

arXiv has embarked on its next chapter: a transition to an independent nonprofit. The move will enable faster technological development, greater organizational flexibility, expanded partnerships, and long-term financial sustainability.

[Read more](#)

MAGMA

The Simons Foundation has played a key role in supporting Magma for over a decade, providing free access to Magma for researchers based at institutions in the United States. Year two of the grant period (2025–2026) was a significant one for the Magma project, bringing modernization of the infrastructure used to develop, test, document, build, and release the software. This work has already made development more reliable and collaborative, and it provides a foundation for the pursuit of responsible integration of AI-assisted software-development tools.

[Read more](#)

Conferences And Symposia

CONFERENCES

MPS Conferences take place over two, three, or five days and are meant to facilitate new scientific directions for MPS engagement and promote interaction and collaboration across disciplines.

Information on 2026 conferences can be found on our [website](#).

SYMPOSIA

Simons Symposia are meetings on exciting developments in mathematics, theoretical physics, and theoretical computer science. For one week, top researchers are brought together for discussions and collaborations in a relaxed yet scientifically stimulating atmosphere. Symposia are normally a series of three meetings held every second year.

Simons Symposia to date are available [here](#).

Simons Society of Fellows

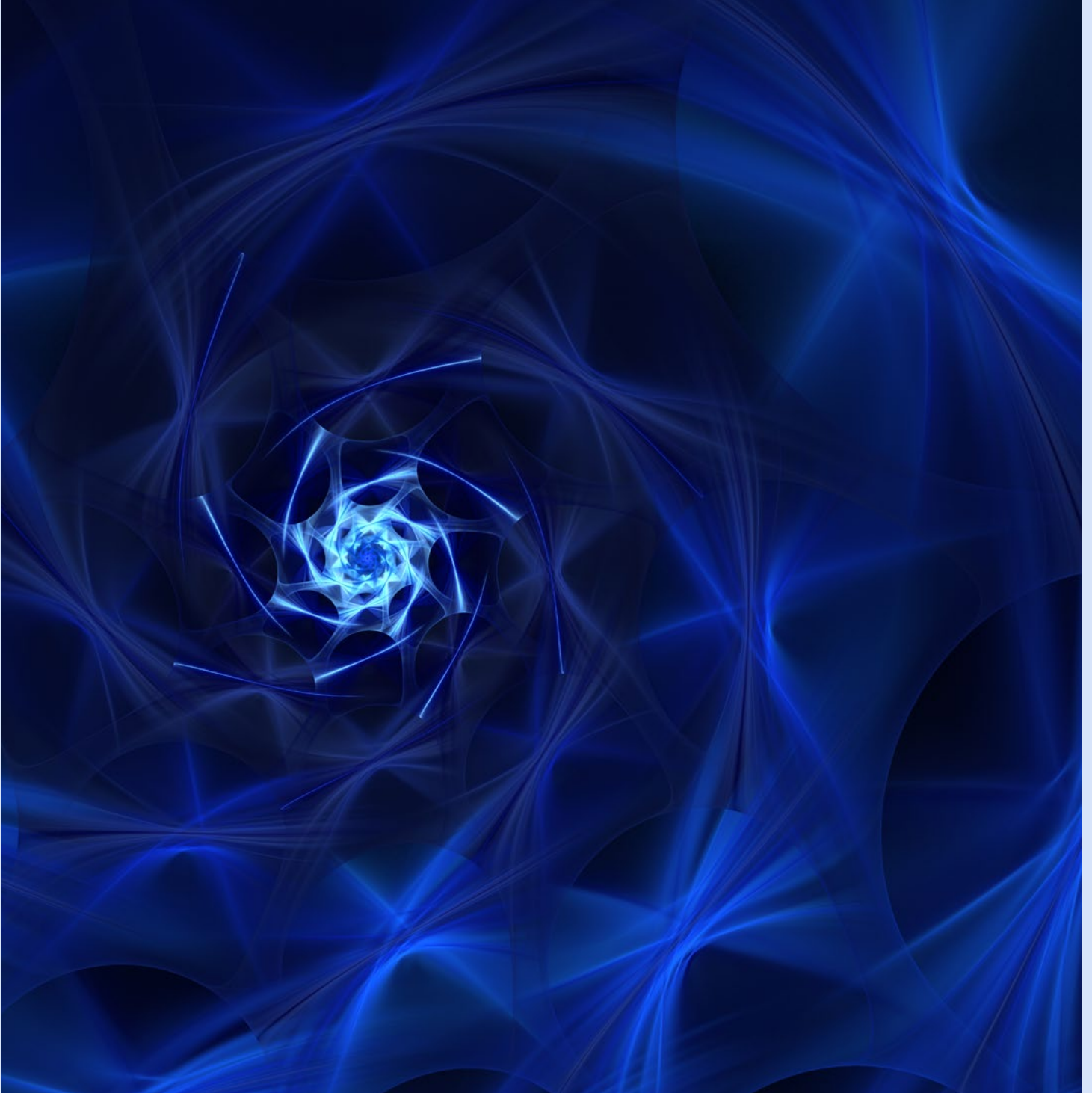
Founded in 2014, the Simons Society of Fellows is a community of scholars that encourages intellectual interactions across disciplines and across research centers in the New York City area.

Composed of both senior and junior fellows, the society organizes weekly dinners, annual retreats, alumni conferences, and career development workshops. It also encourages its fellows to participate in regular lectures and conferences organized by the Simons Foundation.

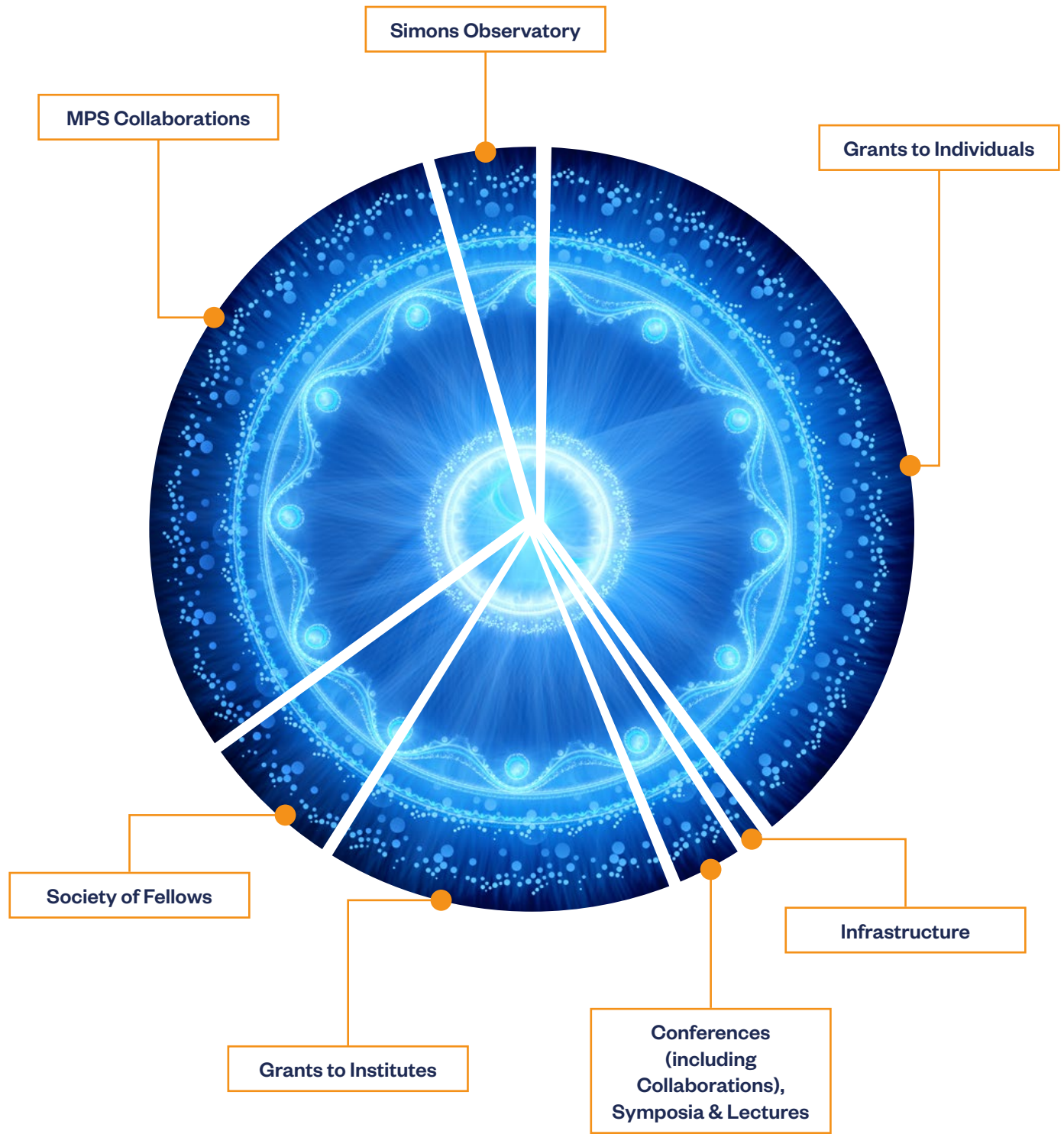
In 2026, the society awarded 14 new [Junior Fellows](#) and added two new [Senior Fellows](#) via Simons Foundation International.

[Read more](#)

MPS Budget

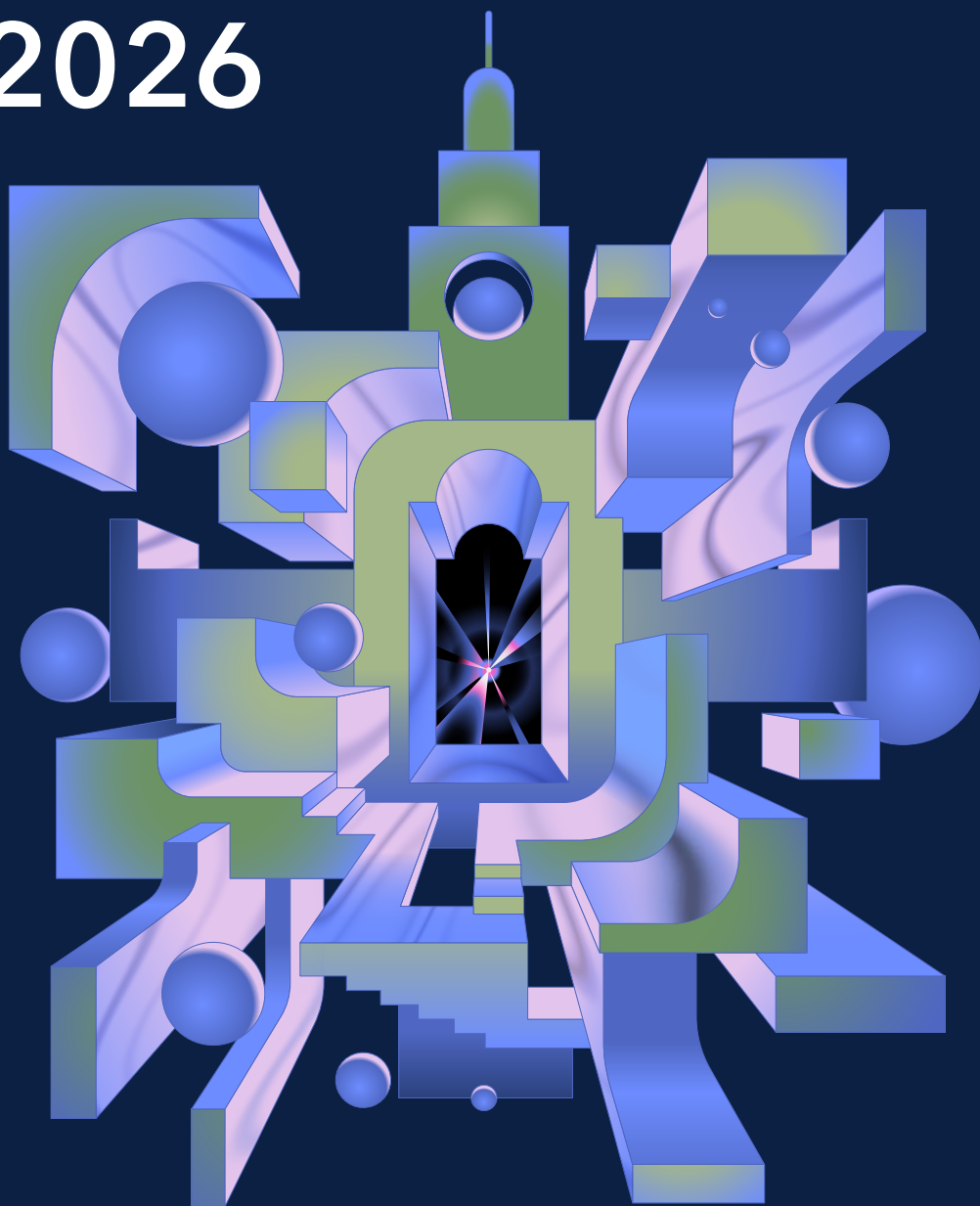


MPS Division Budget



The 2026 International Congress of Mathematicians

INTERNATIONAL CONGRESS
OF MATHEMATICIANS
2026



July 23-30, 2026
Philadelphia, Pennsylvania



2026 ICM

The International Congress of Mathematicians (IMU), among the biggest mathematical conferences worldwide, was held in Philadelphia in July 2026. This was the first time in 40 years that the congress was held in the United States. The MPS Division at the Simons Foundation was proud to support the event.

In collaboration with the IMU, the Commission for Developing Countries, and the American Mathematical Society, the Simons Foundation provided travel, lodging, and local support for 443 early career and post-early career mathematicians from the following regions:

- Latin America
- Eastern Europe
- Africa
- Asia & Pacific

PARTICIPANTS ATTENDED

ICM SCIENTIFIC PROGRAM

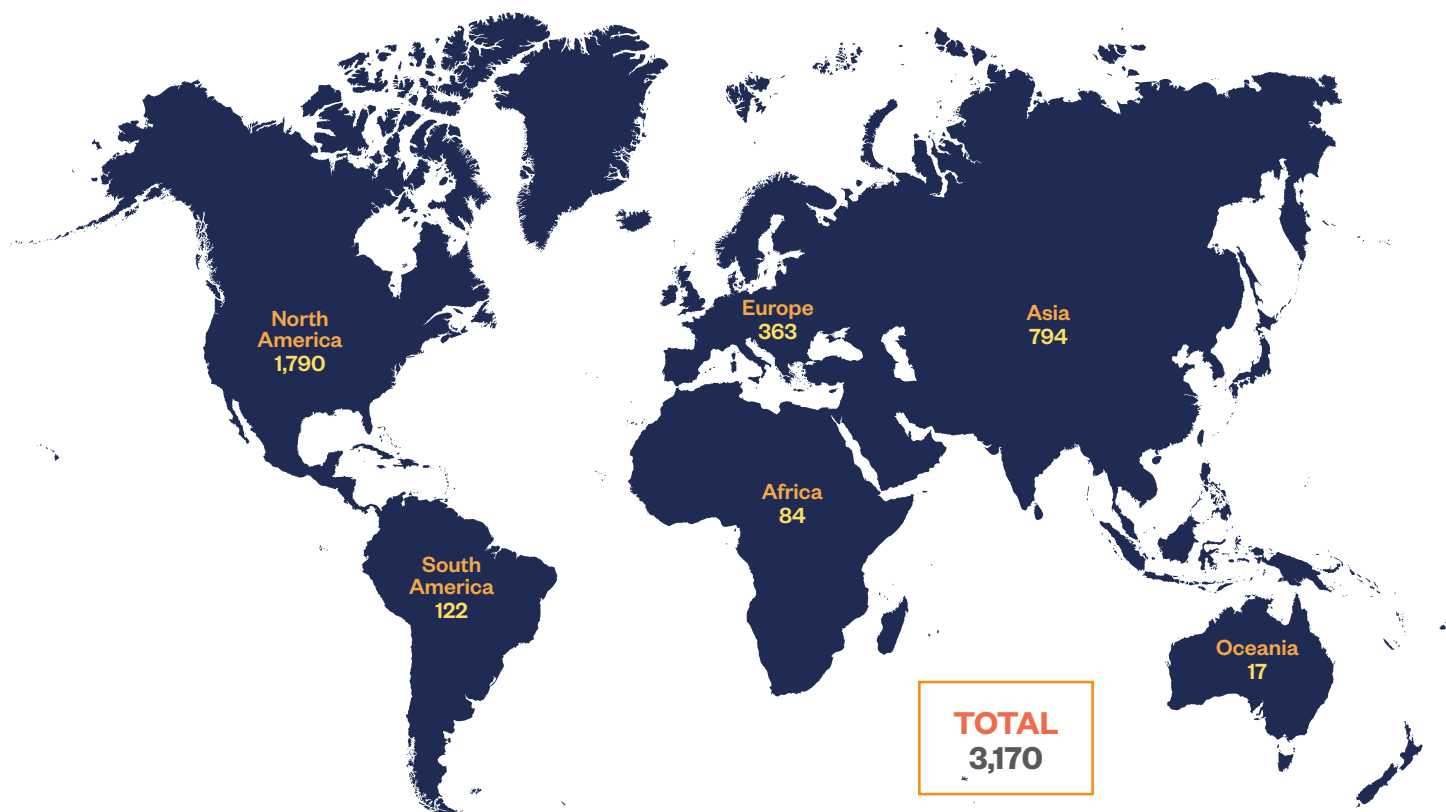
- Plenary lectures: **21**
 - Public lectures: **6**
 - Prize lectures: **7**
 - Section lectures: **180**
 - **Total: 214**
-
- Short communications accepted: **504**
 - Short communications presented: **424**
 - Poster accepted: **185**
 - Posters presented: **132**

ICM PUBLIC PROGRAM

- Films: **12**
- Receptions and special events: **14**
- Outreach events: **18**

TOTAL PUBLIC ATTENDANCE

- Adults: **726**
- Children: **242**



Thank You



The MPS Team:
Gregory Gabadadze, Michelle Pantaleon, Meghan Fazzi,
Elizabeth Roy, Christina Darras and Yuri Tschinkel