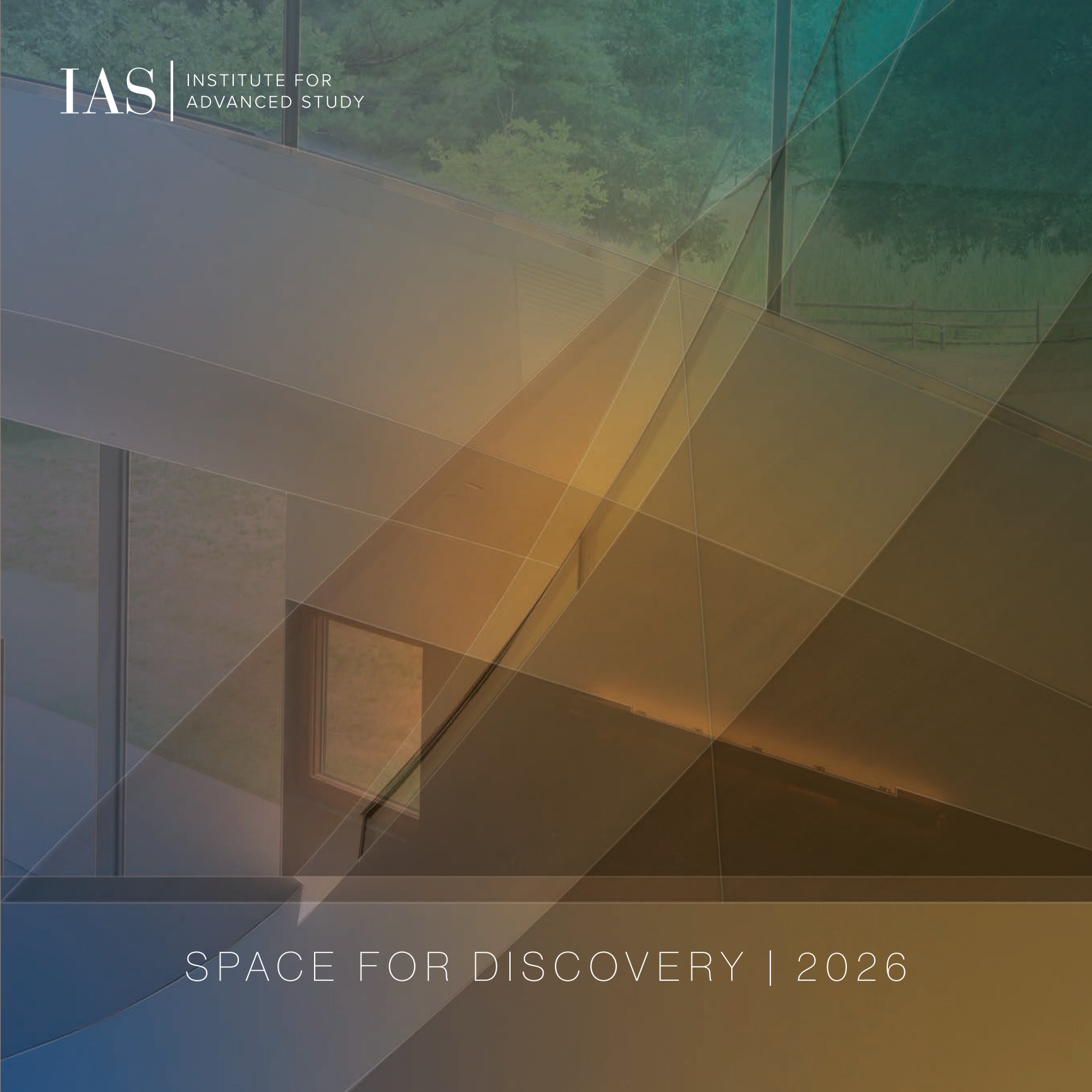


IAS | INSTITUTE FOR ADVANCED STUDY

# SPACE FOR DISCOVERY | 2026



SPACE FOR DISCOVERY | 2026

Photography Credits:
Gianmarco Caldini
Thomas Robert Clarke
Esther Liberman Cuenca
Abbey Ellis
Massimo Fiorito
Andrea Kane
Sameer A. Khan
Dan Komoda
Eric Mann / Unreel Films
Miles Mazel
Lena Murchikova
National Taiwan University
Maria O'Leary
Sofía Torallas Tovar

Archival Images:
Shelby White and Leon Levy
Archives Center

Library Illustrations:
Courtesy of Kimmel Bogrette

Design by ChingFoster

Institute for Advanced Study
Einstein Drive
Princeton, New Jersey 08540
(609) 734-8000 | www.ias.edu

Contact:
publications@ias.edu
IASGiving@ias.edu

# Questions Without Borders



**One of the wonders** of our species is that our capacity for knowledge is collective. Our capacity crosses generations, in that, thanks to language, we can learn from the vast stores of knowledge created by those who have come before, allowing us to focus on questions beyond the horizon of the known. It crosses cultures, so that with every traveling scholar, text, or idea we can gain insights born amongst other peoples and distant places. It crosses disciplines and communities of practice, sometimes in surprising ways. (When what we today call books were invented, for example, the technique discovered for binding them was borrowed from the stitching used for making socks.)

The ancients spoke of "the collective intellect," realizing that no scholar is an island, no human discovery takes place in isolation. The scholars of the medieval world wandered from place to place, seeking in the schools and libraries of others what they could not find in their own. All the great research centers of the United States, our own Institute precocious among them, flourished because they opened their doors to the talent of the world in the so-called "brain drain" after World War II. In short, our nations, our disciplines, our institutions, our individual capacities, may have borders. Our questions do not.

This is what J. Robert Oppenheimer meant when he said in 1953 that the singular mission of the Institute was to keep open the doors of discovery.[1] He strove to create a microcosm of the world's collective intellect at its best, a place capable of nourishing the kind of discovery that requires openness to talent, to connection, to conversation across boundaries. The borders and barriers are different today, but the mission is just as important. Every scholar and every philanthropist mentioned in the pages that follow is contributing to that mission. For that, the Institute —and the collective knowledge of humanity— owes them an enormous debt of gratitude.

[1] From the Reith Lectures of 1953: Science and the Common Understanding, Lecture 6: The Sciences and Man's Community.

# *Locus Amoenus*

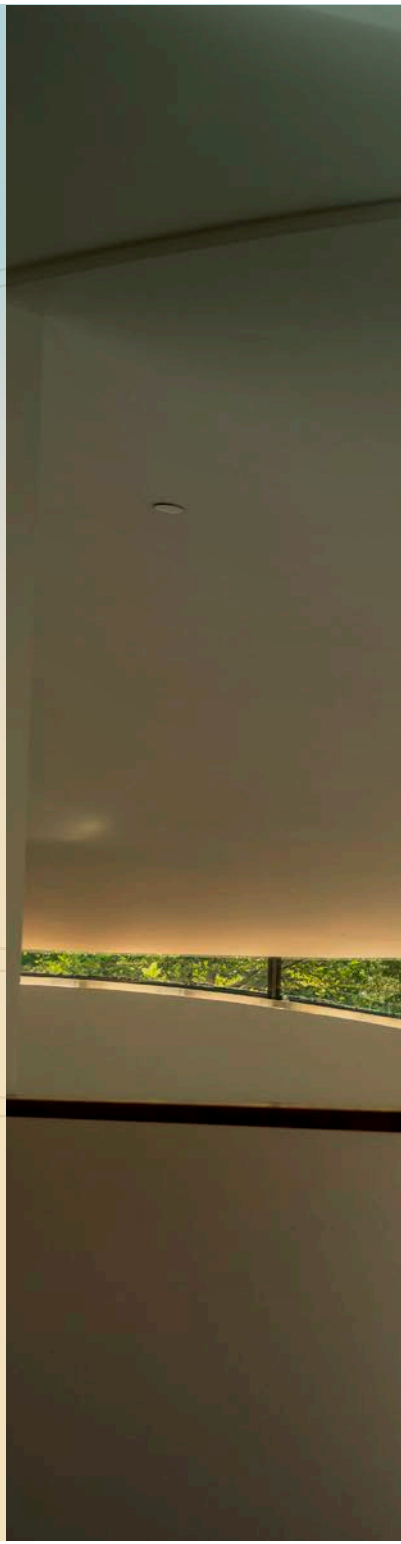
**When Gianmarco Caldini**, visiting graduate student (2024) in the Institute's School of Mathematics, first arrived at IAS, the campus was quiet and empty—no one on the footpaths, or around the pond across the lawn. The halls echoed emptily, as did the library on the second floor of Fuld Hall. Yet, by the afternoon, it had transformed. Scholars gathered for a talk from world-famous geometer Simon Brendle and the Institute came alive with conversation and curiosity.

Caldini found himself in a place of harmonious extremes: a peaceful refuge for scholars to think freely without aim, and an energetic, collective vehicle for nourishing ideas through profound relationships.

It is exactly this unique alignment that, in the words of Director and Leon Levy Professor David Nirenberg, makes the Institute a *locus amoenus*: a special place.

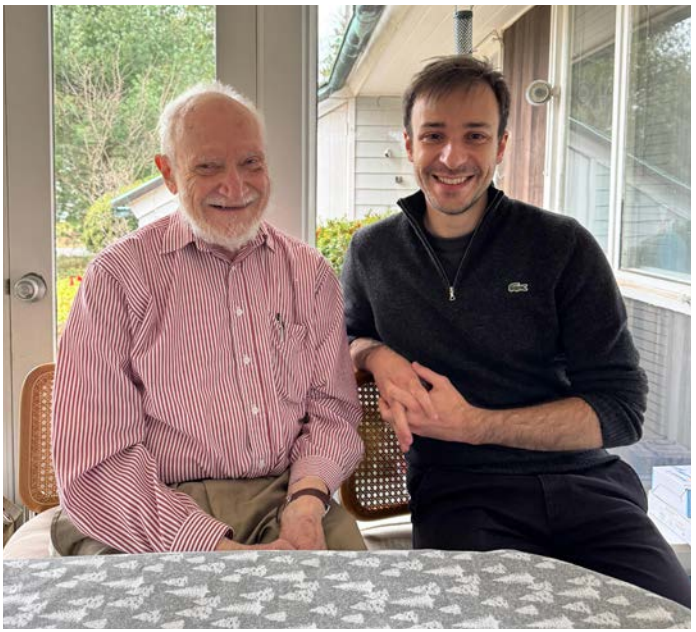
Dedicated entirely to the possibilities of thought, the Institute is restricted by no boundaries—geographical, disciplinary, temporal—in its pursuit of discovery. In this immersive space of freedom, conventional time feels altered, fostering moments of unexpected serendipity, surprise, and wonder.

This spirit of possibility shaped Caldini's scholarship. Encouraged to chart his own research path by his mentor, IBM von Neumann Professor Camillo De Lellis, a prominent expert in the field of geometric measure theory (GMT), Caldini followed a trail from a puzzling footnote.










FULD HALL





It is exactly this unique alignment that, in the words of Director and Leon Levy Professor David Nirenberg, makes the Institute a *locus amoenus*: a special place.

The note, in a paper by Frederick J. Almgren—frequent Member in the School of Mathematics—and William Browder—frequent Visitor in the School—referenced a theorem on smooth approximation of integral cycles (an important open question in GMT), promising a proof, but none could be found. It remained "in preparation."

As a visiting graduate student, Caldini didn't live in campus housing and was instead renting an apartment in Princeton. By chance, his landlady introduced him to her neighbor—who turned out to be Browder himself. This meeting led to conversations, the rediscovery of decades-old notes, and a collaboration that produced a new proof of the problem referenced in Almgren and Browder's paper. Caldini, De Lellis, and Browder's work not only resolved a longstanding mathematical question, but also became Browder's final mathematical contribution before his passing in February 2025.

Caldini's journey at the Institute illustrates how its unique environment—a true *locus amoenus*—enables the serendipitous connections and intellectual freedom that transform curiosity into discovery.

In this special place, the divisions between solitude and community, past and present, dissolve—a bending of time and space—making possible the kind of profound work and human connection that define the spirit of IAS.

Read Gianmarco Caldini's full story on the Ideas page of the IAS website

**Pictured (from left to right)** are Professor and Mrs. Stephen Virgil Ullom, Frederick J., Almgren, Jr., and Nancy Browder, then wife of Bill Browder at a social gathering hosted by Marston Morse, Professor (1935–77) in the School of Mathematics, and his wife Louise.

Gianmarco Caldini seated alongside Bill Bowder.

IBM von Neumann Professor Camillo De Lellis lecturing as part of a School of Mathematics special year on algebraic and geometric combinatorics.

Group photo from a symposium on differential topology held at the Institute in April 1963, in honor of Professor Marston Morse. Bill Browder appears in the back row, third from right.

# Excellence Knows No Borders




**At the Institute for Advanced Study, brilliant minds from across the globe gather together, creating a vibrant mosaic of intellectual excellence. The remarkable geographic span of IAS's scholars and staff—highlighted in the "Institute Instances" video series—demonstrates how discovery transcends boundaries, embodying the Institute's mission of pushing the frontiers of human understanding.**

1 **Catherine Eva Pfaff**, Member (2024–25) in the School of Mathematics, is an assistant professor at Queen's University in Kingston, Ontario. One focus of Pfaff's time at the Institute was Culler-Vogtmann outer space, which she investigated from a variety of interconnected perspectives. She is more broadly interested in connections between metric graphs, metric surfaces, theoretical physics, and computer science. Pfaff also has an interest in geometric sports analytics.

2 **Federico Ardila**, Friends of the Institute for Advanced Study Member (2024–25) in the School of Mathematics, hails from Bogotá, Colombia. A participant in the 2024–25 Special Year in Algebraic and Geometric Combinatorics, Ardila and his collaborators established surprising and useful connections between combinatorics, geometry, and physics. In his spare time, Ardila is a percussionist.

3 A cultural and visual anthropologist, **Ulla Berg**, Member (2024–25) in the School of Social Science, was born and raised in Denmark and maintains significant personal and intellectual ties there. Her work on migration and deportation has also anchored her deeply in Latin America: namely, in Peru's capital Lima and in the highland city of Huancayo, as well as in the Cañar province in the southern highlands of Ecuador. At IAS, Berg completed an anthology about immigration detention in New Jersey. She is also a practicing filmmaker.

4 Italian-born **Giovanni Maria Tomaselli**, Member (2024–28) in the School of Natural Sciences, came to IAS from the University of Amsterdam. Tomaselli's research explores theoretical and astrophysical aspects of black holes, gravitational waves, and dark matter. He also organizes the Physics and Math Olympiads for students in Italy.




❺ **Elena Aronova**, Willis F. Doney Member (2024–25) in the School of Historical Studies, specializes in the history of science in Russia and the Soviet Union. At IAS, she conducted research into how biologists offered multiple ways to conceive of time and temporality in the nineteenth and twentieth centuries.

❻ **Tamar Mayer**, Member (2024–25) in the School of Historical Studies, serves as a professor at Tel Aviv University. She dedicated her time at IAS to researching the relationships between art historian Moshe Barasch, Member (1967–68) in the School of Historical Studies, and Jewish-American émigré art historians.

❼ **E. Tendayi Achiume**, Member (2024–25) in the School of Social Science, was born in Zambia and moved throughout southern Africa with her family as a child. Her research interests in international migration law are inspired by her observations of the structural injustices and inequalities that characterize borders globally.

❽ Originally from Quetta, Pakistan, **SherAli K. Tareen**, Patricia Crone Member (2024–25) in the School of Historical Studies, focuses his research on Muslim intellectual traditions and debates. Tareen is widely recognized for his book *Defending Muhammad in Modernity*, which was awarded the American Institute of Pakistan Studies 2020 Book Prize.

❾ **Sihao Cheng**, Martin A. and Helen Choolijian Member (2022–25) in the School of Natural Sciences, uses statistical analysis to understand our universe. He earned his Bachelor of Science degree from Peking University. During his time at IAS, he discovered a possible dwarf planet located at the outer edge of the solar system.

Scan the QR code to watch these members of the IAS community (and many more!) discuss their work in the "Institute Instances" video series.

# Across Disciplines, Across Generations, Across the

**The serendipitous collaboration** of Gianmarco Caldini, Bill Browder, and Camillo De Lellis is not the only intergenerational collaboration on campus. Take, for example, the three generations of IAS astrophysicists—Scott Tremaine, Professor Emeritus in the School of Natural Sciences; Chris Hamilton, John N. Bahcall Fellow in the School; and visiting graduate student Shaunak Modak—who have pioneered, in a series of papers, a new method for calculating the dynamics of galactic disks. The trio has used this method to unify six decades of theory on the spiral structure of galaxies. In this collaboration and many others seen across the Institute campus, intergenerational scholarship is a key driver of cutting-edge research, enriching a scholar's knowledge at every stage of their career.

Such connections do not end when Members leave campus. As they return to their home institutions or move on to new academic communities, they carry with them the enduring partnerships and intellectual bonds forged at IAS. To keep these connections alive, the Association for Members of the Institute for Advanced Study (AMIAS) has recently reinvigorated a practice of gathering scholars through events. Such events have included a tour of the Chau Chak Wing Museum in Sydney, Australia; a dinner and trivia night at the International Medieval Congress conference in Leeds, England; a reception at the Amplitudes conference at IAS; and a lecture by Patrick Geary, Professor Emeritus in the School of Historical Studies, at the University of Houston-Victoria, Texas. These colleague-hosted, informal gatherings enable IAS scholars, past and present, to unite—carrying forward the enriching relationships that help drive discovery.

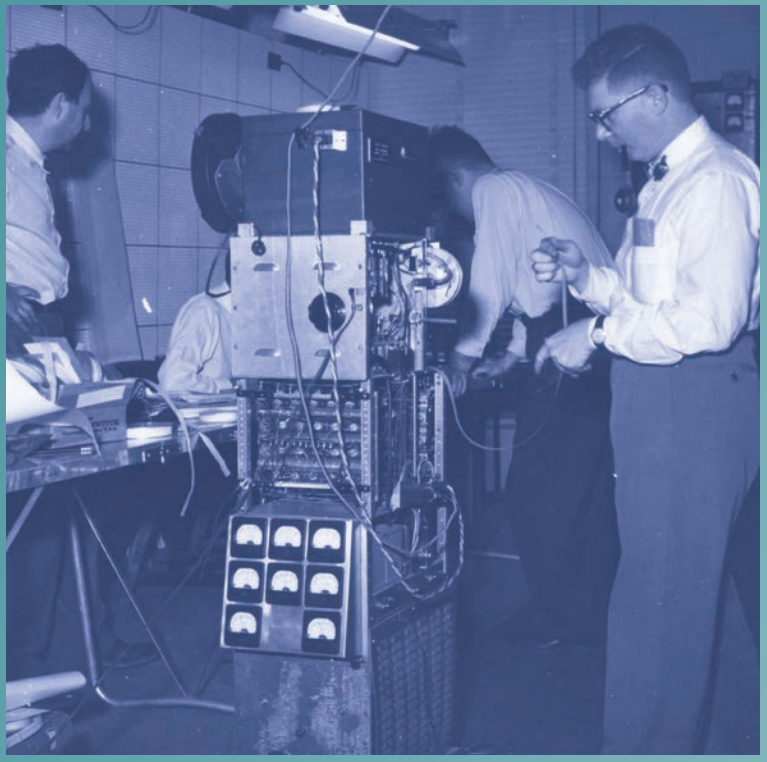




# Globe







**About two decades** after Lewis Fry Richardson's first attempts to predict the weather in the early 1920s, founding IAS Professor (1933–55) John von Neumann welcomed a group of sixteen experts in the field of meteorology to the Institute campus for a conference. This would generate work that laid the foundation for an understanding of climatology that is only becoming familiar to most individuals now, over seventy-five years later.

The conference, spurred on by the leverage that meteorological and climate data could provide at the outset of World War II, hoped to use von Neumann's new electronic computing machine to create the first successful numerical predictions to forecast the weather. The device provided the necessary calculation power to address many of the problems of Richardson's first forays into the field.

From this early conference of meteorologists, mathematicians, and physicists was born the Meteorological Group, an Institute project which



# Research with Reach



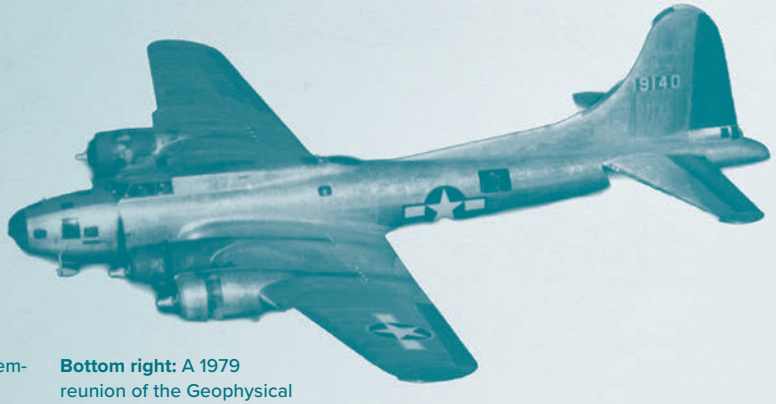
expanded the vision of von Neumann's conference by developing the mathematical frameworks that remain the basis of modern climate science: the first general circulation models of the atmosphere. The project would eventually develop a sophisticated understanding of the climate as a geofluid dynamic system, a mathematical calculation that could account for the impacts of the ocean and the atmosphere on the weather as global phenomena.

Joseph Smagorinsky, who joined the the Meteorological Group in 1950 as a doctoral student after impressing the team with insightful questions at a lecture, worked closely with Jule G. Charney—a student of Richardson, a participant in von Neumann's original conference, and leader of the Meteorological Group—to shift the focus of weather research toward the study of global climate, a transformation reflected in the influential 1979 report that bears Charney's name. Smagorinsky eventually went on to found the Geophysical Fluid Dynamics Laboratory at Princeton University, now a key laboratory under the National Oceanic and Atmospheric Administration's Office of Oceanic and Atmospheric Research.

To these projects, Smagorinsky brought the Institute's ethos of innovative collaboration. There, he was distinguished by a habit of inviting scientists from unexpected fields into his labs, seeking out the broadest perspectives on the weather that he could find.

The once unimaginable capacity to simulate the global climate came out of chance findings and meaningful disagreements, casual conversations and unforeseen symmetries, across fields—nurtured by the intellectual freedom and resources of IAS. In its commitment to foundational discovery, and the space it affords that pursuit, the Institute nourishes research with reach. From the development of climate science to pancreatic cancer vaccines, the Institute is a place where borderless conversations can become the knowledge of our daily lives.

Scan to read about another chapter in the Institute's tradition of research with reach: Long-term Member (2008–13) in the School of Natural Sciences Benjamin Greenbaum's work on mRNA vaccines for pancreatic cancer, highlighted in the Fall 2023 *Institute Letter*.




**Top left:** Joseph Smagorinsky at The Franklin Institute in Philadelphia in 1968.

**Bottom left:** Workers at the Institute's Electronic Computer Project (including Smagorinsky) in circa 1950.

**Top right:** Attendees assembled at a symposium on Climate Modeling in 1976.

**Bottom right:** A 1979 reunion of the Geophysical Fluid Dynamics Laboratory in Canberra, Australia.



# At the Forefront of

**IAS scholars from all four Schools are diving deep into the multifaceted world of artificial intelligence. Their holistic approach to AI extends from assessing its efficacy as a science tutor, to utilizing it in the study of handwritten historical documents, to exploring the societal and environmental consequences of its widespread adoption.**

**Each of these projects not only advances understanding of this revolutionary technology for both scholars and the public but also opens new pathways for future inquiries. In so doing, the scholars continue the storied Institute tradition of instigating innovative approaches that shape the evolving landscape of research.**

# DISCOVERY



**When a confused student** turns to an artificial intelligence language model for help with, for example, a tricky differential equation, how reliable is the answer they receive? This question prompted an innovative research partnership at the Institute, where scholars from two Schools joined forces to examine AI's potential as a science tutor.

At the outset of their project, the scholars recognized that effective evaluation of a language model's efficacy required examining its responses to the kinds of questions that real students ask.

Alexis Chevalier, Member (2022–23) and Visitor (2023–24) in the School of Mathematics; Sebastian Mizera, Member (2019–24) in the School of Natural Sciences; Toni Mikael Annala, Member (2022–24) in the School of Mathematics; and their collaborators used their subject-specific expertise from a range of STEM disciplines—from mathematics to environmental science—to devise realistic student questions. The questions ranged from those demonstrating basic conceptual confusion to highly specific technical queries.

To test their questions, the team fine-tuned foundation models (such as Llama) with data from open-source textbooks. They assessed each language model's responses against a benchmark of "key points" that outlined what constituted a good answer for each question—assessing not only whether the answers were correct, but whether they were correct for the right reasons.

While the scholars initially hypothesized that doing more fine-tuning with textbook data would make the model score better on their benchmark, surprisingly, they found that training models on the textbooks alone had no impact on performance. Instead, their research revealed that effective AI tutoring demands exposure to the messy reality of how learning actually happens.

Since finding real student-teacher conversations on which to train their models was challenging, the scholars used AI to generate thousands of synthetic dialogues where students made mistakes and tutors provided corrections.

This pedagogical realism proved crucial. The team found that training their models on conversations where the synthetic student made many mistakes, and the synthetic teacher corrected them, led to the biggest performance improvements—a significant insight for ongoing AI fine-tuning techniques.

In the spirit of IAS research, the scholars made their models, data, and evaluations freely available on GitHub. An educator wanting to assess the abilities of an AI model as a science tutor could run the benchmark and find out how their model of choice performs.

HTR utilizes artificial intelligence to convert handwritten text from images or documents into digital, editable text, streamlining the digitization of such documents and enhancing accessibility for scholarship.

**While their research** may be focused on times past, scholars from the Institute's School of Historical Studies are harnessing the seemingly futuristic technology of handwritten text recognition (HTR), investigating how this can shed new light on original evidence from the ancient and medieval past.

HTR utilizes artificial intelligence to convert handwritten text from images or documents into digital, editable text, streamlining the digitization of such documents and enhancing accessibility for scholarship. It is a valuable tool for philologists who study languages across diverse geographical and temporal borders, as it speeds up the transcription of sources and facilitates the study of historic texts at scale. However, this an emergent field, with presently untapped potential for new breakthroughs.

While scholars within other disciplines host workshops and annual conferences to exchange technological and methodological developments in their fields, such spaces had not yet been created for HTR. That is, until scholars from the School of Historical Studies hosted a first-of-its-kind exchange meeting on HTR in June 2025, titled the "Future of Philology."

The IAS scholars involved in the meeting, many of whom were already engaged in research projects utilizing computational tools, included Professors Sabine Schmidtke and Suzanne Conklin Akbari; Distinguished Visiting Professor Sofía Torallas Tovar; Senior Research Associate George Kiraz; and Aaron Hershkowitz, Co-Director of the Krateros Squeeze Digitization Project. Having noticed that philological and ancient studies projects can often run "parallel" to one another, without converging over methods and findings, they joined with colleagues from Princeton University to host a meeting where scholars could come together in precisely this kind of conversation.

The meeting welcomed scholars of multiple languages including Arabic, Ge'ez, Hebrew, Sanskrit, and Syriac, among others. During their meetings, historians, papyrologists, philologists, computer scientists, and software engineers engaged in lively discussions of the most pressing questions and challenges related to the use of HTR and explored new approaches to the technology. To supplement these activities, training sessions were also offered, where knowledge and methods in the study of historic texts were shared, aided by machine learning.

As a hub for interdisciplinary research and collaboration, IAS provided fertile ground for this groundbreaking exchange, opening doors to further partnership and future meetings on the role of HTR in philology on a global scale.


IAS


and the AI Supp
Tamara Kneese
Data & Society
Thea Riofrancos
Providence College
Howard W. French
Columbia University
Kate Crawford
University of Southern California/
Microsoft Research

Investigating the material demands of artificial intelligence is vital: these needs are reshaping global power dynamics in unexpected ways.

**Although typing a question** into ChatGPT or Gemini has become commonplace, few users consider the copper mines in Chile or the cobalt extraction sites in the Democratic Republic of Congo that make these digital conversations possible.

The hidden material reality of AI has prompted Alondra Nelson, Harold F. Linder Professor in the School of Social Science, to investigate what she calls "the full AI ecosystem," which includes the social and political dimensions of the emerging technology and its environmental foundations.

Nelson, who leads the Science, Technology, and Social Values Lab at IAS, has been engaged in research into the global networks that connect algorithmic development to resource extraction, alongside Tatiana Carayannis and Marie-Therese Png, Research Associates in the School of Social Science.

Their research brings to the forefront AI's startling material and human dependencies: a single large-scale data center requires more than one thousand tons of copper for its power networks and cooling systems, while the semiconductors powering machine learning demand gallium, germanium, and indium. They also emphasize the role of data workers, many based in Africa and Asia, who label images, moderate content, and clean the datasets that train AI systems, performing the invisible cognitive labor that makes machine learning possible.

Investigating the material demands of artificial intelligence is vital: these needs are reshaping global power dynamics in unexpected ways. Nations once considered peripheral to technological advancement—many in the Global South—now find themselves at the center of new forms of power. In Nelson's words, this is "not because they've developed Silicon Valley-style innovation hubs, but because they sit atop the raw materials that make Silicon Valley possible."

And, perhaps most surprisingly, AI development intensifies, rather than reduces, environmental pressures. The same critical minerals powering AI systems are essential for renewable energy infrastructure, causing multiple industries to compete for often finite resources.

To provide a public forum for the discussion of the intersections between AI and the extractive economies on which it relies, Nelson hosted a panel discussion at IAS in June 2025, titled "RARE/EARTH: The Geopolitics of Critical Minerals and the AI Supply Chain." It brought together leading scholars in AI, geopolitics, infrastructure, and resource extraction (who participated in a related workshop) to offer insight into how this evolving terrain is shaping the future of technology and international relations.

The panel challenged the audience to think beyond the visible surface of the technology to understand the full scope of AI's social and environmental implications.

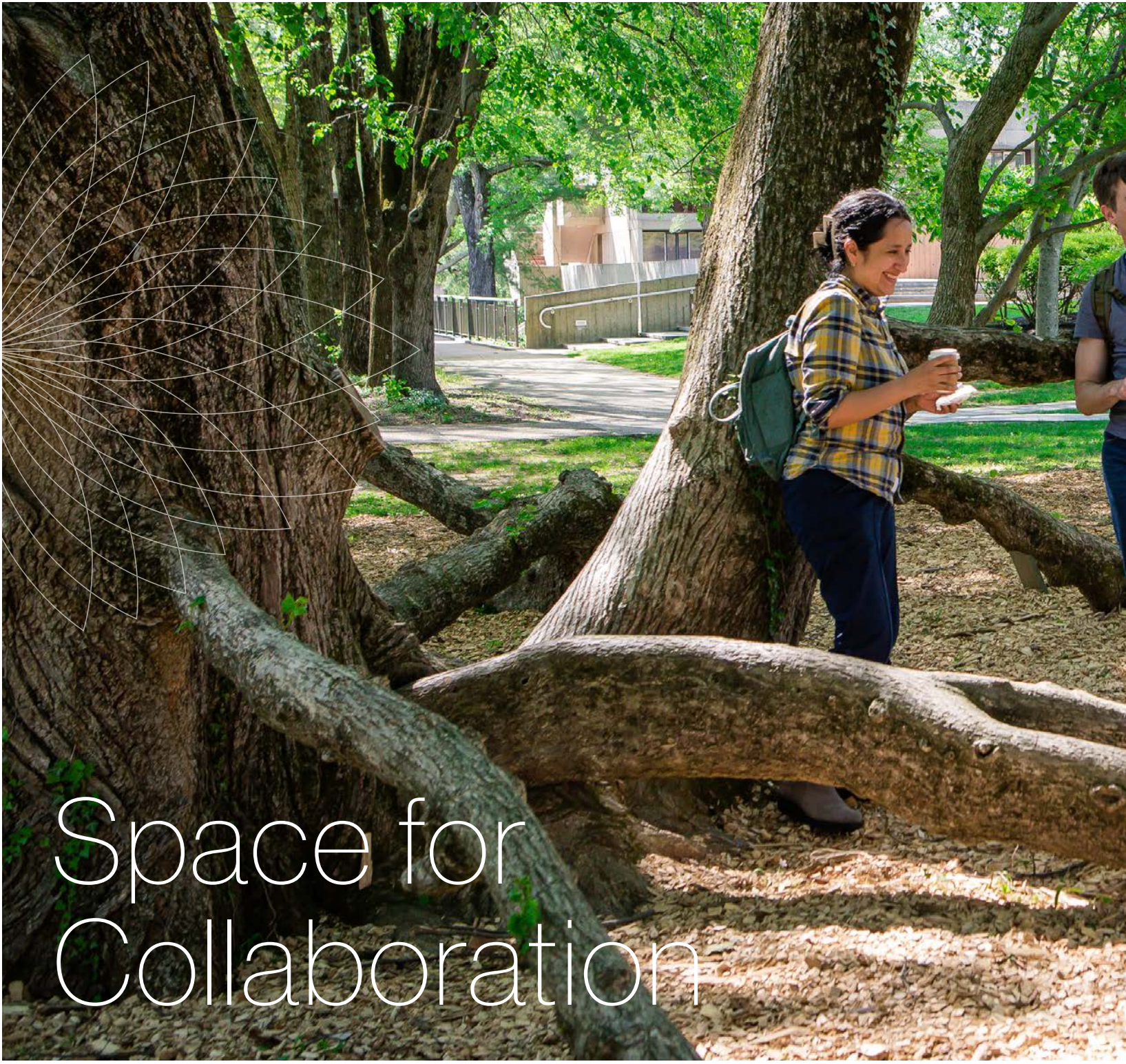
## A PARTNERSHIP OF SCIENCE AND SOCIETY

In April 2025, IAS hosted researchers from DeepMind for a Math+AI Workshop which investigated the impact of artificial intelligence on mathematical discovery. Culminating in a Director's Conversation event between IAS Director and Leon Levy Professor David Nirenberg and Google DeepMind CEO and Nobel laureate Sir Demis Hassabis, the weeklong collaborative effort included brainstorming sessions, guest lectures, and a joint panel discussion with IAS Faculty.

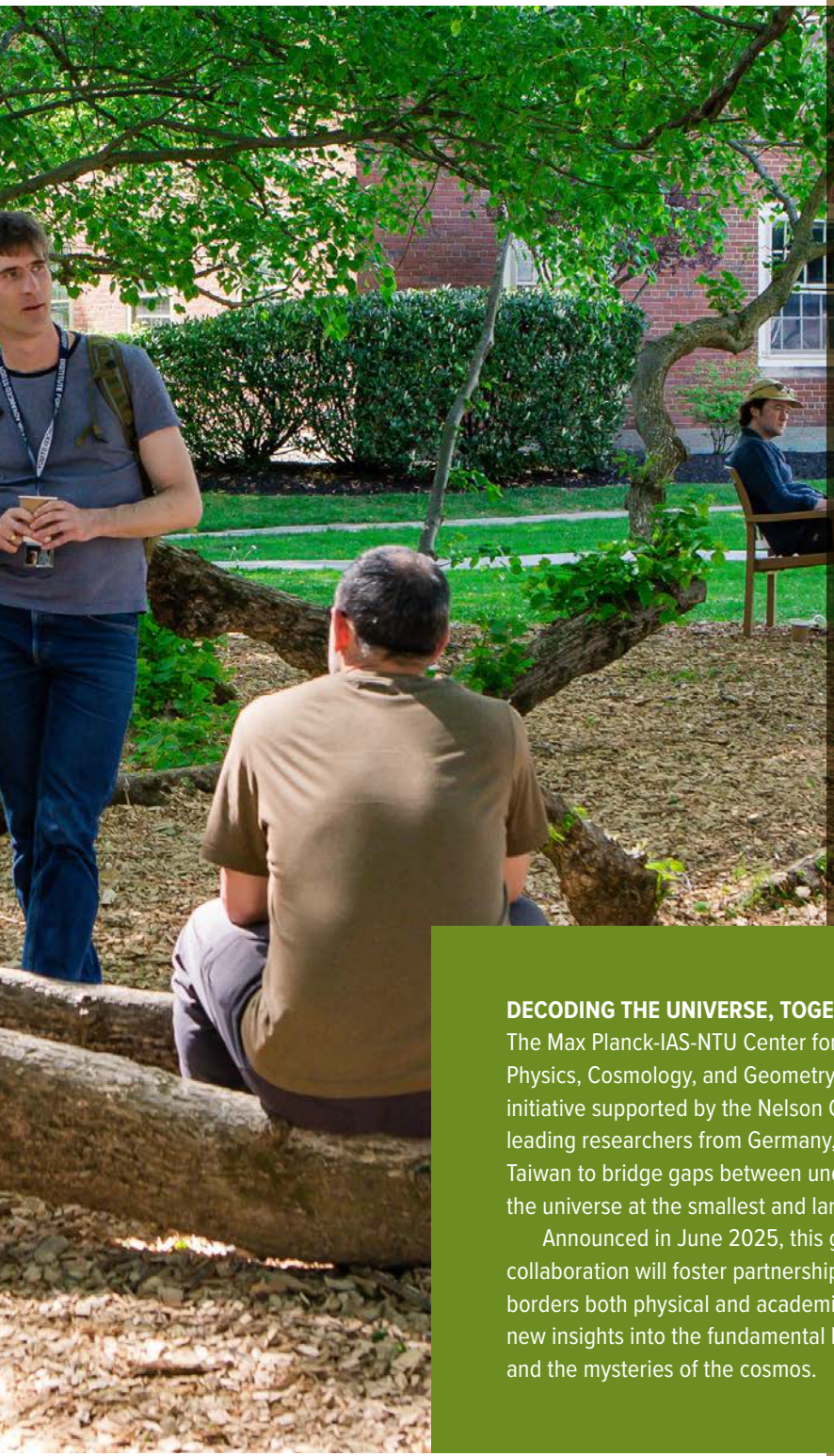








# Space for Collaboration



**The official launch** of the Jonathan M. Nelson Center for Collaborative Research in July 2024 marked a new chapter for the Institute, expanding its capacity for discovery across disciplines and institutions.

Made possible by a gift from Trustee Jonathan M. Nelson and additional support from the Gerard B. Lambert Foundation, the Center empowers scholars to pursue ambitious, team-based projects that transcend traditional academic boundaries.

Building on the Institute's established mission of nourishing foundational scholarship, the Center provides seed funding for early-stage ideas; resources for large-scale, multi-year research; and the infrastructure needed to support collaborations with partners worldwide.

Currently supported projects delve into a wide range of subjects; from an archive of the twentieth-century Arabic manuscript trade to software development for computational astrophysics, critical perspectives on the AI ecosystem, and the history of modern mathematics.

As IAS nears its second century, the Nelson Center stands as a bold step forward—strengthening the Institute's ability to explore the frontiers of research and generate knowledge without boundaries.

**DECODING THE UNIVERSE, TOGETHER**

The Max Planck-IAS-NTU Center for Particle Physics, Cosmology, and Geometry (MPC), an initiative supported by the Nelson Center, unites leading researchers from Germany, the U.S., and Taiwan to bridge gaps between understanding the universe at the smallest and largest scales.

Announced in June 2025, this global collaboration will foster partnership across borders both physical and academic, unlocking new insights into the fundamental laws of nature and the mysteries of the cosmos.







# Space for Contemplation





**A library is more** than a collection of books—it is a space where temporal boundaries dissolve. Libraries connect scholars with the past through documents and archives, create immersive moments where time feels altered, and even inspire reflections on the nature of time itself.

The restoration and expansion of the Institute's Historical Studies - Social Science Library, which began in the spring of 2025, will extend spaces for deep thought on campus, supporting the advancement of knowledge.

Made possible by a gift from Trustee Mark Heising, the project will allow scholars to benefit from revitalized reading rooms and new offices and collaborative areas, as well as protecting the Institute's significant rare book and manuscript collection. The planned addition of a second story will also fulfill the vision of Director (1947–66) J. Robert Oppenheimer, who commissioned the original library's design in 1960.

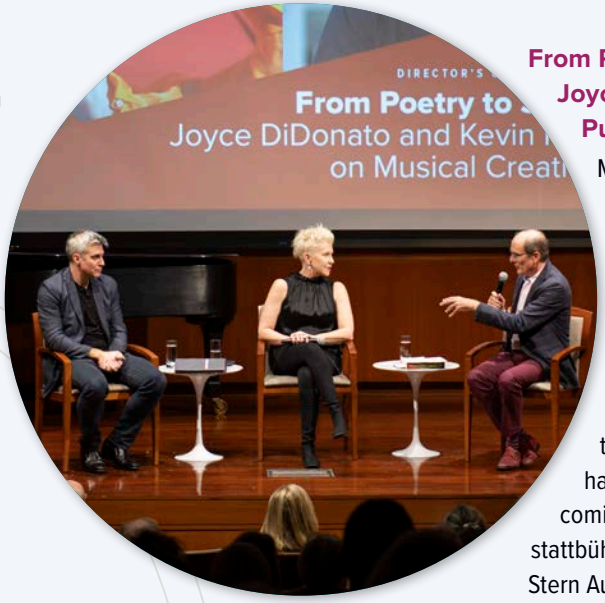
As the library is renewed, its spaces quietly prepare to welcome future generations of scholars—each ready to shape, and be shaped by, the unfolding rhythms of time.



# Immersed in DISCO

**On the east side of campus**, tucked between the School of Mathematics's Simonyi Hall and the School of Natural Sciences's Bloomberg Hall, stands the Institute's 220-seat lecture and performance space, Wolfensohn Hall. Named for James D. Wolfensohn, the late former Chair of the Institute's Board of Trustees, the Hall is host to a multifaceted array of programs. In addition to over 65 academic lectures each year, Wolfensohn Hall inspires the Institute's community of discovery—among scholars and non-scholars alike—with programming that embraces the Institute's own distinctive form of curiosity.

From Director's Conversations seeking to explore how cultural forms are adapting to the emerging future, to arts programs offering an insider's look at collaborative creation, the events taking place in Wolfensohn Hall are curated to bring various forms and configurations of discovery to life on stage. Those that occurred this past year are no exception. The selection showcased here offers only a smattering of moments manifesting the potential for discovery on the Wolfensohn Hall stage.




### From Poetry to Song: Joyce DiDonato and Kevin Puts on Musical Creation

Mezzo-soprano Joyce DiDonato, the composer Kevin Puts, and the string trio Time for Three workshopped a song cycle of settings of poems by Emily Dickinson titled *Emily – No Prisoner Be*. This process inspired the creation of a piece that will be seen in other great halls around the world in the coming year, including the Werkstattbühne at the Bregenzer Festspiele, Stern Auditorium at Carnegie Hall, and Richardson Auditorium at Princeton University.



## A Lecture Demonstration with Randall Goosby and The Renaissance Quartet

The Renaissance Quartet, led by violinists Randall Goosby and Jeremiah Blacklow, along with violist Jameel Martin and cellist and composer Daniel Hass, offered a program (ahead of their concert at McCarter Theater) in which they put questions to new and traditional repertoire and demonstrated empathetic listening techniques cultivated at violinist Itzhak Perlman's Perlman Music Program on Shelter Island.

## Director's Conversation: Sir Demis Hassabis on The Future of Knowledge

Sir Demis Hassabis, co-founder & CEO of Google DeepMind and Nobel laureate, joined Institute Director and Leon Levy Professor David Nirenberg for a Director's Conversation on the future of knowledge. They examined the ways in which artificial intelligence is transforming our capacities for discovery, including breakthrough artificial intelligence projects like AlphaFold's protein structure predictions and the emerging use of AI in mathematics.



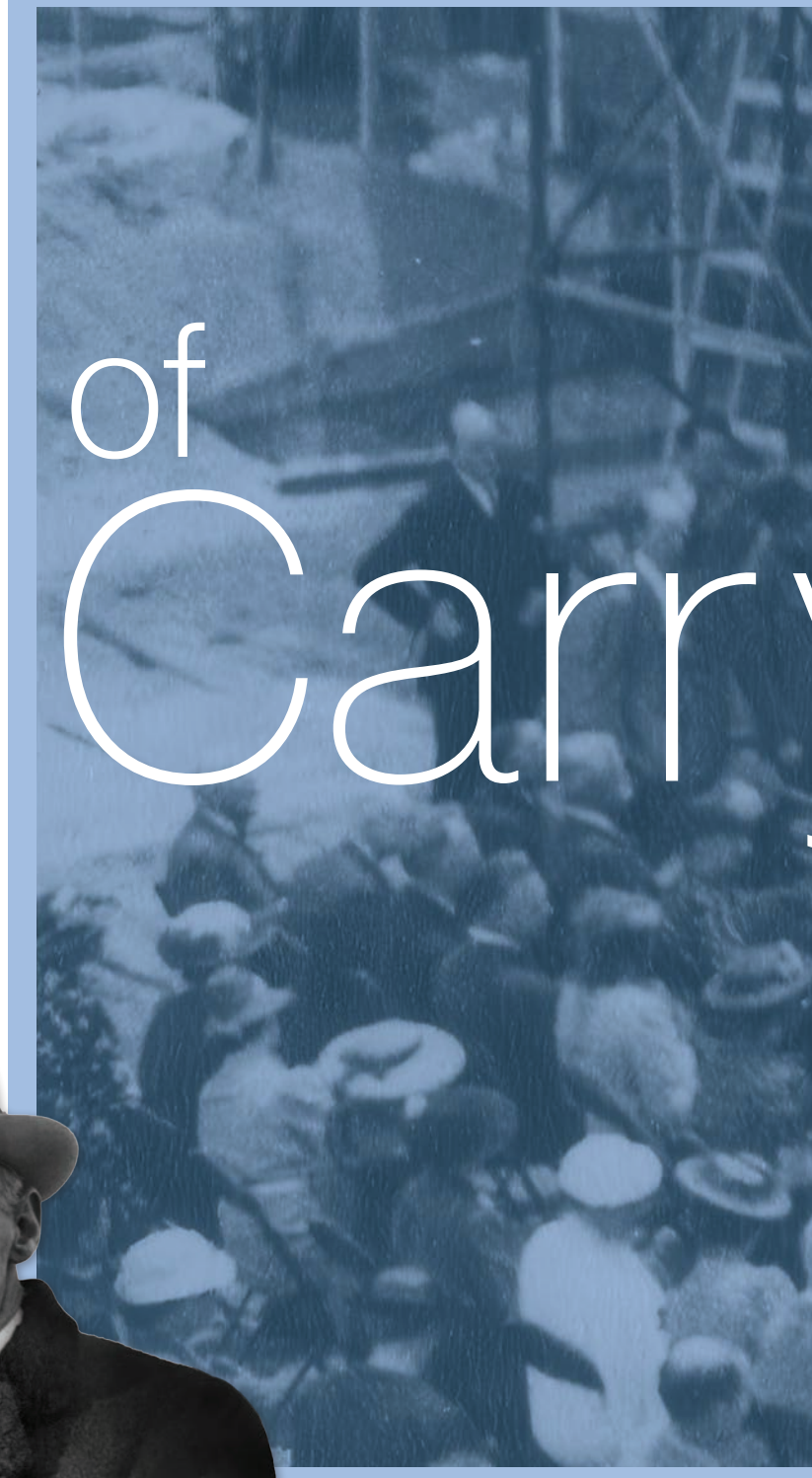
OVERY




## Broadcasting Fidelity: German Radio and the Rise of Early Electronic Music

Myles Jackson, Albers-Schönberg Professor in the History of Science, offered a lecture-demonstration based on his newly published book, *Broadcasting Fidelity: German Radio and the Rise of Early Electronic Music* (Princeton University Press, 2024). Animated by live performances from the Jasper String Quartet and soprano Maria Brea, Jackson shared how a convening of natural scientists, radio engineers, and musicians in the attic of the Berlin Academy of Music in 1928 ultimately led to the development of one of the twentieth century's most significant electronic musical instruments. Blending live performances and academic lecture, Jackson's presentation itself cross-pollinated ideas across the sciences and humanities.

# A Tradition of Carry

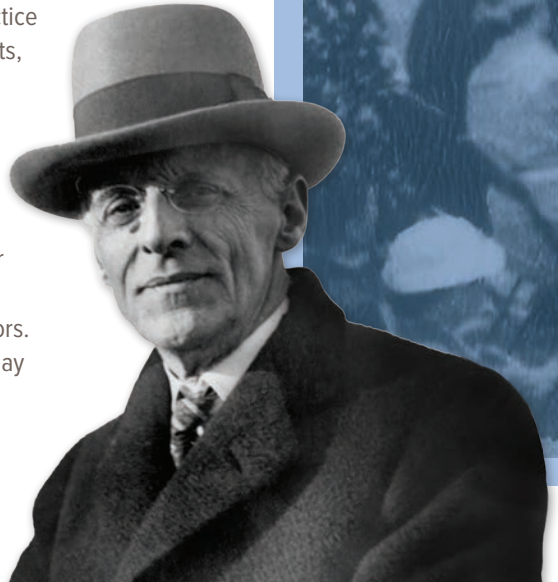


"The Institute is pledged to assemble a group of scientists and scholars who with their pupils and assistants may devote themselves to the task of pushing beyond the present limits of human knowledge and to training those who may 'carry on' in this sense." — **Abraham Flexner**

The Institute for Advanced Study has long been animated by the vision of its founding Director (1930–39) Abraham Flexner. This vision not only set a new benchmark for curiosity-driven discovery, but also enshrined the idea that each generation of scholars builds upon the work and wisdom of those before them.

"Carrying on," as Flexner put it, is both a daily practice and a profound institutional legacy: through their efforts, the discoveries of IAS scholars become cumulative, building a chain of insight that extends ever further.

But "carrying on" is not only the work of scholars in their fields. It is also the charge of those who sustain and renew the Institute itself. Just as every breakthrough depends on the foundations laid by prior thinkers, the Institute's capacity for discovery is made possible by the commitment and generosity of its donors. Philanthropy at IAS is itself an enduring tradition—a relay across generations.





# ying On

Founding Director Abraham Flexner addresses the assembled crowd during the dedication ceremony for Fuld Hall on May 22, 1939.

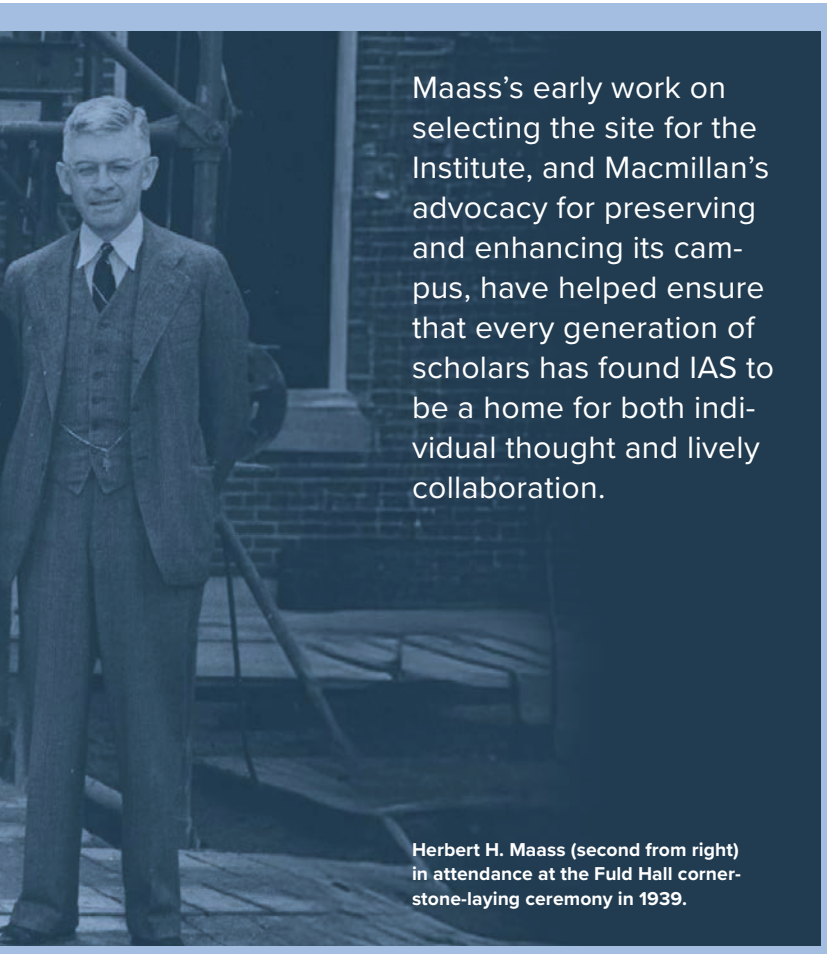


This can be seen as far back as 1929, when sibling philanthropists Louis Bamberger and Caroline Bamberger Fuld, seeking to channel the proceeds from the sale of their department store into a gift for the public good, turned to their trusted attorney and advisor Herbert Halsey Maass. Maass introduced them to Flexner, whose vision of unfettered scholarly inquiry resonated with the Bambergers' hopes for a lasting legacy. As a founding Trustee and later Chair of the Board, Maass's wisdom and direction shaped the Institute's earliest years, from selecting its site to nurturing its tradition of academic excellence.

But this story of stewardship did not end with Maass. Decades later, his great-niece Nancy MacMillan would likewise become a dedicated Trustee and Friend of the Institute, helping to guide its growth and preserve its mission. In 2003, MacMillan honored her great-uncle's pivotal contributions by endowing the Herbert H. Maass Professorship in Theoretical Computer Science. The chair is now held by Avi Wigderson, a pioneer in computational complexity theory and the first scholar to receive both the Abel Prize and the Turing Award for his work.



**Nancy MacMillan (right) at the 2025 Founders Day celebrations.**

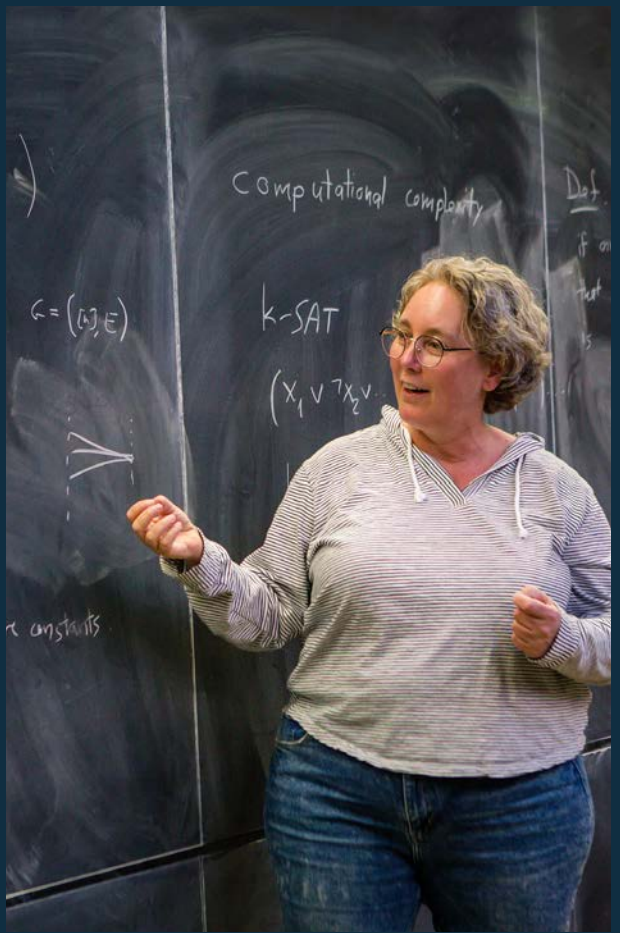


Maass's early work on selecting the site for the Institute, and Macmillan's advocacy for preserving and enhancing its campus, have helped ensure that every generation of scholars has found IAS to be a home for both individual thought and lively collaboration.

**Herbert H. Maass (second from right) in attendance at the Fuld Hall cornerstone-laying ceremony in 1939.**

For Maass and for MacMillan—who was appointed Trustee Emerita in 2025—philanthropy meant more than governance or financial support. It represented a personal investment in the ideals and even the physical landscape of the Institute: Maass's early work on selecting the site for the Institute and MacMillan's advocacy for preserving and enhancing its campus have helped ensure that every generation of scholars has found IAS to be a home for both individual thought and lively collaboration.

Today, the Institute's tradition of "carrying on" is shared by its Faculty, visiting scholars, staff, and supporters alike. In challenging times, this community cherishes not only the breakthroughs of the present, but also the philanthropy that makes discovery possible. The legacy of Maass and MacMillan reminds us that, at the Institute, every step forward is both a tribute to those who came before and a promise to those who will follow.




## ANOTHER STEP FORWARD

With the establishment of a new professorship in the theory of computing, completed this spring, the Institute takes another step in its commitment to discovery. Irit Dveer Dinur, a world-preeminent theorist in computational complexity, now holds the Betsey Lombard Overdeck Theory of Computing Professorship in the Institute's School of Mathematics.

Supported by a gift from Board of Trustees Chair John Overdeck, the new professorship signals the Institute's continued commitment to global leadership in the theory of computing—a field that has generated some of the Institute's most transformational discoveries over the last 80 years—as well as its promise of ceaselessly passing forward the baton of inquiry to new minds and new fields.

# ACKNOWLEDGEMENTS

**We are extremely grateful** to the Trustees, Faculty, Friends of the Institute, Members and Visitors, Staff, organizations, and members of the community listed below for their visionary commitment and contributions.

**In fiscal year 2024–25 (ending June 30, 2025), gifts and pledges to the Institute totaled nearly $68 million.**

We strive for excellence and accuracy in recognizing all who have supported IAS. Please contact **IASGiving@ias.edu** to request any necessary updates to how your name is acknowledged in future publications. Thank you.

## MAJOR DONORS

Anonymous† (2)
Anonymous (7)
Frank and Carol Accetta
Georg Albers-Schönberg
Victoria and Hank Bjorklund
Rick and Heather Black
David L. Champi
Chern Medal Foundation
**Ashvin B. Chhabra and Daniela Bonafede-Chhabra**
May P. Chu
Michael L. Cohen
Stephen DeAngelis/Massive Dynamics**
European Research Council
The Gladys Krieble Delmas Foundation
Roger W. Ferguson, Jr. and Annette L. Nazareth
Fernholz Foundation
Robert and Luisa Fernholz
Ford Foundation
Gerda Henkel Stiftung
Bruce J. Gressin
Mikhail Grinberg
Mark Heising and Elizabeth D. Simons
Heising-Simons Foundation
Dr. John P. Hempel†
Fred and Abby Hu
Jane Street Capital
Johnson & Johnson*
Sarah B. Jones and Landon Y. Jones†
Saj-nicole A. Joni
Misha Kogan
Tomislav and Vesna Kundic
Gerard B. Lambert Foundation
Alfred Landecker Foundation
Leinweber Foundation



### E. Tendayi Achiume

**Ashvin B. Chhabra and Daniela Bonafede-Chhabra Member (2024–25)**

The Institute is grateful to Ashvin B. Chhabra and Daniela Bonafede-Chhabra for establishing the Ashvin B. Chhabra and Daniela Bonafede-Chhabra Membership in the School of Social Science. Providing Membership support over three years, their fund reflects their belief in the power of ideas within this unique space where scholars from around the world build more just and informed societies. In its first year, the fund supported international legal scholar E. Tendayi Achiume, whose research advances understanding of human rights, refugee protection, and migration governance. Her work at IAS sparked timely dialogue on global justice and displacement—an outcome made possible by the Chhabras' generous support.



† Deceased * Matching Gift ** Corporate Friend

Jeanette Lerman-Neubauer and Joseph Neubauer
Nancy and Duncan MacMillan
Michael and Ling Markovitz
David and Lori Marquardt
Microsoft Corporation*
Minerva Research Foundation
The Ambrose Monell Foundation
Dorothy C. Moote†
National Endowment for the Humanities
National Science Foundation
Jonathan and Maya Nelson
David Nirenberg and Sofía Torallas Tovar
Österreichische Akademie der Wissenschaften
John A. Overdeck
Nancy B. Peretsman and Robert W. Scully
Sandra E. Peterson
Elena† and Georgio† Petronio
Anoop and Sangeeta Prasad
Jörn Rausing
Rita Allen Foundation
Colin J. Rust and Jeannie Tseng
Sherwin Seligsohn
Simons Foundation
Marilyn H. Simons
Charles and Lisa Simonyi
Michael F. Singer
**David E. Smith†**
Space Telescope Science Institute
Michael Speiser
Peter Svrcek
Tang Research Foundation
Shirley Tilghman
Fritz Thyssen Stiftung
United States Department of Energy
University of Oxford
The University of Texas at Austin



## David E. Smith

A longtime Friend of the Institute, David E. Smith† supported IAS faithfully for more than two decades. Often spotted enjoying lunch in the dining hall, he was a quiet presence who found community in campus rhythms and deep meaning in the Institute's scholarly programming. In December 2024, just days before his passing, he made an extraordinary, unexpected gift—one of his final acts of generosity. Though he never sought recognition, his enduring commitment speaks volumes, and IAS remains profoundly grateful for his dedication and belief in the Institute's mission.

University of Toronto
Wolfensohn Family Foundation
Brian F. Wruble
Peter and Angela Yianilos
Joe Zou

## DONORS

Anonymous (33)
Anonymous Corporation
Dr. William Abikoff
Stephen L. Adler and Sarah Brett-Smith
AllianceBernstein*
Susan Ames
Betsy Anda-Harris
Robert Antony
Celia Applegate and David Blackbourn
Ana Lucia Araujo
Dr. Bulent Atalay and Mrs. Carol Jean Atalay
Vivian Barnett
Ken Baron
Marisa A. Bass
Steve Batterson
Greg Bayer
Bruce Berndt
Henry and Leigh Bienen
Ezana Bocresion
James J. Bono
Michael D. Bordo
Dr. Constance Brittain Bouchard
Professor Hartwin Brandt
William Nielsen Brandt
Susan J. Brison
Bristol-Myers Squibb Company*
Christer Bruun
Lawrence Bryan
John and Virginia Bryant
Piyabut Burikham
Claude Calame
Prof. Sir David Cannadine
Vicki Caron
Vincent Carretta
Alexander Casey

# ACKNOWLEDGEMENTS

Jessica Cattelino
Thomas E. Cecil
Gilbert Chaitin
Chan Zuckerberg*
Sun-Yung Alice Chang and Paul Yang
Sagun Chanillo
Celia Chazelle
Jie Chen
Donna Ching and Jonathan Foster
Profs. R. Sekhar Chivukula and
Elizabeth H. Simmons
Elliot Cohen
Eric P. Cohen
Fabrizio Conti
Melissa Darejeh
David Dault
Rebecca Davis
John M. de Figueiredo
Harold G. Diamond
Paul DiMaggio
Mark Dittmer
Michael J. Dollarhide
Simon K. Donaldson
Ava and Arthur Doppelt
Michael R. Douglas
Hal Drake
Pierre du Prey
Loyal Durand
Edward T. Cone Foundation
Lawrence Ein
Danilo Elez
Glenn Ellison and Sara Fisher Ellison
Janet and Arthur Eschenlauer
John Feldman
Nancy Johnson and Larry Filler
Lucia and Carter Findley
Carole Fink
John Freed
William E. Fulton
David and Donna Gabai
Alison Games
Mort and Debbi Gasner
Fred J. Gilman
George Glauberman
Carol Gluck
Peter B. Golden
William Goldman
Daniel and Ryoko Goldston
Bryna Goodman
Roe Goodman
Sue Goodman
Google, Inc.*
Anupam Goyal
Bruce Grant
Philip Green
Andrew Greene
Michel R. Gros
Edward J. Groth III
Diane and Metin Guvenis
Paul Halliday
Paul A. Hanle
Marta Hanson
Joel Hass and Abby Thompson
Professor Randolph C. Head
James and Lynn Heitsch
Stephen Hellmuth
Alex Himonas Alexandrou
Gil Holder
Bob and Pam Howell
Ginger Hsieh
Susan L. Huntington
John Imbrie
Ron and Gail Irving
Yoshihiro Ishikawa
Greg Jacobs
Katherine L. Jansen
Thomas Jech
Seva Joukhovitski
Mary and Peter Katzenstein
Michael Konetschnik
Robert Krasny
Michael M. Kunichika
John and Mary Kwan
William E. Lang
Paul Langacker
Sarah and Martin L. Leibowitz
Marsha Levin-Rojer
Michael Licitra
Peter Light
Terence Lindgren
Maya Ling
Eric M. Linn
Olga Lisansky
Beverly Livesay
Brandon C. Look
Brian B. Loretz
Sergio Lukic
Michael Maas
Andrew MacFadyen
David H. Mack
Daniel Malinow
Indur Mandhyan
Steven A. Mansbach
Clint McCrory
Russell and Evelyn McMillan
Michael McVaugh
Rajan Menon
Microsoft Corporation*



† Deceased * Matching Gift ** Corporate Friend

Joel Samuel Migdal
Joseph Minahan
Mizuho Securities USA*
Carlos and Ofelia Moreno
Kathryn Morgan
Bob and Mimi Murley
Nathan P. Myhrvold and Rosemarie Havranek
Linda Ness and Munir Cochinwala
Catharine Newbury
William I. Newman, Ph.D.
Y. Jack Ng
Doug Niebur
Linda and Thomas Noble
Rick Norwood
Meaghan Crawford O'Gara
Yong-Geun Oh
Takashi Ono
Tari Pantaleo
Dr. Leonard Parker
James Pascaleff
Charles Payne
Jörg H. Peltzer
Leon and Nancy Petelle
Carl Forbes Petry
David A. Pietz
John Polking
Randall A. Poole
Jeremy D. Popkin
Gerald J. Porter
Martin J. Powers
William L. Pressly
Dr. Richard Randell and Linda Randell
Richard T. Rapp
Jerome Ravetz
Evelyn S. Rawski
Peter Redfield
Matthias L. Richter
Sarah Ringer
James B. Rives and John L. Johnston
Christoph Rode
James Rovnyak
Samuel H. Kress Foundation*
Stuart A. Samuel
Patrick Sänger
Frutuoso Santana and Alexandra Day
Leslie Saper
John Schrecker
Margery and Gerald Schwarz
Fareed Shaikh
Alan E. Shapiro
Adebisi Shofu
Hilary Silver
Amy Singer
Karen Vogtmann and John Smillie
Neal Jay Snyderman
Robert H. Socolow
Alexandre Sogicami
Eugene R. Speer
Thomas and Bridget Spencer
Elizabeth Spieth
James D. Stasheff
Robert Stengel
George Sterman and Elise Frank
Ronald and Sharon Stern
Bruce Stillman
Tracey Storey
R. Richard Summerhill, Ph.D.
Richard J. Talbert
Alexandra Tatnall
Chuu-Lian Terng and Richard S. Palais
The Carlyle Group*
Shideh Theunissen
Catherine Thomas
Marion Thomas
Ward Titus and Dr. Elena Taratuta
Dr. Elizabeth A. Tolman and Venkata S. Mandala
Marilyn and Scott Tremaine
Ewine F. van Dishoeck
Frans van Liere and Katherine van Liere
Vignan Velivela
Maryna Viazovska
Kim Vu
Samuel S. Wagstaff, Jr.
Thomas Wallnig
Jeff Walz
Brian Wecht
David Wecker
Charles Weibel
David Weinberg and Lisa Florman
W. Stephen Wilson
Professor Mark L. Witten
Kenneth B. Wolf
Hung-Hsi Wu
Don Wyatt
Ray Yang
York-Peng E. Yao and Cynthia C. Yao
Allen L. Yuan
Professor Emeritus Tsing Yuan
Froma I. Zeitlin

# ACKNOWLEDGEMENTS

## FRIENDS OF THE INSTITUTE FOR ADVANCED STUDY

### FOUNDERS' CIRCLE

Frank and Carol Accetta
Georg Albers-Schönberg
Edward and Kiyomi Baird
Ashvin B. Chhabra and Daniela Bonafede-Chhabra
Stephen DeAngelis, Beverly Brossoie, and Mia Brossoie
Paul DiMaggio
Carl and Toby Feinberg
Bruce J. Gressin
Yung and Peggy Lim
David Nirenberg and Sofía Torallas Tovar
James and Stacy Sarvis
David E. Smith†

### CHAIR'S CIRCLE

Ashley and George Aitken-Davies
Melanie and John Clarke
Elizabeth and Aristides Georgantas
Jane M. James
Sarah Jones and Landon Jones†
Russell Kulsrud and Helene Kulsrud†
Jonah and Amy Lansky
Michael and Francesca Liechenstein
Catherine and David Loevner
Jane and Robert MacLennan
Tamara and Kevin MacMillan
Nancy and Duncan MacMillan
Charles W. McCutchen† / The McCutchen Foundation
Robert and Ann McKeehan
Mark and Judy Sarvary

### DIRECTOR'S CIRCLE

Susan G. Anable and Jack McCarthy, III
Mickey Atwal
Mark Baumgartner
Joseph Blasi and Nancy Bonus
Josh Bowerman and Jennifer Shimp-Bowerman
The Lilly and Zdenek Capek Charitable Foundation
Jennifer Chayes and Christian Borgs
Donna Collins
Jixin Dai and Irene Yi Liu
Brett Danko
Audrey and David Egger Charitable Fund at the Jewish Community Foundation of Greater Mercer
Robert and Luisa Fernholz
Martin and Jane Fransson
Kevin Gao
Mark Hall and Natalia Priale
Carolyn and John Healey
Joshua T. Katz and Solveig Gold
John K. Kim and Ashley Lyu
Jingyi Li
Lighte Grant Family Fund of the Princeton Area Community Foundation
Yvonne Marcuse
Dr. Ferris Olin
Johan and Lydia Pfeiffer
Schaeder-Batterman Family Fund of the Princeton Area Community Foundation

### AMBASSADOR'S CIRCLE

Anonymous
Latif Alam
John Alexander and Rose Alexander
Alsup Family Fund at the Princeton Area Community Foundation
Stephen Anderson and Clara F. Richardson
Dr. Jeffrey T. Apter
Jacqueline Asplundh
Len and Laura Berlik
Dennis Block
Etsuko and Dan Chamby
Stanley and Regine Corngold
Ann Damsgaard and Lee Gladden
Justin and Sara Doran
Camille and Tim Dybvig
Lindsey and Stephen Forden
Chad Goerner and Danielle D'Angelo
Gray Family Fund at the Princeton Area Community Foundation
Melissa and Tom Grzymala
Debora Russo Haines, Esq. and John R. Haines
Christie and Fred Henry
Katherine Nouri Hughes and Johanna Hunsbedt
Alisan and Kevin Kavookjian
John J. Kerr, Jr. and Nora Wren Kerr
Frank Konings and Vera Van de Velde
Ann and Kurt Kovalick
Mark and Jill Kushner
Yuki Moore Laurenti and Jeffrey Laurenti
William and Geniva Martin
Julie and Mark McLaughlin
Scott McGoldrick and Linda Noel
Deborah and Alan Poritz
Janine Purcaro
Rysia de Ravel



† Deceased * Matching Gift ** Corporate Friend

Gillian and Scott Reeder
Ann Reichelderfer and Douglas H. Blair
Matthew Roden and Jessica Vieira
Elisa and Richard Rosen
Schiro Family Foundation
JP Schnapper-Casteras and Tamara Klajn
Gregg and Zvia Schoenberg
Andrew and Catherine Sidamon-Eristoff
John and Louise Steffens
Marissa and Jesse Treu
Louis Venezia and Melissa Klein
Cora Walker and Joshua Desai
Laura and Roscoe White
Robert Wuertz and Yoojin Grace Wuertz
Robert and Kathleen Zatta
Jerome Zeldis and Sharon Stamm

## FRIEND

Wassim Abida and Carolyn Yerkes
Alexander and Helen Ackley
Michael and Marta Aizenman
Stephen Lin and Carol Anderson
Mona Ashiya and Jonathan Bain
Allegra Asplundh and Evan McGarvey
Lorraine and David Atkin
Zlatko and Vesna Bacic
Sandy Bai and Xiaojian Chen
Arnold Rabson and Barbara Barnett
Leigh and John Bartlett
Eric and Chaitra Baum
Robert A. and Susan M. Beckman
Lucas and Lauren Bento
Torsten Bernewitz and Katrin Weber-Bernewitz
Toni Besselaar
Helena and Peter Bienstock
William and Helen Bikales
Felix Bird and Claire Bird
Elisabeth A. Bish
Carolyn Blanckmeister
Haim and Shari Blecher
Dr. Jan and Elly de Boer
Susan and Stephen Boughn
Ted Boyer and Jane Rohlf
Mark and Sarah Branon
**Gilles and Olivia Bransbourg**
Judith K. Brodsky
Sandra Brown
James and Pernilla Burke
Tom and Barbara Byrne
Mary Calabro and William Hery
Christopher and Michelle Chang
Dr. and Mrs. Paul H. Chew
Anthony Chiurco and Kimberly J. Chiurco
Mark Coleman and Jessica Pieters
Vicky and Brad Corrodi
Donna and Donald Deieso
Mary Dougherty and Erik Neumann
Marilyn R. Durkee and Erik H. Vanmarcke†



### Gilles Bransbourg

**Infosys Member (2024–25)**

"This has been one of the most meaningful years of my academic life. I've rarely experienced such freedom to write and research in my career, surrounded and supported by so many bright minds. The Institute offers an environment that is truly exceptional—and it exists thanks to the generosity of those who choose to support it. On behalf of my colleagues, I'd like to express my sincere gratitude. The spirit of scientific inquiry and collaborative research that defines this place is something truly unique that deserves praise."

Bransbourg's field of research deals with comparative economic and monetary history, from the ancient to the contemporary world. At the Institute, he pursued the completion of a monograph titled *Roman Imperial Economics*. Following his year at IAS, Bransbourg joined the Friends of the Institute—carrying forward the generosity he discovered here.

# ACKNOWLEDGEMENTS

Julia Eizenkop
Diane and Gregory Eshleman
Steven and Linda Gecha
Colleen Goggins
C. David Goldman and Debbie Bisno Goldman
Jill Goldman
Fred and Selma Goldstein
Milton and Patricia Grannatt
Stephanie and William Gray
Joshua and Lizabeth Greer
Joseph Guarnaccia
Anne Gutmann and Gary Johnson†
Joan and Jack Hall
Peter Ham
Jorgen and Susan Hansen
Scott and Kelly Harrison
Archer and Tom Harvey
Jamie and Kathy Herring
H. James Herring and Carol P. Herring†
Cynthia H. Hillas
Nancy Hingston
Peter Dougherty and Elizabeth Hock
Anne and Hervé Hoppenot
Bob and Lynn Johnston
Alexander Jones and Catherine Haines
Seth Joseffer and Patricia Kim
Drs. Welmoet and Daniel P. Van Kammen
Michael and Martha Kane
Timothy Karcher and Roberta Karcher
Terry Kent
John and Clare Kowalak
Ugur and Ayse Koyluoglu
Kathleen and Hartmut Kraft
Christopher Kuenne and Treby Williams
Ilyana Kuziemko and Isaac Solotaroff
William Bruce Leslie
Harry and Ellen Levine
Michael Lewis
Annie and Frank Li
Denis and Howard Lieberman
Donald and Nancy Light
Hung Ling and Gigi Hsu
Jeffrey Lipkowitz
Doris Ma and Ming Liu
Professor James H. Marrow and Dr. Emily Rose
Cecilia A. Mathews and Michael S. Mathews†
Tom Mavis and Anne Mavis
John L. McGoldrick
Pat and Bill McKinley
Jim McKinney and Valerie McKinney†
Ron Meier and Anil Perez
Andrew and Lillian Meyers
Carol and Brad Mills
Bradley and Robyn Mitchell
Dean and Jill Mitchell
Jennifer and Manish Monga
Sean and Hilary Murray
Susan Naquin
Jim and Carol Nawn
Isabel and Ricardo Nirenberg
Margaret Plantes and Theodore M. Brown
Marion and Robert Pollack Family Fund
at the Jewish Community Foundation
of Greater Mercer
Ludmilla G. Popova-Wightman
John H. Rassweiler
Charlie Rippin
Paul Rorem and Kate Skrebutenas
David and Christina Rowntree
William and Joan Rue
Carolyn and George Sanderson
Frutuoso Santana and Alexandra Day
Mr. and Ms. Henry Saveth
Debbie Schaeffer
Adam and Michal Scheer
Yi Shen
Tara Sikma
Dr. Mitchell Simon and Mrs. Marisa Simon
Yamile Slebi and Omar H. Téllez
Christa Smith and Michael Gatzke
Sundaresa and Inge Srinivasan
Caren Sturges
Julia Tamulis and Justin Mirabal
Alexander Taylor and Chenyu Zhang
Jeff and Regan Tuder
Karen Uhlenbeck and Robert F. Williams†
Gail M. Ullman
Thomas and Denise Valen
Ping Wang
Danfeng Wang and Haibo Wu
Robert and Stephanie Wedeking
Fong Wei and Theodora Wei†
Virginia and Jonathan Weiner
Louise and John Wellemeyer
Sharon and Russ White
Ralph and Joan Widner
Susan and Larry Wiley
Rosalie Siegel Wolarsky
Amber Wu


† Deceased * Matching Gift ** Corporate Friend

## GIFT-IN-KIND DONORS

Ashley and George Aitken-Davies
Lorenzo Alunni and Elisa Nocentini
Robert Antony
Robert Bjork
Yve-Alain Bois
Brad Bolman
Enrico and Barbara Bombieri
Dominique Borel
Gilles Bransbourg
Cédric Brélaz
Sonja Brentjes
Scott Bruce
Paul L. Chern
Melanie and John Clarke
John and Cheryl Dawson
Penelope L. Deutscher
Glenn Dynner
John Eldevik
The Emmanouilides Family
Jesús R. Escobar
Assefa Fiseha
Kristen R. Ghodsee
Miriam Haas
Michael Harrison
Robert Hatfield
Jonathan I. Israel
Padma Kaimal
David L. Kennedy
Yuki Moore Laurenti and Jeffrey Laurenti
Marilyn A. Lavin
Leon Levy Foundation
Peter Lighte and Julian Grant
Maria H. Loh
Michael Maas
Wilferd Madelung†
Robert and Ann McKeehan
Rosalind C. Morris
Elzbieta Olechowska
Dr. Ferris Olin
Florenzia Pacifico
Eric Palazzo
Mariana Palumbo
Christopher C. Parslow
Adriana Petryna
Princeton Symphony Orchestra
Orest Ranum
Lisa Regazzoni
Rebecca Repper
The Rockefeller Foundation
Sabine Schmidtke
Joan W. Scott
Asheesh K. Siddique
Thomas and Bridget Spencer
Heinrich von Staden and Eve Ingalls
Julia Ticona
Francesca Trivellato
Joëlle Vailly
Antonio Y. Vázquez-Arroyo
Hannah Wahl

## TRIBUTES

### In Memory of

NEELAM KUMARI ATWAL
Mickey Atwal

JOHN BAHCALL
Plamen Krastev

CATRIONA ALEXIS BUCHDAHL
Nicholas Buchdahl

GILES CONSTABLE
Alan E. Bernstein
Robert C. Figueira
Carmela Vircillo Franklin
Antoni A. Kosinski and Renate Blumenfeld-Kosinski

PATRICIA CRONE
Rosemary Stanfield-Johnson

CLAIRE DICKEY
Laurence Dickey

FREEMAN DYSON
Robert S. Doran

CLIFFORD GEERTZ
David Bjelajac
Karin Knorr Cetina
Gordon Schochet

FELIX GILBERT
Estate of George Labalme Jr.†
John E. Talbott

# ACKNOWLEDGEMENTS

CHRISTIAN HABICHT
Glenn R. Bugh
Margaret M. Miles
Stephen Tracy and June Allison

HARISH-CHANDRA
Anonymous
Roger E. Howe

WILLIAM S. HECKSCHER
Petra Chu

JOHN P. HEMPEL
Kristian Hempel

ROBERT S. HILLAS
Rob and Camden Hillas
Timothy Hillas
Wendy H. Miller and Roland A. Hillas

ALBERT HIRSCHMAN
Gordon Schochet

MICHEL V. HUGLO
Barbara Haggh-Huglo

LANDON JONES
Susan Becker
Virginia Mason
Woodwinds Partners in Ecology and the deTuro family

WILLIAM LAMPE
Susan Lampe

IRVING LAVIN
Diane Cole Ahl
Professor James H. Marrow and Dr. Emily Rose
Sarah McPhee

LISE MEITNER
Michael Konetschnik

MARSTON AND LOUISE MORSE
Antoni A. Kosinski and Renate Blumenfeld-Kosinski

DR. GEETHA RAMACHANDRAN
Doraiswamy Ramachandran

ABRAHAM ROBINSON
Volker Weispfenning

VLADIMIR VOEVODSKY
François Maniquet

MORTON WHITE
Robert C. Sleigh, Jr.

CLARENCE AND BERTHA WITHAM
Dave Witham

**In Honor of**

PROFESSOR VALDIR DE FARIAS BENTO
Lucas and Lauren Bento

ALAN BOWEN
Anonymous

GLEN BOWERSOCK
Annemarie and Gerald Carr
Bruce W. Frier
Dennis Kehoe

CAROLINE WALKER BYNUM
Pauline Yu

PATRICK GEARY
Columba Stewart

ASHLEY LYU AND JOHN KIM
Joe and Alice Small

ROBERT P. LANGLANDS
James Arthur
Freydoon Shahidi

PETER LIGHTE AND JULIAN GRANT
Christine Danser

MARIA LOH
Daniel Abramson

WALTER NEUMANN
Jonathan and Deborah Wahl



† Deceased * Matching Gift ** Corporate Friend

DAVID NIRENBERG
Teofilo Ruiz

RICHARD S. "DICK" PALAIS
Denise Kim and Rob Kusner

CHARLES SIMONYI
Scott and Laurie Oki

HEINRICH VON STADEN
Angela N.H. Creager

CHUU-LIAN TERNG
Denise Kim and Rob Kusner

KAREN UHLENBECK
Denise Kim and Rob Kusner

## LEGACY SOCIETY

The Legacy Society was established in 1995 to honor those who have made a planned gift to the Institute for Advanced Study or have informed the Institute of a bequest intention, IRA roll-over, or other provision in their estate plans. Legacy Society members include Trustees, Faculty and Faculty Emeriti, Friends, Members and Visitors, Staff, and other private donors. These gifts have a long-lasting impact on the Institute's programs and future generations of scholars.

Anonymous (2)
Robert and Susan Beckman
Victoria and Hank Bjorklund
Rick and Heather Black
Enrico Bombieri
Catherine and Cornelius Borman
Claude Calame
David L. Champi
Michael L. Cohen
John and Cheryl Dawson
Professor William Doyle, FBA
Masaaki Eguchi
Dale F. Eickelman
Janet and Arthur Eschenlauer
Graham Farmelo
Carl and Toby Feinberg
Dr. Cloudy (Klaus-Dietrich) Fischer
Dr. Paul Forman
Lor and Mike Gehret
Peter and Helen Goddard
Milton and Patricia Grannatt
Rachel D. Gray
Tina and Bill Greenberg
Phillip A. Griffiths
Robert M. Guralnick
Daphne Hawkes
Susanna B. Hecht
Dr. John P. Hempel†
Keith and Carolyn Hilles-Pilant
Norman Horing
William A. Howard
Bob and Pam Howell
Susan L. Huntington
Sarah B. Jones and Landon Y. Jones†
Saj-nicole A. Joni
Michael Keevak
George Labalme, Jr.†
Dr. Henry J. Landau†
Dr. Florian Langenscheidt
Robert and Charlotte Langlands
Walter H. Lippincott†
Virginia Loughlin
Robert MacPherson and Mark Goresky
Gregory Maertz
Steve Mariotti
Valerie† and Jim McKinney
Beverly Mielke
Dorothy C. Moote†
Alexander P. Mourelatos
Elena† and Georgio† Petronio
Susan E. Ramirez
John H. Rassweiler
Theodore Reff
Barbara Heard Roberts
Daniel H. Saracino
Tomasina Pia Schiro
Alan E. Shapiro
Robert J. Sibner
Hilary Silver
N. J. Slabbert

# ACKNOWLEDGEMENTS

James D. Stasheff
Alexandra Tatnall
Chuu-Lian Terng and Richard S. Palais
Franklin K. Toker
Grazia Tonelli
Marilyn and Scott Tremaine
Karen Uhlenbeck and Robert Williams†
Mrs. Veda Varadarajan
Professor C. Franciscus Verellen and
Mrs. Isabelle M. Verellen
Brian F. Wruble

## Martin A. Chooljian

Martin A. Chooljian† joined the Institute's Board of Trustees in 1997 and served with distinction across multiple committees during his 13-year tenure. He and his wife, Helen†, were enthusiastic supporters as Friends of the Institute, and in recognition of Martin's service and generosity, he was named an honorary lifetime member of the Friends Executive Committee in 2016.

In 2000, the Chooljians established the Martin A. and Helen Chooljian Membership to support scholars in the School of Natural Sciences. This fund continues to support Members like Samuel Leutheusser (2024–25), who explores computational tools for understanding local observables in quantum gravity.

Their commitment deepened with a second endowed Membership in Biology, advancing research in the Simons Center for Systems Biology. This support enables Members from the Institute's diverse and collaborative community to advance their research, including Antonis Georgiou (2024–26), who investigates mathematical models of human memory.

Like the tree planted on our campus in their honor, the Chooljians' generosity continues to grow—nurturing discovery and shaping the Institute's intellectual community.





† Deceased * Matching Gift ** Corporate Friend

# DIRECTORS, FACULTY, AND TRUSTEES

## Director and Leon Levy Professor

David Nirenberg

## Past Directors (in order of service)

Abraham Flexner
Frank Aydelotte
J. Robert Oppenheimer
Carl Kaysen
Harry Woolf
Marvin L. Goldberger
Phillip A. Griffiths
Peter Goddard
Robbert Dijkgraaf

## Faculty and Faculty Emeriti

### School of Historical Studies

Suzanne Conklin Akbari
Yve-Alain Bois
Glen W. Bowersock
Caroline Walker Bynum
Angelos Chaniotis
Nicola Di Cosmo
*Luce Foundation Professor in East Asian Studies*

Patrick J. Geary
Jonathan Israel
Myles W. Jackson
*Albers-Schönberg Professor in the History of Science*

Maria H. Loh
Sabine Schmidtke
Francesca Trivellato
*Andrew W. Mellon Professor*

Heinrich von Staden

### School of Mathematics

Bhargav Bhatt
*Fernholz Joint Professor*

Enrico Bombieri
Camillo De Lellis
*IBM von Neumann Professor*

Pierre Deligne
Irit Dveer Dinur
*Betsey Lombard Overdeck Theory of Computing Professor*

Phillip Griffiths
Helmut Hofer
*Hermann Weyl Professor*

Robert P. Langlands
Elon Lindenstrauss
Jacob Lurie
*Frank C. and Florence S. Ogg Professor*

Robert D. MacPherson
Aaron Naber
Peter Sarnak
Thomas Spencer
Akshay Venkatesh
*Robert & Luisa Fernholz Professor*

Avi Wigderson
*Herbert H. Maass Professor*

### School of Natural Sciences

Stephen L. Adler
Nima Arkani-Hamed
*Gopal Prasad Professor*

Peter Goddard
Peter Goldreich
Stanislas Leibler
Arnold J. Levine
Juan Maldacena
*Carl P. Feinberg Professor*

Nathan Seiberg
*Charles Simonyi Professor*

James Stone

Scott Tremaine
Michail Tsodyks
*C.V. Starr Professor*

Edward Witten
Matias Zaldarriaga
*Richard Black Professor*

### School of Social Science

Wendy Brown
*UPS Foundation Professor*

Didier Fassin
*James D. Wolfensohn Professor*

Alondra Nelson
*Harold F. Linder Professor*

Joan Wallach Scott
Michael Walzer

### Legacy Programs

Piet Hut

## Past Faculty

James W. Alexander
Andrew E. Z. Alföldi
Danielle S. Allen
Michael F. Atiyah
John N. Bahcall
Arne K. Beurling
Armand Borel
Jean Bourgain
Luis A. Caffarelli
Harold F. Cherniss
Marshall Clagett
Giles Constable
Patricia Crone
José Cutileiro
Roger F. Dashen

# DIRECTORS, FACULTY, AND TRUSTEES

Freeman J. Dyson
Edward M. Earle
Albert Einstein
John H. Elliott
Clifford Geertz
Felix Gilbert
James F. Gilliam
Kurt Gödel
Hetty Goldman
Oleg Grabar
Christian Habicht
Harish-Chandra
Jonathan Haslam
Ernst Herzfeld
Albert O. Hirschman
Lars V. Hörmander
Ernst H. Kantorowicz
George F. Kennan
Irving Lavin
Tsung-Dao Lee
Elias A. Lowe
Avishai Margalit
Eric S. Maskin
Jack F. Matlock, Jr.
Millard Meiss
Benjamin D. Meritt
John W. Milnor
David Mitrany
Deane Montgomery
Marston Morse
J. Robert Oppenheimer
Abraham Pais
Erwin Panofsky
Peter Paret
Tullio E. Regge
Winfield W. Riefler
Dani Rodrik
Marshall N. Rosenbluth
Atle Selberg
Kenneth M. Setton
Carl L. Siegel
Walter W. Stewart
Bengt G. D. Strömgren
Richard Taylor
Homer A. Thompson
Kirk Varnedoe
Oswald Veblen
Vladimir Voevodsky
John von Neumann
Robert B. Warren
André Weil
Hermann Weyl
Morton White
Hassler Whitney
Frank Wilczek
Ernest Llewellyn Woodward
Chen Ning Yang
Shing-Tung Yau

## Board of Trustees

John A. Overdeck
*Chair of the Board*

Nancy B. Peretsman
*Vice Chair of the Board*

Charles Simonyi
*Chair Emeritus*

Ann-Kristin Achleitner
Victoria B. Bjorklund
Neil A. Chriss
Christopher Cole
Paul DiMaggio
Mario Draghi
Mark Heising
Fred Hu
Jeanette Lerman-Neubauer
David F. Marquardt
Jonathan M. Nelson
David Nirenberg
John A. Overdeck
Nancy B. Peretsman
Sandra E. Peterson
Anoop Prasad
Jörn Rausing
David M. Rubenstein
Charles Simonyi
Mike Speiser
Gigliola Staffilani
Peter Svennilson
Shirley M. Tilghman
Pauline Yu

## Trustees Emeriti

Richard B. Black
Roger W. Ferguson, Jr.
E. Robert Fernholz
Peter R. Kann
Spiro J. Latsis
Martin L. Leibowitz
David K.P. Li
Nancy S. MacMillan
Martin Rees
Eric E. Schmidt
Ronaldo H. Schmitz
Harold T. Shapiro
Michel L. Vaillaud
Shelby White
Marina v.N. Whitman
Brian F. Wruble



Dedicated entirely to the possibilities of thought, the Institute is restricted by no boundaries—geographical, disciplinary, temporal—in its pursuit of discovery. In this immersive space of freedom, conventional time feels altered, fostering moments of unexpected serendipity, surprise, and wonder.



IAS | INSTITUTE FOR ADVANCED STUDY

1 Einstein Drive | Princeton, New Jersey 08540
www.ias.edu | 609.734.8000

InstituteforAdvancedStudy
@the_IAS
videosfromIAS
@instituteforadvancedstudy
institute-for-advanced-study