IAS | INSTITUTE FOR ADVANCED STUDY

Faculty and Members 2024–2025

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.

—Mission statement of the Institute for Advanced Study by founding Director Abraham Flexner, Organization Meeting, October 10, 1930

It is fundamental in our purpose, and our express desire, that in the appointments to the staff and faculty as well as in the admission of workers and students, no account shall be taken, directly or indirectly, of race, religion, or sex. We feel strongly that the spirit characteristic of America at its noblest, above all the pursuit of higher learning, cannot admit of any conditions as to personnel other than those designed to promote the objects for which this institution is established, and particularly with no regard whatever to accidents of race, creed, or sex.

—Louis Bamberger and Caroline Bamberger Fuld, in a letter dated June 4, 1930, to the Institute's first Board of Trustees

Cover: Emily Hayes, Visitor (2023) in the School of Historical Studies, spent her time at IAS working on a manuscript that explores the interplay between the "magic lantern" and the development of British geography in the late nineteenth and early twentieth century. Photo: Sameer Khan

Opposite page: Member Sierra Lomuto and Willis F. Doney Member Yan Liu, both from the School of Historical Studies, engaged in independent contemplation in the Historical Studies-Social Science Library. Photo: Sameer Khan

Contents

Information contained herein is current as of September 20, 2024

Introduction

The Institute for Advanced Study is an international center for theoretical research and intellectual inquiry that provides an exceptional environment for the acceleration of ideas and knowledge. It creates time and space for solitary work as well as dialogue among some 250 researchers selected each year from more than 100 institutions around the world. Scholars, who come to the Institute at various stages in their careers, are mentored by a permanent Faculty, each of whom are preeminent leaders in their fields. From postdocs with new perspectives and tools, to established experts who create and advance fields of inquiry, the Institute's focused yet freely inquisitive atmosphere enables advancement in unforeseeable ways, leading to societal innovation and new understanding.

Located in Princeton, New Jersey, the Institute was founded in 1930 with the motto "Truth and Beauty." It is an independent educational institution that charges no tuition and relies on charitable contributions and grants for its operation. Brother-and-sister philanthropists Louis Bamberger and Caroline Bamberger Fuld established the Institute in the vision of founding Director Abraham Flexner.

At the Institute, everything is designed to encourage scholars to pursue their research: Members carry out their work in a setting where human scale has been carefully maintained to encourage the sharing of ideas, serendipitous interaction, and friendship. Members' freedom to express their scholarly convictions on a wide range of topics without institutional hindrance or interference is considered vital to the Institute's academic integrity, and the Institute refrains from issuing statements except on matters directly related to its founding values in order to support the free pursuit of research.

Research spans four Schools—Historical Studies, Mathematics, Natural Sciences, Social Science—and is focused on long-term and fundamental outcomes, with no concern for immediate application but rather revolutionary and sustained impact. IAS is a scholar's paradise—a campus of unparalleled energy and curiosity, free of external pressures and academic restraints, where exceptional minds have boundless opportunity to explore what is not yet known. Among present and past Faculty and Members, there have been 35 Nobel Laureates, 44 of the 62 Fields Medalists, and 23 of the 27 Abel Prize Laureates, as well as winners of the Turing Award; the Pulitzer Prize in History; the Wolf, Holberg, and Kluge prizes; and many MacArthur and Guggenheim fellows, among other honors.

Long and complex chains of knowledge have developed in numerous and astounding ways through research originating at the Institute—from the development of programmable computers and the uncovering of deep symmetries of nature to advances in societal understanding and historical practice. Current research at IAS involves the following ventures: pursuing a theory of everything that governs the smallest and largest phenomena in our universe, a unified framework pursued by IAS founding Professor Albert Einstein, father of the theory of relativity; using computational tools, models, and simulations to determine the origins and long-term fate of the universe; establishing the theoretical foundations of machine learning; reconstructing history through textual and material evidence, utilizing digital resources, climate data, and genetic information; examining facets of society previously overlooked or hidden, such as racial formation and social citizenship and emerging scientific and technological phenomena; and developing a critical anthropology of politics and morality.

Albert Einstein, Kurt Gödel, Hetty Goldman, George F. Kennan, Erwin Panofsky, John von Neumann, and Hermann Weyl were among the first in a long line of distinguished Institute scientists and scholars to produce a deeper understanding of the physical world and of humanity. Flexner's vision has been maintained by his successors as Director: Frank Aydelotte, J. Robert Oppenheimer, Carl Kaysen, Harry Woolf, Marvin L. Goldberger, Phillip A. Griffiths, Peter Goddard, Robbert Dijkgraaf, and David Nirenberg, who became the Institute's tenth Director in February 2022.

David Nirenberg

Director and Leon Levy Professor

David Nirenberg is a historian and author, recognized for wide-ranging scholarship on the interaction of Christians, Jews, and Muslims. His research provides insight into questions of racism, Anti-Semitism, and Christian-Muslim relations. At the University of Chicago, Nirenberg served as founding director of the Neubauer Collegium for Culture and Society, Dean of the Social Sciences, Executive Vice Provost, and Interim Dean of the Divinity School. Nirenberg is a member of the American Philosophical Society, American Academy of Arts and Sciences, and Medieval Academy of America. His most recent book, co-authored with his father (Ricardo L. Nirenberg) is *Uncountable: A Philosophical History of Number and Humanity from Antiquity to the Present*, which seeks to understand the powers and limits of the sciences and the humanities. He is currently at work on a history of racial thought in Judaism, Christianity, and Islam.

School of Historical Studies

Administrative Officer: Janet Yoon

The School of Historical Studies was established in 1949 with the merging of the School of Economics and Politics and the School of Humanistic Studies. It bears no resemblance to a traditional academic history department as it brings together disciplines that are normally isolated in separate departments. The School supports all inquiry for which historical methods and approaches are appropriate throughout the humanistic disciplines, from socioeconomic developments, political theory, and modern international relations, to the history of art, science, philosophy, music, and literature. In geographical terms, the School concentrates primarily on the history of Western, Near Eastern, and Asian civilizations, with emphasis on Greek and Roman civilizations, the history of Europe (medieval, early modern, and modern), the Islamic world, and East Asia, but it also promotes research in areas beyond the scholarly interests of its Faculty. The School also supports scholars whose work focuses on other regions, including Central Asia, India, Africa, and the Americas.

The Members of the School represent a variety of nationalities and career stages, with a continually increasing number of young researchers and scholars from less privileged countries. The Faculty and Members of the School do not adhere to any one point of view but practice a range of methods of inquiry and scholarly styles, both traditional and innovative, ranging from the edition of texts and the analysis of images to cooperations with the social and natural sciences. Uniquely positioned to sponsor work that crosses conventional departmental and professional boundaries, the School actively promotes interdisciplinary research and cross-fertilization of ideas. It thereby supports research that often is not possible in other academic environments and encourages the creation of new historical enterprises.

Suzanne Conklin Akbari

Professor · Medieval Studies

Suzanne Conklin Akbari has expanded the range and methods of exploring texts from the Middle Ages, pushing the boundaries of traditional readings and exploring shared histories. Her research has traced the evolving relationship between sight and knowledge as manifested in a range of poetic texts, explored the relationship between Islam and Christianity, challenged the notion of medieval European literature's insularity, and highlighted the influence of Arabic poetry, music, and philosophy. Her current research considers how historical fields intersect with Indigenous Studies, grounded on ongoing collaborations with Lunaape (Delaware) communities. She also co-hosts a literature podcast called *The Spouter-Inn*.

Angelos Chaniotis

Professor · Ancient History and Classics

Angelos Chaniotis is engaged in wide-ranging research in the social, cultural, religious, legal, and economic history of the Hellenistic world and the Roman East. The author of many books and articles and senior editor of the *Supplementum Epigraphicum Graecum*, he has worked on war, religion, communicative aspects of rituals, and strategies of persuasion in the ancient world. His current research focuses on emotions, memory, identity, the history of the night, and the history of Aphrodisias (Asia Minor). He is the co-director of the archaeological excavation of Lyktos on Crete.

Nicola Di Cosmo

Luce Foundation Professor in East Asian Studies · East Asian Studies

Nicola Di Cosmo's main field of research is the history of the relations between China and Inner Asia from prehistory to the modern period. Within that broad area, he has published on the early history of China's relations with steppe nomads (e.g., *Ancient China and Its Enemies: The Rise of Nomadic Powers in East Asian History*, 2002) and on Mongol and Manchu history (e.g., *Manchu-Mongol Relations on the Eve of the Qing Conquest*, 2003), and he has edited several books, including *The Cambridge History of Inner Asia* (2009). His most recent works explore the use of proxy data from climatology and other palaeosciences in the study of the history of China and Central Asia, with special reference to early Eurasian nomads, the Mongol empire, and the Qing dynasty.

Myles W. Jackson

Albers-Schönberg Professor in the History of Science · History of Science

Myles W. Jackson explores the intersections between science, technology, aesthetics, history, and society. The breadth of Jackson's research extends from the artisanal production of scientific knowledge in nineteenth-century Germany to molecular biology and physics, intellectual property and privacy issues, knowledge sharing, race and genomics, bioengineering, and the interactions between musicians, natural scientists, and radio engineers. His scholarship is noted for its cross-disciplinary methodology which interweaves economic, commercial, and scientific insights, pushing the boundaries of the field to establish fresh lines of inquiry.

Maria H. Loh

Professor · Art History

Maria H. Loh is best known for her work on Venetian art of the sixteenth and seventeenth centuries, particularly Titian and the numerous copies and variants that his works have inspired. Through her scholarship, she has developed radical new approaches to key issues in the field of art history, producing groundbreaking work on originality and repetition, and the emergence of the early modern artist. Loh has also written on rainbow imagery in Stuart England, melancholia and the Renaissance in nineteenth-century Italy, remakes in Chinese cinema, repetition in Alfred Hitchcock's *Vertigo*, and the work of contemporary artists such as Sherrie Levine. She is an advocate for the critical role of art history as a humanistic discipline and for the public humanities at large.

Sabine Schmidtke

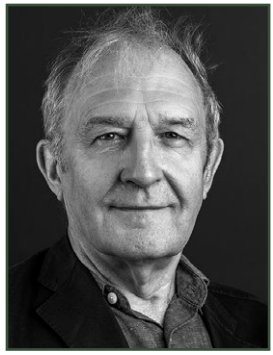
Professor · Islamic Intellectual History

Sabine Schmidtke is a scholar of Islamic intellectual history whose pioneering research has transformed perspectives on the interrelations and connections among different strands of intellectual inquiry—across time, place, religions, and philosophical schools. Schmidtke is currently working on the history of Islamic thought in the post-classical period (thirteenth to nineteenth century), with a focus on reconstructing the textual heritage and the intellectual import of the Islamic intellectual world, from Iran and Central Asia to Turkey and Yemen. She is also engaged in a comprehensive study of the Muslim reception of the Bible, a topic on which she has published extensively over the past years.

Francesca Trivellato

Andrew W. Mellon Professor · Early Modern Europe

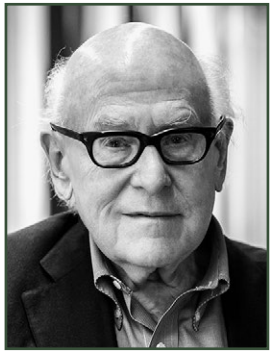
A leading historian of early modern Italy and continental Europe, Francesca Trivellato has made significant and groundbreaking contributions to our understanding of the organization and culture of the marketplace in the pre-industrial world. Trivellato's original and imaginative research has revitalized the study of early economic history, and her influential work on cross-cultural trade intersects the fields of European, Jewish, Mediterranean, and global history, religion, and capitalism.



Yve-Alain Bois

Professor Emeritus · Art History

A specialist in twentieth-century European and American art, Bois is recognized as an expert on a wide range of artists, from Henri Matisse and Pablo Picasso to Piet Mondrian, Barnett Newman, and Ellsworth Kelly. Bois is currently working on several long-term projects, foremost among them the five-volume catalogue raisonné of Ellsworth Kelly's paintings and sculptures.



Glen W. Bowersock

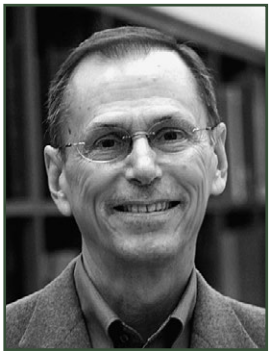
Professor Emeritus · Ancient History

Glen W. Bowersock is an authority on Greek, Roman, and Near Eastern history and culture as well as the classical tradition in modern literature. He uses his exceptional knowledge of classical texts in many languages, together with inscriptions, coins, mosaics, and archaeological remains, to illuminate the mingling of different cultures and to draw unexpected and revelatory conclusions. His research interests include the Greek East in the Roman Empire and late antiquity as well as pre-Islamic Arabia.

Caroline Walker Bynum

Professor Emerita · European Medieval History

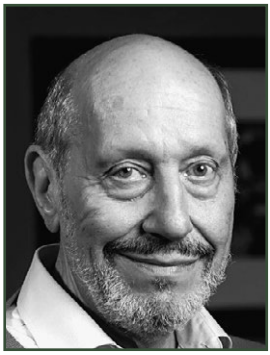
Caroline Walker Bynum's work has been instrumental in introducing the concept of gender into the study of medieval Christianity. Her path-breaking books have created the paradigm for the study of women's piety that dominates the field today and helped propel the history of the body into a major area of premodern European Studies. Several of her essays are widely cited in discussions of historical method. Her work in *Christian Materiality* (2011) and *Dissimilar Similitudes* (2020) is a radical reinterpretation of the nature of Christianity on the eve of the reformations of the sixteenth century and an exploration of theoretical problems concerning questions of historical comparison. She is currently continuing to work on Christian devotional objects in comparative perspective.



Patrick J. Geary

Professor Emeritus · Medieval History

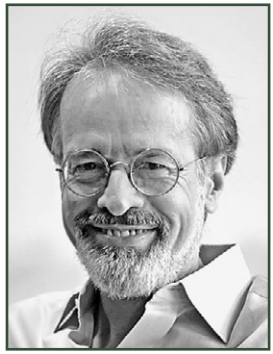
Patrick J. Geary's work extends over a vast range of topics in medieval history, both chronologically and conceptually—from religiosity and social memory, to language, ethnicity, social structure, and political organization. Currently, Geary is leading a major project that studies the migration of European societies north and south of the Alps through the analysis of ancient DNA in Longobard-era cemeteries in Hungary and in Italy. He is Co-Principal Investigator of a European Research Council Synergy Grant project integrating genetic, archaeological, and historical perspectives on Eastern Central Europe in order to understand the impact of migrations and mobility on the population of the Carpathian Basin from 400–900 C.E.



Jonathan Israel

Professor Emeritus · Modern European History

Jonathan Israel's work is concerned with European and European colonial history from the Renaissance to the eighteenth century. His recent work focuses on the impact of radical thought (especially Spinoza, Bayle, Diderot, and the eighteenth-century French materialists) on the Enlightenment and on the emergence of modern ideas of democracy, equality, toleration, freedom of the press, and individual freedom.



Heinrich von Staden

Professor Emeritus · Classics and History of Science

Heinrich von Staden has written on a variety of topics in ancient science, medicine, philosophy, and literary theory, from the fifth century B.C.E. to the fifth century C.E. Drawing on a wide range of scientific, philosophical, and religious sources, he has contributed to the transformation of the history of ancient science and medicine, particularly of the Hellenistic period. His book *Herophilus: The Art of Medicine in Early Alexandria* (1989) is a major contribution to the history of Greek intellectual discourse. His current projects include a book on Erasistratus (one of the two early pioneers of human dissection), a study of the role of animals in ancient scientific theories and practices, and further work on the "semantics of matter" in ancient science.

Richard P. Anderson

History of Modern Architecture · The University of Edinburgh · *s*
Elizabeth and J. Richardson Dilworth Member

While at IAS, Richard P. Anderson will study the work of the painter, designer, and architect El Lissitzky. Anderson will trace the profile of an unfamiliar figure who has hitherto stood in the shadows of his other personae: El Lissitzky, writer and critic.

Hassan Farhang Ansari

Islamic Law and Theology · Institute for Advanced Study · *ra*

Hassan Farhang Ansari focuses on the study of Islamic theology, philosophy, law, and legal theory.

Elena Aronova

History of Science · University of California, Santa Barbara
Willis F. Doney Member

Elena Aronova is interested in the history of evolutionary and environmental sciences, science during the Cold War, history of science in Russia and the Soviet Union, and other topics. While at IAS, she will work on a book on how biologists offered multiple ways to conceive of time and temporality in the nineteenth and twentieth centuries.

Pamela Ballinger

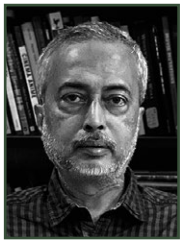
Late Modern and Modern Italian History · University of Michigan
Hans Kohn Member

While at IAS, Pamela Ballinger will work on her book, "Materializing Mussolini's Mediterranean: Infrastructures of Fascist Empire." Interrogating what the expansionist project of Mare Nostrum meant in material terms, she explores the mobilization of fisheries, the creation of scientific infrastructure, and special customs regimes in ports.

Hannah Barker

Medieval Mediterranean History · Arizona State University
AMIAS Member

Hannah Barker studies connections between the Black Sea and the Mediterranean, especially the slave trade, during the late medieval period. At IAS, she will work on a book about petitions by enslaved people in medieval Genoa who claimed freedom on the basis that their enslavement had been illegal.



Moinak Biswas

Film, Fine Arts, Literature · Jadavpur University · *f*
Elizabeth and J. Richardson Dilworth Member

Moinak Biswas's research at IAS will explore the function of home and landscape in the work of some major Indian artists of the twentieth century. Biswas would like to see if an alternative historical vision emerged through the archive of existence and accounts of contemplative life that art has left us.

Dina Boero

Ancient History, Classics · The College of New Jersey
Funding provided by the Fund for Historical Studies

Dina Boero's research elucidates the making of saints, the anthropology of pilgrimage, and the development of monasticism in late antique Syria. At IAS, she will examine the formation of stylitism and the history of Symeon the Stylite's cult.

Brad Bolman

History of Science · Institute for Advanced Study
Funding provided by the Herodotus Fund

Brad Bolman studies the history of knowledge about organisms. His first book, "Lab Dog: What Global Science Owes American Beagles," follows the emergence of beagles as the "laboratory dog" into the present. While at IAS, Bolman is working on a transnational history of mycology and fungal science, tentatively titled "The Decomposition Book."

Georgios Boudalis

Byzantine Culture and Archaeology, Book History, Codicology · Museum of Byzantine Culture, Thessaloniki, Greece · *s*
Funding provided by the Hetty Goldman Membership Fund

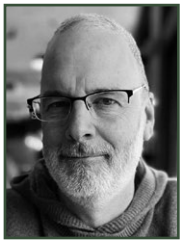
Georgios Boudalis is interested in the study of the archaeology of the codex, especially in the eastern Mediterranean, combining physical, iconographical, and written evidence. While at IAS, he will be working on his next book about the history and making of the bindings in Greek codices between the Byzantine and post-Byzantine period.

Gilles Bransbourg

Ancient History, Economic History, Numismatics · American Numismatic Society
Infosys Member

Gilles Bransbourg's field of research deals with comparative economic and monetary history, from the ancient to the contemporary world. At the Institute, he will be pursuing the completion of a monograph titled "Roman Imperial Economics."

f First Term · *s* Second Term · *m* Long-term Member · *v* Visitor · *dvp* Distinguished Visiting Professor
vp Visiting Professor · *ra* Research Associate



Scott G. Bruce

Medieval European History · Fordham University

Edwin C. and Elizabeth A. Whitehead Member; additional funding provided by The Andrew W. Mellon Foundation

Scott G. Bruce will research the reception history and influence of Greek patristic literature in the medieval Latin tradition.

Thomas A. Carlson

Medieval Middle Eastern History · Oklahoma State University

Patricia Crone Member

Thomas A. Carlson is a social and cultural historian of Christianity, Islam, and religious diversity in the medieval Middle East and Eastern Mediterranean. At IAS, he will be working on a book project exploring what impact religious diversity had on the late medieval "Islamic World" and "Byzantine World" (ca. 950–1500).

Ting Chang

History of Modern European Art · University of Nottingham

Willis F. Doney Member; additional funding provided by the Fund for Historical Studies

Ting Chang is an art historian. At IAS, she will work on "Touching History, Playing Empire, and Making Worlds," which investigates the efficacy of tactility, visuality, and ludicity in promoting the imperial project. She examines map-based games, globes, and optical devices made to foster an imperial sensibility in France and Britain.

Jessey Choo

History and Religion of Medieval China · Rutgers, The State University of New Jersey

Roger E. Covey Member in East Asian Studies

Jessey Choo's current research explores religion and women's everyday life in medieval China. While at IAS, she will work on her second book, tracing the development and consequence of a popular Buddho-Daoist soteriology that centers on childbirth and women's damnation to hell because of menses and parturition blood.

Emilie Connolly

North American and Indigenous History · Brandeis University

The Andrew W. Mellon Foundation Fellowship for Assistant Professors

Emilie Connolly is interested in the history of political economy and Indigenous peoples of North America. While at IAS, she will be completing a book on money, finance, and Indigenous dispossession, and starting a new project on taxation and Native sovereignty.

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vp Visiting Professor · *ra* Research Associate

Sandipto Dasgupta

Political Theory, History of Political Thought · The New School for Social Research

Elizabeth and J. Richardson Dilworth Member; additional funding provided by the Fund for Historical Studies

Sandipto Dasgupta is a political theorist and historian of political thought, with a research interest in the political theory of empire, decolonization, and postcolonial presents. At IAS, he is working on a book on the emergence and decline of the concept of public ownership in the postcolonial world.

Garrett Allen Davidson

Near Eastern and Islamic Studies · The College of Charleston

George F. Kennan Member

Garrett Allen Davidson studies the Islamic scholarly tradition, Arabic manuscript culture, and provenance history. While at IAS, he will be working on a monograph examining the recently discovered papers of Muḥammad Amīn al-Khānjī (d. 1938) and his role in the Islamic manuscript trade in the first half of the twentieth century.

Arnab Dey

Labor and Environmental History; Modern India · Binghamton University, The State University of New York · *s*

Funding provided by the Hetty Goldman Membership Fund

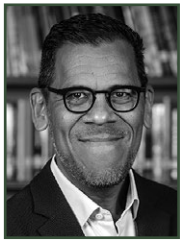
Arnab Dey's research has looked at the intersections of law, labor, and ecology in the making and unmaking of imperial commodity regimes in South Asia. While at IAS, he will be working on a book project on industrial disease and its impact on the working-class history of India.

Mara Yue Du

East Asian History · Cornell University

The Andrew W. Mellon Foundation Fellowship for Assistant Professors

Mara Yue Du is interested in the legal and political culture of late imperial and modern China (1600–present), Sino-foreign relations, Chinese communities overseas, and the global circulation of social Darwinism. While at IAS, Du is completing a book manuscript tentatively titled "China: From a Nationless State to a Nation Defined by State."



Jesús Escobar

Architectural History · Northwestern University

Funding provided by the Ruth Stanton Foundation Fund

While at IAS, Jesús Escobar will work on a book manuscript, "Americans Abroad in the Seventeenth Century: People, Buildings, and the Space of Empire," which explores individual experiences with architecture in Mexico, Peru, Spain, and Italy. He specializes in architecture, urbanism, and cartography of the Spanish Habsburg empire.

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vp Visiting Professor · *ra* Research Associate

Herschel Farbman

Comparative Literature · University of California, Irvine · *v*

Herschel Farbman works in comparative modernist studies, critical theory, psychoanalysis, and film and media studies. At IAS, he will be finishing a study of the earth's ongoingness even in the worst-case scenarios of environmental breakdown.

Ariel Fein

Byzantine and Islamic Art History · Institute for Advanced Study

Funding provided by the Herodotus Fund

Ariel Fein studies the medieval visual cultures of Byzantium and the Islamic world. Her research focuses on intercultural artistic connections across the frontier zones of the medieval Mediterranean, with a particular interest in the arts of Norman Sicily and the Arab-Christian communities of medieval Egypt and Ifriqiya.

Anne Feng

Art History · Boston University · *v/s*

Anne Feng is interested in the intersections between elemental media such as water and air and their roles in shaping visual and material cultures of China and Central Asia. While at IAS, she will be working on a book about Buddhist paradise images and water systems of the Tang empire (618–907 C.E.).

Marisa J. Fuentes

Early Modern Black Atlantic World · Rutgers, The State University of New Jersey

Friends of the Institute for Advanced Study Member

Marisa J. Fuentes is interested in histories of Atlantic slavery and critical historical methods. While at IAS, she will work on a book about discarded captives from the transatlantic slave trade in the seventeenth and eighteenth centuries.

Maria Fusaro

Social and Economic History · University of Exeter

Zurich Insurance Company Member

Maria Fusaro works at the intersection of the social, economic, and legal developments of pre-modern Europe, especially in relation to the early phases of globalization. While at IAS, she will work on the comparative analysis of maritime trade and employment in late medieval and early modern Europe.

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Paul Galvez

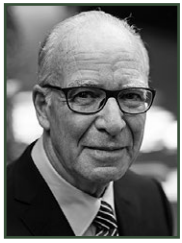
Art History · *v*

Paul Galvez is a historian of modern art from its historical emergence to the present. Galvez's research interests range broadly from realist painting to the Russian avant-garde to contemporary abstraction.

Durba Ghosh

Late Modern History, Britain and India · Cornell University · *f*
George F. Kennan Member

Durba Ghosh is working on a book that historicizes commemorative statues installed in Britain and India under colonial rule and removed after independence in 1947.



Gabriel Gorodetsky

Russian and British History in the 20th Century · All Souls College, University of Oxford and Tel Aviv University · *v/f*

Gabriel Gorodetsky published the rare diaries of Ivan Maisky, Soviet Ambassador in London from 1932–43, in three volumes with extensive commentary (Yale University Press), and a compendium single volume. While at the Institute, he will be working on the genesis of the Grand Alliance in World War II, as well as on Johannes Brahms's autumnal years.

Tobias Harper

Modern British Empire, Environmental History, History of Science · Arizona State University · *v*

Tobias Harper is a historian of Britain and the British Empire. While at IAS, Harper will be working on a book project called "The Settler Fishes of the Southern Hemisphere." This project examines how freshwater fish acclimatization projects in British colonies transformed the environment and shaped settler nationalism and law.

Dorothea Heuschert-Laage

Mongolian History · University of Bonn · *f*
Starr Foundation East Asian Studies Member

Dorothea Heuschert-Laage works on Mongolian political, legal, and cultural history. While at IAS, she will focus on Mongolian history writing in the early twentieth century.

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Katherine Victoria Hill

Early Modern, Global, and Environmental History · Birkbeck, University of London · *f*

Martin L. and Sarah F. Leibowitz Member

Katherine Victoria Hill focuses on questions of landscape, people, belonging, and heritage in the nonconformist religious communities, such as Mennonites in Europe, America, and the Global South, and also mountain refuges and huts, such as the bothies of the Scottish Highlands. While at IAS, she will work on Mennonite migrations in global contexts.

Ellie M. Hisama

Twentieth-Century U.S. Music History · University of Toronto · *f*

Edward T. Cone Member in Music Studies

Ellie M. Hisama is a social historian and music theorist. At IAS, she will work on a book on composer and musician Julius Eastman. Titled "The Fragment and the Long Song of Julius Eastman," her project addresses his fractured archive and language of ecstatic minimalism. It offers pathways of listening to his uncompromising musical engagements.

Benjamin Jerue

Classics · Universidad San Jorge · *v/f*

While at IAS, Benjamin Jerue will be working on the links between Greco-Roman historiography and rhetoric, focusing on authors such as Dionysius of Halicarnassus, Quintilian, Livy, and Cicero.

Nathaniel Kahn

Filmmaker, Intersection of Art and Science · *v*

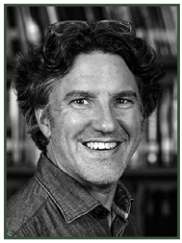
While at IAS, independent filmmaker Nathaniel Kahn will be co-hosting a series of film screenings as well as working on a project involving Hawaii in collaboration with a Native Hawaiian filmmaker, and a project involving Jewish immigration in the early twentieth century.

Matthew Keegan

Classical Arabic Literature, Islamic Studies · Barnard College

The Andrew W. Mellon Foundation Fellowship for Assistant Professors

While at IAS, Matthew L. Keegan will research the understudied poetry and prose of the era between the First Crusade and the fall of Baghdad to the Mongols. This literature has often been viewed through the lens of the Crusades, but this era was one of literary experimentation with a range of concerns beyond the counter-Crusade.



Sean Keller

Architectural History · Illinois Institute of Technology
Agnes Gund and Daniel Shapiro Member

Sean Keller is a historian and critic of modern and contemporary architecture, with a focus on the relationship of architecture and technology after 1945. While at IAS, he will be writing about the architecture of the 1972 Olympic Games in Munich.

Gavin Kelly

Latin Literature and Roman History · University of Edinburgh · *s*
Funding provided by the Fund for Historical Studies

While at the Institute, Gavin Kelly will complete and revise his translation of Ammianus Marcellinus (in collaboration with Michael Kulikowski of Penn State). This work will also feed into his planned critical edition of the same author for the Oxford Classical Texts.

Thomas Kelly

Chinese Literature · Harvard University · *s*
Funding provided by the Herodotus Fund

Thomas Kelly is a scholar of late imperial Chinese literature with related research interests in the history of writing, material culture, and premodern media studies. While at IAS, he will be working on a project that examines the literary history of ephemera in early modern China.

George A. Kiraz

Ottoman Religious Minorities, Syriac Studies · Beth Mardutho: The Syriac Institute · *ra*

George A. Kiraz is working on Ottoman Garshuni documents from the Mardin Patriarchal Archive dating to the late nineteenth century. These are documentary petitions addressed to the Syriac Orthodox Patriarchs who resided in Deir al-Zaʿfarān (Monastery of the Saffron).

Katerina Korola

Art History · University of Minnesota, Twin Cities · *f*
The Andrew W. Mellon Foundation Fellowship for Assistant Professors

Katerina Korola is an art historian and media scholar whose work explores the history of photography through an ecological lens. While at IAS, she will be working on her first book, "Picturing the Air: Photography and the Industrial Atmosphere," which tells a history of air pollution as a photographic problem.

f First Term · *s* Second Term · *m* Long-term Member · *v* Visitor · *dvp* Distinguished Visiting Professor
vp Visiting Professor · *ra* Research Associate

Ada Kuskowski

Medieval History, Legal History · University of Pennsylvania
Funding provided by the Patrons' Endowment Fund and the Hetty Goldman Membership Fund

Ada Kuskowski is a medieval and legal historian. Her work has focused on the construction of legal knowledge, especially customary law. While at IAS, she will explore law in the long aftermath of conquest and the formation of colonial legal imaginaries. Through this, she aims to rethink the broad contours of medieval law.

Anne E. Lester

Medieval History · Johns Hopkins University · *v*

Anne E. Lester's research, as a social historian of medieval Europe and the Levant, explores fragmentary sources from French and European archives to understand the role of individuals and objects in catalyzing changes in institutions, beliefs, and social relationships. While at IAS, she will complete a book focused on the movement of relics and other objects into Europe in the aftermath of the Fourth Crusade.

Han Hsien Liew

Islamic History and Political Thought · Arizona State University · *f*
Funding provided by the Herodotus Fund

Han Hsien Liew is an intellectual historian of the premodern Islamic world focusing on political thought and scholarly culture. At IAS, he will be completing his monograph, which examines the relationship between political thought, homiletic preaching, and emotions in the medieval Middle East through the writings of Ibn al-Jawzi.

Giuseppe Marcocci

Early Modern History, Iberian Empires · University of Oxford · *s*
Funding provided by the Fund for Historical Studies

Giuseppe Marcocci is an early modern historian with a strong interest in the experience of those who lived in the global empires of Spain and Portugal. While at IAS, he will work on the first book-length study of the Lisbon massacre of 1506.

Catherine Mas

History of Science, Modern American History · Florida International University
Funding provided by the Herodotus Fund

Catherine Mas studies the history of science in the U.S.–Caribbean context. Her current book project, "Sweet Captivity: A History of Primate Science from Cuba to the United States," centers on Cuban heiress Rosalía Abreu, whose extraordinary collection of apes helped launch a new era of medical experimentation and psychological research.

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vp Visiting Professor · *ra* Research Associate

Tamar Mayer

Art History · Tel Aviv University

Funding provided by the Herodotus Fund

Tamar Mayer specializes in nineteenth century French art and museum studies. She is interested in drawing history, theory, and practice, most recently researching the uses of drawing in the work of art historian Moshe Barasch. At IAS, she will explore Barasch's relationships with Jewish-American art historians and the time he spent at IAS.

Susan Alice McDonough

Medieval Mediterranean History · University of Maryland, Baltimore County

George William Cottrell, Jr. Member; additional funding provided by the Fund for Historical Studies

At IAS, Susan Alice McDonough will be writing a book that sees medieval Mediterranean sex workers as knowledge brokers. Through notarial and legal records collected from archives across the Latin Christian Mediterranean, she will explore how sex workers mobilized institutions that sought to exclude them in order to build community.

Christine Mehring

Art History · The University of Chicago

Elizabeth and J. Richardson Dilworth Member

Christine Mehring is interested in abstraction, unconventional art materials, the impact of World War II and an internationalizing art world, the crossovers between art and design, and public art. These issues are central to the book she is completing, with IAS Member Sean Keller, on the art and architecture of the Munich Olympics.

James A. Millward

East Asian and Central Asian History · Georgetown University · *s*

Starr Foundation East Asian Studies Member

James A. Millward is a historian of China and Inner (Central) Asia. At IAS, he will complete a historiographic critique of tropes in Chinese history that bolster Han-centric narratives and obscure the fabulous diversity of the Chinese past: "sinicization," "the tribute system," and "Chinese dynasties."

Melissa Moreton

History of the Book, Global Middle Ages · Institute for Advanced Study · *ra*

Melissa Moreton is a codicologist and scholar of the history of the book, who is particularly interested in material culture and the development and exchange of manuscript technologies across Eurasia, Africa, and the Americas. She works on projects relating to global book history (1000–1700) and Indigenous language and cultural revitalization.

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Ioannis Papadogiannakis

Late Roman World and Byzantium · King's College London
Stavros Niarchos Foundation Member

Ioannis Papadogiannakis is interested in the study of late Roman and Byzantine intellectual and religious history, the Christianization of the Roman empire, and interreligious debates. While at IAS, he will carry out a study of the role of emotions in everyday life in late Roman religious and social practice.

Ellen Mary Pilsworth

Twentieth-Century International History · University of Reading
Alfred Landecker Member

Ellen Mary Pilsworth's research explores responses to Nazism and the Holocaust within their contemporary historical context. Her previous work has studied the reception of memoirs in English by refugees from Nazism before 1945. At IAS, she will compare British responses to reports of Nazi violence with reports on colonial violence in the British Empire.

Natividad Planas

Early Modern Mediterranean History · Université Clermont Auvergne
Funding provided by the Fund for Historical Studies

Natividad Planas is a specialist in the history of early modern Spain and the Mediterranean, working on contacts between Europe and Islam. While at IAS, she will work on the significant presence of servile foreigners in European Mediterranean lands during the early modern period.

Amy Knight Powell

Northern European Art, 1300–1700 · University of Southern California
Felix Gilbert Member; additional funding provided by the Fund for Historical Studies

Amy Knight Powell is interested in the affordances and dis-affordances of artistic media, particularly painting. At IAS, she will be working on a long history of the easel painting's ambivalent relationship to its box-like constraints.

Fabrício Prado

History of Latin America and the Atlantic World · The College of William & Mary
Willis F. Doney Member; additional funding provided by the Hetty Goldman Membership Fund

Fabrício Prado's interests focus on the intersection of global trade, social networks, privateering, and state-building in the Atlantic World. While at IAS, Prado will work on a new book examining commercial and political networks linking the Iberian South Atlantic and the United States during the Age of Atlantic Revolutions.

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vp Visiting Professor · *ra* Research Associate

Alex Reiss-Sorokin

History of Information Technology · Institute for Advanced Study and Princeton University

Alex Reiss-Sorokin is a socio-legal historian of information technology. At IAS, she will work on "Trust in Search: Credibility and Doubt in Legal Research Technologies," tracing how American legal professionals came to use and trust information technology for legal research, and how it transformed their work and expertise in the process.

Ohad Reiss-Sorokin

History of Science, Intellectual History, History of the Social Sciences and Humanities · University of Virginia · *v*

Ohad Reiss-Sorokin is a historian of the mind sciences and humanities in twentieth-century Central Europe. Currently, Reiss-Sorokin is writing a book on the culture of intellectual circles in interwar Vienna. Reiss-Sorokin also writes on the history of the philosophy of science, Friedrich Hayek's neuropsychology, and the history of the desire for knowledge.

David Gilman Romano

Greek and Roman Archaeology · The University of Arizona · *f*

Willis F. Doney Member; additional funding provided by the Fund for Historical Studies

David Gilman Romano is Codirector and Field Director of the Mt. Lykaion Excavation and Survey Project in Arcadia, where he is working on Volume II, The Upper Sanctuary. He is also the Director of the Initiative for the creation of the Parrhasian Heritage Park of the Peloponnesos, Greece's first large scale national heritage park.

Charles Brian Rose

Mediterranean Archaeology, Classics · University of Pennsylvania · *f*

Funding provided by the Fund for Historical Studies

Having supervised the excavations at Troy in northwest Turkey, Charles Brian Rose is completing a monograph on Troy's West Sanctuary, which became tied to the Romans when they began promoting their Trojan ancestry. It also discusses architectural conservation strategies at Troy, and considers how an archaeologist can mishandle the staging of history.

Celia Sánchez Natalías

Ancient History, Classics · Universidad de Zaragoza · *f*

William D. Loughlin Member; additional funding provided by the Hetty Goldman Membership Fund

Celia Sánchez Natalías's research focuses on ancient magico-religious practices from the Roman West, and especially on Latin curse tablets (also known as *defixiones*). Her project at IAS deals with the reedition of a collection of erotic and circus curse tablets from North Africa.

Michael Schreffler

Art History · University of Notre Dame · *v/f*

Michael Schreffler's research draws from early sixteenth-century Spanish reports on the Americas to examine the shifting affordances of extraordinary objects made of gold and silver as they changed hands in the Peruvian Andes and traveled across the Atlantic. The project contributes to the scholarship on gold, its lure, and its extraction in the Americas, but it also engages in broader discussions on early modern ideals of authorship and paradigms of naturalism in artistic production.

Tansen Sen

Global Asia · New York University Shanghai and New York University

Funding provided by The Andrew W. Mellon Foundation

Tansen Sen has authored "Buddhism, Diplomacy, and Trade: The Realignment of Sino-Indian Relations, 600-1400 and India, China, and the World: A Connected History." While at IAS, he is researching the Ming admiral Zheng He and China-India relations during the 1950s.

Uri Zvi Shachar

Medieval Studies · Ben-Gurion University of the Negev

Funding provided by the Fund for Historical Studies

Uri Zvi Shachar is interested in interreligious encounters in late medieval Europe and the Mediterranean. While at IAS, Shachar will study a fourteenth century encyclopedia called *The Book of Sidrac*, as a part of a project that seeks to reevaluate the history of Mediterranean France in its rise as a site of intellectual and literary contact.

Nataly Shahaf

History of China, Buddhism, Print Culture · Institute for Advanced Study and Princeton University

Nataly Shahaf, a historian of China, explores the nexus of religion, science, and culture. At IAS, she will be working on her book, "Multiple Exposures: Ghosts, Buddhism, and Visual Heritage in Early Twentieth-Century China," examining how visual media technologies have shaped and been shaped by religious ideas, beliefs, and practices.

Rachel Silberstein

Chinese History, History of Material Culture, Global Trade, History of Technology · University of Washington · *s*

Starr Foundation East Asian Studies Member

Rachel Silberstein is a specialist in textiles and dress in Chinese history, with an interest in how people produce and consume the fabrics that adorn and define their bodies, and the impact of new technologies and trade. At IAS, she will work on a book project investigating the position of foreign textiles in Qing society and the economy.

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vp Visiting Professor · *ra* Research Associate

Anna Marie Stirr

Music · University of Hawai'i at Mānoa · *s*

Elizabeth and J. Richardson Dilworth Member; additional funding provided by the Fund for Historical Studies

Anna Marie Stirr is interested in the performing arts of Nepal and the Himalayan region. While at IAS, she will research the works of Nepali performer and musicologist Subi Shah and his impact on performance traditions of central Nepal.

SherAli K. Tareen

Early Modern and Modern Islam · Franklin & Marshall College

Patricia Crone Member

SherAli K. Tareen is the author of the award-winning book *Defending Muhammad in Modernity* (2020) and more recently, *Perilous Intimacies: Debating Hindu-Muslim Friendship after Empire* (2023). At IAS, he will be working on his third book, an intellectual history and biography of the preeminent eighteenth century scholar Shah Walyullah (d. 1762).

Sofía Torallas Tovar

Classics, Papyrology, Ancient Mediterranean, Greco-Roman Egypt · dvp

Sofía Torallas Tovar's current research projects include the study of a papyrus containing Athanasius's Letter to Dracontius, the critical edition of the Coptic versions of the Gospel of Mark (with Anne Boud'hors), and "Transmission of Magical Knowledge" dedicated to the publication of Greco-Egyptian magical papyri (with C. Faraone).

William Van Andringa

Archaeology and Roman History · École Pratique des Hautes Etudes, Université Paris Sciences et Lettres · *s*

Funding provided by The Gladys Krieble Delmas Foundation

Based on excavations carried out at Pompeii and Saint-Bertrand-de-Comminges, William Van Andringa's work has contributed to the renewal of methods for approaching religious and funerary phenomena in the Roman period, and has also helped to develop our knowledge of cities and urbanization in antiquity.

Dror Weil

History of Science in the Islamicate World and East Asia · University of Cambridge

Gerda Henkel Stiftung Member

Dror Weil is interested in scientific exchanges across Asia and the various forms of localization and naturalization of knowledge on the natural world. At IAS, he will be working on a monograph that explores the archives of Arabic and Persian texts in early modern China and the unique scholarly practices that facilitated their study.

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vp Visiting Professor · *ra* Research Associate

Rachel Weil

Early Modern British History · Cornell University

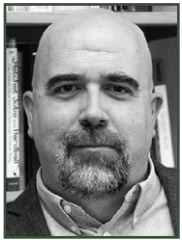
Funding provided by The Andrew W. Mellon Foundation

While at IAS, Rachel Weil will research a book about detention in early modern England, reconstructing contestations over the treatment of people (debtors, political suspects, persons awaiting trial) imprisoned for reasons other than having been convicted of a crime and historicizing the complex relationship of detention to punishment.

Daniel Whistler

History of Late Modern European Philosophy · Royal Holloway, University of London · *v/s*

Daniel Whistler is interested in the history of French, German, and Dutch philosophies during the eighteenth and nineteenth centuries, as well as in methodological issues in the historiography of philosophy, on which he will be working at IAS.



David Wilton

Historical Linguistics, Medieval English Literature · Institute for Advanced Study · *v*

David Wilton's current project examines lexicographic methodological practices, in particular the selection, presentation, and citation of usage citations in historical dictionaries, and how these practices are affected by the shift from print dictionaries to digital ones.

School of Mathematics

Administrative Officer: Nicole Maldonado

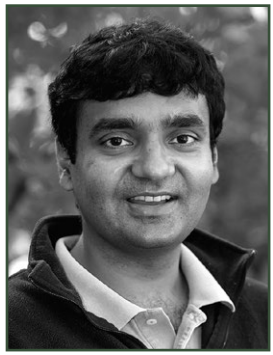
The School of Mathematics, established in 1933, was the first School at the Institute for Advanced Study. Oswald Veblen, Albert Einstein, John von Neumann, and Hermann Weyl were the first Faculty appointments. Kurt Gödel, who joined the Faculty in 1953, was one of the School's first Members. Today, the School is an international center for research in mathematics and theoretical computer science. Members discover new mathematical results and broaden their interests through seminars and interactions with the Faculty and with each other. Several central themes in mathematics in the last nine decades owe their major impetus to discoveries that took place at the Institute. As an example, the creation of one of the first stored-program computers, which von Neumann built on the Institute's campus, influenced the development of today's computers and formed the mathematical basis for computer software.

During the 2024–25 academic year, the School will host a special program on algebraic and geometric combinatorics. Confirmed participants include Dave Anderson, Federico Ardila, Shiyue Li, Lucia Lopez de Medrano, Oliver Lorscheid, Mateusz Michalek, Leonardo Mihalcea, Igor Pak, Greta Panova, Sam Payne, Cecilia Salgado, Alan Stapledon, and Liz Vivas.

Mathematical objects often have a combinatorial structure, sometimes overtly and other times in a concealed way. The special year will focus on research that uncovers and exploits such a structure in algebra and geometry. The program will bring together active researchers from various fields, including tropical geometry, matroid theory, computational algebraic geometry, representation theory, toric geometry, Schubert geometry, and "algebra and geometry over the field with one element." Many recent breakthroughs in these areas have come from teams of mathematicians with various backgrounds spanning the above disciplines, a trend that is likely to continue. We will make a concerted effort to foster the formation of such teams throughout the year. Experimental methods using computational tools will be actively explored.

Other programs associated with the School are the Park City Mathematics Institute (PCMI), an innovative program integrating mathematics research

and mathematics education, and the Program for Women^{+} and Mathematics (W^{+}AM), jointly sponsored by the National Science Foundation, Lisa Simonyi, Robert S. Hillas Fund, Minerva Research Foundation, Institute for Advanced Study, and Princeton University. W^{+}AM brings together research mathematicians with undergraduate and graduate students for an intensive weeklong workshop on campus.



Bhargav Bhatt

Fernholz Joint Professor

Bhargav Bhatt is interested in algebraic geometry, in a broad sense, and especially enjoys arithmetic questions. He has made fundamental contributions to *p*-adic Hodge theory and applied them to longstanding questions in commutative algebra and algebraic topology.

Camillo De Lellis

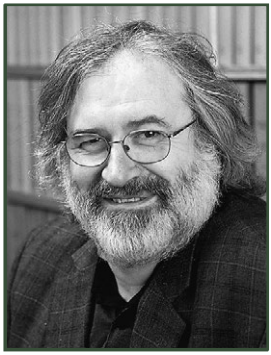
IBM von Neumann Professor

Camillo De Lellis, a geometric analyst, has broad expertise in the calculus of variations, geometric measure theory, and fluid dynamics. Using modern tools and innovative approaches, De Lellis has contributed to central problems in analysis and geometry, resulting in the creation of a transparent proof of regularity and opening new lines of inquiry for geometric analysts to explore.

Irit Dveer Dinur

Professor

Irit Dinur is interested in theoretical computer science, and especially in error-correcting codes and probabilistically checkable proofs, both of which capture a certain "robustness" in computation. Currently, she is interested in connecting these to so-called high-dimensional expansion—an analogue of expander graphs that draws on group theory, topology, and combinatorics.



Helmut Hofer

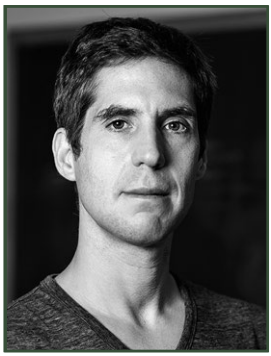
Hermann Weyl Professor

One of the founders of the area of symplectic topology, Helmut Hofer works on symplectic geometry, dynamical systems, and partial differential equations. His fundamental contributions to the field have led to a new area of mathematics known as Hofer geometry.

Elon Lindenstrauss

Professor

Elon Lindenstrauss is a leading authority in the field of ergodic theory, dynamical systems, and their applications to number theory. His major breakthroughs include the development of the theory of mean topological dimension, the proof of quantum unique ergodicity for arithmetic surfaces, and the characterization of the set of possible exceptions to the celebrated Littlewood conjecture in Diophantine approximation.



Jacob Lurie

Frank C. and Florence S. Ogg Professor

Jacob Lurie's research has influenced a diverse range of fields from topology to number theory, providing foundational work that has changed the way mathematicians describe and work with derived phenomena. His ideas have redefined the foundations of homotopy theory and topological aspects of algebraic geometry, providing a channel through which algebraic topology influences algebraic geometry. His proof of the Baez-Dolan cobordism hypothesis changed the field dramatically, providing a precise dictionary between manifold theory and operadic algebra as well as an applicable language for topological field theory.

Aaron Naber

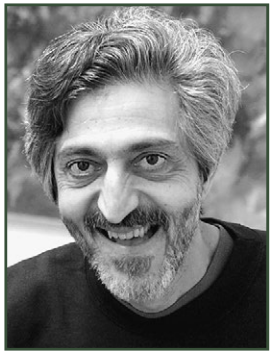
Professor

Aaron Naber, a world-renowned geometric analyst, has opened new horizons for studying singular sets arising in the calculus of variations. Powerful techniques that he has developed in the field of Riemannian geometry have also brought about new understandings of the structure of Gromov-Hausdorff limit spaces with lower Ricci bounds, Einstein manifolds, and their degenerations.

Akshay Venkatesh

Robert and Luisa Fernholz Professor

Akshay Venkatesh is a mathematician who has worked on many topics at the interface between number theory and other fields, including representation theory, dynamics, and algebraic topology. His recent work examines new algebraic structures related to the topology of locally symmetric spaces.



Avi Wigderson

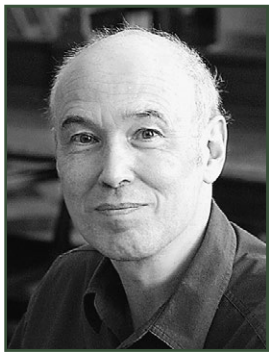
Herbert H. Maass Professor

Avi Wigderson is a widely recognized authority in the diverse and evolving field of theoretical computer science. His main research area is computational complexity theory. This field studies the power and limits of efficient computation and is motivated by such fundamental scientific problems as Does P = NP? (Can mathematical creativity be efficiently automated?) Can every efficient process be efficiently reversed? (Is electronic commerce secure?) Can randomness enhance efficient computation? Can quantum mechanics enhance efficient computation? How do we learn, and can machines be taught to learn like us (or better)?

Enrico Bombieri

Professor Emeritus

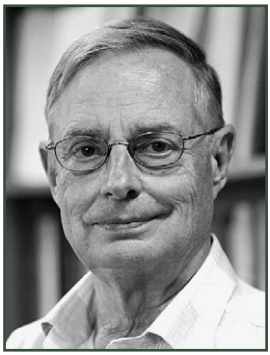
Enrico Bombieri, a Fields Medalist for his work on the large sieve and its application to the distribution of prime numbers, is one of the world's leading authorities on number theory and analysis. His work ranges from analytic number theory to algebra and algebraic geometry, and the partial differential equations of minimal surfaces. In the past decade, his main contributions have been in the active area of Diophantine approximation and Diophantine geometry, exploring questions of how to solve equations and inequalities in integers and rational numbers. Some of the above topics, in particular those related to prime number theory, have potential practical applications to cryptography and security of data transmission and identification.



Pierre Deligne

Professor Emeritus

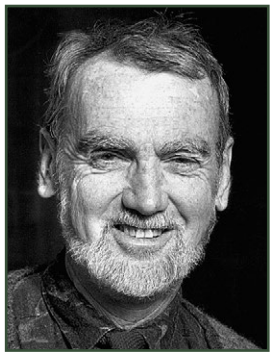
Pierre Deligne is known for his work in algebraic geometry and number theory. He pursues a fundamental understanding of the basic objects of arithmetical algebraic geometry—motive, L-functions, Shimura varieties—and applies the methods of algebraic geometry to trigonometrical sums, linear differential equations and their monodromy, representations of finite groups, and quantization deformation. His research includes work on Hilbert's twenty-first problem, Hodge theory, the relations between modular forms, Galois representations and L-series, the theory of moduli, Tannakian categories, and configurations of hyperplanes.



Phillip A. Griffiths

Professor Emeritus

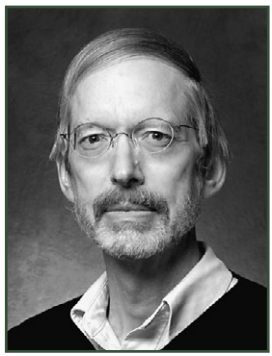
Phillip Griffiths initiated with his collaborators the theory of variation of Hodge structure, which has come to play a central role in many aspects of algebraic geometry and its uses in modern theoretical physics. In addition to algebraic geometry, he has made contributions to differential and integral geometry, geometric function theory, and the geometry of partial differential equations. A former Director of the Institute (1991–2003), Griffiths chaired the Science Initiative Group, which fosters science in the developing world through programs such as the Carnegie–IAS African Regional Initiative in Science and Education.



Robert P. Langlands

Professor Emeritus

Robert Langlands's profound insights in number theory and representation theory include the formulation of general principles relating automorphic forms and algebraic number theory; the introduction of a general class of L-functions; the construction of a general theory of Eisenstein series; the introduction of techniques for dealing with particular cases of the Artin conjecture (which proved to be of use in the proof of Fermat's theorem); the introduction of endoscopy; and the development of techniques for relating the zeta functions of Shimura varieties to automorphic L-functions. Mathematicians have been working on his conjectures, the Langlands Program, for the last three decades. In recent years, he has been preoccupied by the geometric theory of automorphic forms.



Robert MacPherson

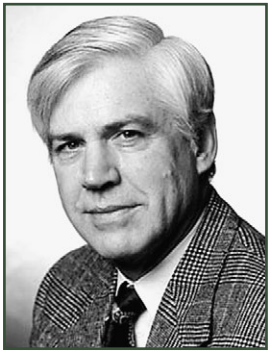
Professor Emeritus

Robert MacPherson's work has introduced radically new approaches to the topology of singular spaces and promoted investigations across a great spectrum of mathematics. He works in several fields of geometry-topology, algebraic geometry, differential geometry, and singularity theory. He is especially interested in aspects of geometry that interact with other areas of mathematics, such as the geometry of spaces of lattices, which interacts with modular forms, and the geometry of toric varieties, which interacts with combinatorics.

Peter Sarnak

Professor Emeritus

Peter Sarnak has made major contributions to number theory and to questions in analysis motivated by number theory. His interest in mathematics is wide-ranging, and his research focuses on the theory of zeta functions and automorphic forms with applications to number theory, combinatorics, and mathematical physics.



Thomas Spencer

Professor Emeritus

Thomas Spencer has made major contributions to the theory of phase transitions and the study of singularities at the transition temperature. In special cases, he and his collaborators have proved universality at the transition temperature. Spencer has also worked on partial differential equations with stochastic coefficients, especially localization theory. He is presently developing a mathematical theory of supersymmetric path integrals to study the quantum dynamics of a particle in random media. His other interests include random matrices, chaotic behavior of dynamical systems, and nonequilibrium theories of turbulence.

Dave Anderson

Algebraic Geometry and Combinatorics · The Ohio State University · *s*
Funding provided by the Charles Simonyi Endowment

Dave Anderson is interested in geometric manifestations of combinatorial positivity, particularly in questions related to Schubert varieties, toric varieties, and spaces with group actions.

Grigory Andreychev

Arithmetic Geometry · Institute for Advanced Study
Funding provided by the National Science Foundation

Grigory Andreychev studies K-theory and localizing invariants in algebraic and arithmetic geometry.

Federico Ardila

Algebraic and Geometric Combinatorics · San Francisco State University
Friends of the Institute for Advanced Study Member

Federico Ardila investigates objects in geometry, algebra, topology, and applications by understanding their underlying combinatorial structure. He is especially interested in the geometry and combinatorics of matroids and polytopes, and the role they play in algebraic geometry, representation theory, and applications.

Andrew Berget

Algebraic and Geometric Combinatorics · Western Washington University · *f*
Funding provided by the Charles Simonyi Endowment

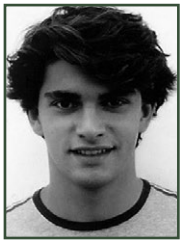
Andrew Berget's recent work studies matroids and related objects using tools from algebraic geometry, representation theory, and topology. Most recently, Berget is interested in computing singularities and resolutions of ideals coming from linear spaces and matroids.

Gregory Berkolaiko

Spectral Theory, Mathematical Physics · Texas A&M University

Gregory Berkolaiko is interested in spectral theory of graphs and manifolds, morphology of Laplace eigenfunctions, and geometry of spectra of operator families.

f First Term · *s* Second Term · *v* Visitor · *dvp* Distinguished Visiting Professor · *vp* Visiting Professor
vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow



Camillo Brena

Geometric Measure Theory · Institute for Advanced Study
Funding provided by the National Science Foundation

Camillo Brena is interested in geometric measure theory, analysis on non-smooth spaces, and calculus of variations.

Nataly Brukhim

Machine Learning · Princeton University
Eric and Wendy Schmidt for Program in Machine Learning

Nataly Brukhim is interested in theory and algorithms for machine learning and related areas, more specifically boosting algorithms, statistical learning theory, and online learning.

Bennett Chow

Geometric Analysis, Differential Geometry, Geometric Flows · University of California, San Diego · *f*

Bennett Chow is interested in differential geometry and geometric analysis. While at IAS, Chow will study questions and exposition related to the curvature of Riemannian manifolds.

Basile Coron

Combinatorics · Queen Mary, University of London · *s*
Funding provided by The Ambrose Monell Foundation

Basile Coron's research area is centered around the study of combinatorial objects, such as matroids, via methods of algebraic topology (including operadic structures and Koszul duality theory).

Colin William Crowley

Matroid Theory · University of Oregon
Funding provided by the National Science Foundation

Colin William Crowley is interested in the intersection of algebraic geometry and combinatorics, especially hyperplane arrangements and matroid theory. Most of Crowley's research involves varieties associated to hyperplane arrangements and linear subspace arrangements, such as reciprocal linear spaces, wonderful models, and matroid Schubert varieties.

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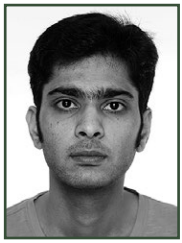
vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow



Yash Deshmukh

Symplectic Topology · Institute for Advanced Study
Funding provided by the National Science Foundation

Yash Deshmukh's research focuses on symplectic topology and its interaction with homotopy theory. Deshmukh is particularly interested in construction and applications of higher homotopical structures on invariants of symplectic manifolds.

Yotam Dikstein

High-Dimensional Expanders, Hardness of Approximation, Graph Theory · Institute for Advanced Study
Funding provided by the National Science Foundation

Yotam Dikstein is interested in high-dimensional expanders and similar structures. This includes constructing such objects, discovering new properties they possess, and utilizing them in various areas of theoretical computer science, such as probabilistically checkable proofs, property testing, and codes. Dikstein is also interested in Boolean function analysis in non-standard domains.

Bradley Dirks

Singularities and Mixed Hodge Modules · Stony Brook University, The State University of New York
Funding provided by the National Science Foundation

Bradley Dirks is interested in complex algebraic geometry, in particular, the theory of Hodge modules and its various applications (to singularities and representation theory, for example).

Robert Donley

Lie Groups, Lie Algebras, and their Representations · Queensborough Community College, The City University of New York · *v/s*

While at IAS, Robert Donley will study combinatorial problems in representation theory. Donley's recent work includes Clebsch-Gordan theory (partial orders, order-raising operators, semi-magic squares) and adinkra models in supersymmetry.

Ellen Eischen

Number Theory · University of Oregon · *vnf*
Funding provided by the National Science Foundation

Ellen Eischen's research concerns data arising in number theory and beyond. She employs algebraic, analytic, and geometric approaches. While at IAS, she will study algebraic and *p*-adic aspects of L-functions and automorphic forms to help understand certain number theoretic phenomena.

Anna Erschler

Group Theory · École Normale Supérieure, Paris and CNRS

Marvin V. and Beverly J. Mielke Fund

During her time at IAS, Anna Erschler plans to study asymptotic geometry of finitely generated linear groups.

Luis Ferroni

Matroid Theory, Combinatorial Hodge Theory · Institute for Advanced Study

Minerva Research Foundation Member

Luis Ferroni investigates objects arising in the interplay between discrete, algebraic, and combinatorial geometry. These objects include partially ordered sets, matroids, and polytopes. Ferroni is particularly interested in polynomial functions associated with these objects (e.g., Kazhdan-Lusztig polynomials and Ehrhart polynomials).

Alessio Figalli

Partial Differential Equations · Eidgenössische Technische Hochschule Zürich

Marvin V. and Beverly J. Mielke Fund

Alessio Figalli works in the broad areas of calculus of variations and partial differential equations (PDEs), with particular emphasis on optimal transportation, functional and geometric inequalities, elliptic PDEs, and free boundary problems.

Alex Fink

Algebro-Geometric Combinatorics · Queen Mary, University of London · *s*

Alex Fink is interested in interactions of algebraic geometry and combinatorics, notably matroid theory and tropical mathematics. He plans to study objects arising in the matroid Hodge theory program, especially generalizations of the matroid Schubert variety corresponding to multiple tautological matroid bundles.

Federico Franceschini

Partial Differential Equations · Institute for Advanced Study

Funding provided by the Giorgio and Elena Petronio Fellowship Fund and the Fund for Mathematics

Federico Franceschini is working in the regularity theory of elliptic problems, mostly in the analysis of free boundaries, using tools and techniques from the regularity theory of minimal surfaces.

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vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Francisco Gancedo

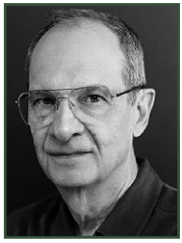
Analysis of Partial Differential Equations · Universidad de Sevilla
Harish-Chandra Fund

Francisco Gancedo is interested in the applications of partial differential equations to fluid mechanics, and incompressible fluid interface.

Federico Glaudo

Partial Differential Equations · Institute for Advanced Study
Funding provided by the National Science Foundation

Federico Glaudo is interested in analysis in a broad sense: he works on partial differential equations, functional and geometric inequalities, and optimal transport.



Mark Goresky

Geometry, Automorphic Forms · Institute for Advanced Study · *v*

Mark Goresky is interested in singularities as they arise in topology, algebraic geometry, number theory, and analysis.

William Graham

Geometry, Combinatorics · University of Georgia

William Graham works on algebraic varieties with group actions. His work includes general results pertaining to equivariant theories such as equivariant Chow groups and equivariant K-theory. Other work concerns specific varieties of interest in Lie theory, such as flag varieties, Schubert varieties, and Springer fibers.

C. Sinan Güntürk

Harmonic Analysis, Information Theory · Courant Institute of Mathematical Sciences, New York University · *v/s*

C. Sinan Güntürk specializes in the fundamental theory of algorithmic processes for the approximation, sampling, compression, quantization, and coding of signals using methods of harmonic analysis.

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vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Jean Gutt

Geometric Analysis · Institut National Universitaire Jean-François Champollion · *vnf*

Funding provided by the National Science Foundation

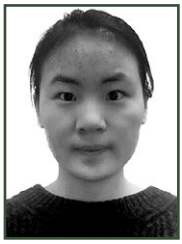
Jean Gutt is currently interested in symplectic and contact geometry and topology. While at IAS, he plans to study a potential link between symplectic capacities and spectral theory.

Pazit Haim-Kislev

Symplectic Geometry · Institute for Advanced Study

Erik Ellentuck Fellow

Pazit Haim-Kislev's research delves into the intricate intersections of symplectic and convex geometries, with a particular focus on symplectic capacities and their connections to geometric structures and dynamics within convex domains.



Lili He

Nonlinear Wave Equations, General Relativity · Institute for Advanced Study

Funding provided by the S. S. Chern Foundation for Mathematical Research Fund

Lili He's field of study is general relativity and nonlinear wave equations. Further interests include microlocal analysis and scattering theory.

Wei Ho

Number Theory, Algebraic Geometry · University of Michigan · *vp*

Funding provided by the Fund for Mathematics

Wei Ho's research is in number theory, algebraic geometry, and related fields. Some of her favorite work involves finding arithmetic applications of classical algebro-geometric constructions.

Max Hopkins

Theoretical Computer Science · University of California, San Diego · *v*

Max Hopkins is broadly interested in the role of structure and randomness in computation, especially with respect to the nascent theory of high dimensional expansion. He is also interested in the interplay of combinatorial, geometric, and topological structure in learning and algorithmic stability.

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vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Daoji Huang

Algebraic Combinatorics, Schubert Calculus · Institute for Advanced Study
Funding provided by the Charles Simonyi Endowment

Daoji Huang is interested in combinatorial algebraic geometry and algebraic combinatorics, with a focus on Schubert calculus. Her recent work has been concerned with combinatorial interpretations of Schubert structure constants and Gröbner degenerations of varieties. While at IAS, she will continue pursuing these topics.

June Huh

Algebraic Geometry, Combinatorics · Princeton University · *dvp*
Funding provided by the Oswald Veblen Fund and by the Fund for Mathematics

June Huh applies tropical geometry and singularity theory to problems in combinatorics and other areas. His interests include cohomology of projective varieties, correlation phenomenon for models in statistical physics, geometry of polynomials, and connections between realizability problems in algebraic geometry and combinatorial geometry.

Mikaela Iacobelli

Partial Differential Equations, Kinetic Theory · Eidgenössische Technische Hochschule Zürich · *vnf*
Funding provided by the National Science Foundation

Mikaela Iacobelli's research focuses on studying partial differential equations arising from many-body systems in kinetic theory, particularly Vlasov-type systems for plasmas and galaxies. Her work also revolves around the quantization of measures, which has applications in fields like signal processing and economics.

Maria-Romina Ivan

Extremal Combinatorics, Ramsey Theory · University of Cambridge · *s*

Maria-Romina Ivan's research is in the areas of extremal combinatorics and Ramsey theory. Ivan is especially interested in poset saturation, partition regularity questions over the rationals, and extremal set theory.

Kasia Jankiewicz

Geometric Group Theory, Topology · University of California, Santa Cruz · *vnf*
Funding provided by the National Science Foundation

Kasia Jankiewicz works in geometric group theory and topology. Her interests include nonpositively curved groups, Artin and Coxeter groups, and separability properties of groups.

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vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Jaiung Jun

Tropical Geometry, Geometry Over the Field with One Element · State University of New York at New Paltz
Bell System Fellowship

Jaiung Jun is interested in tropical geometry and geometry over the field with one element. While at IAS, Jun will focus on several connections between combinatorics and algebra.

Steven Karp

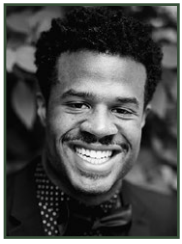
Algebraic Combinatorics · University of Notre Dame · *s*

Steven Karp is interested in total positivity, and connections with algebraic geometry, representation theory, topology, dynamical systems, and theoretical physics.

Zander Kelley

Computational Complexity Theory · University of Illinois at Urbana-Champaign

Zander Kelley is broadly interested in pseudorandomness and its application to computational complexity, as well as its application to extremal combinatorics and number theory.



D. Dóminique Kemp

Decoupling · Institute for Advanced Study
Shiing-Shen Chern Member; additional funding provided by the Fund for Mathematics

D. Dóminique Kemp is interested in problems that simultaneously incorporate elements of geometry (both smooth and rough settings), harmonic analysis, and number theory. Kemp's primary research focus lies in the recently emerged field called decoupling, and his pursuits pertain to both the development of the formal theory and the applications.

Patricia J. Klein

Commutative Algebra, Algebraic Combinatorics · Texas A&M University · *f*
Bob Moses Fund

Patricia J. Klein is interested in commutative algebra, algebraic combinatorics, and combinatorial algebraic geometry. Many of the problems she is currently interested in are related, in one way or another, to Schubert calculus.

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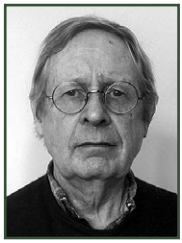
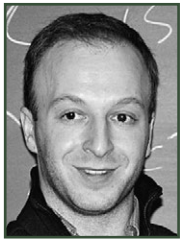
vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow



Friedrich Knop

Algebraic Geometry, Symplectic Geometry, Category Theory · Friedrich-Alexander-Universität Erlangen-Nürnberg · *s*

Friedrich Knop is mainly interested in reductive group actions, spherical varieties, multiplicity free Hamiltonian and quasi-Hamiltonian manifolds, and tensor categories.



Alex Kontorovich

Analytic Number Theory, Group Actions, Formalized Mathematics · Rutgers, The State University of New Jersey · *v/s*

Alex Kontorovich's research concerns problems at the intersection of number theory, geometry, dynamics, and representation theory. Specifically, he studies harmonic analysis on symmetric spaces to try to answer simple questions about whole numbers.

Lukas Kühne

Algebraic and Geometric Combinatorics · Universität Bielefeld · *f*
Erik Ellentuck Fellow

Lukas Kühne is interested in the interplay of combinatorics, algebra, and geometry, specifically in the context of hyperplane arrangements, matroids, and polytopes. He enjoys using and developing computational tools as part of his research.

Matt W. Larson

Combinatorial Algebraic Geometry · Institute for Advanced Study

Matt W. Larson is interested in applications of algebraic geometry to combinatorics, especially to matroids and their generalizations. He is also interested in applying combinatorial tools to problems in algebraic geometry.

Shiyue Li

Combinatorial Algebraic Geometry · Institute for Advanced Study
Funding provided by the National Science Foundation

Shiyue Li is interested in algebraic geometry and combinatorics.

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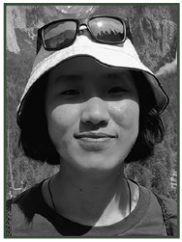
vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Robert Lipshitz

Low-Dimensional Topology, Symplectic Topology · University of Oregon · *v/f*

At IAS, Robert Lipshitz will focus on applications of symplectic geometry, gauge theory, and categorical algebra to problems in low-dimensional topology.



Siqi Liu

Theoretical Computer Science · Institute for Advanced Study

Minerva Research Foundation Member

Siqi Liu is interested in constructions and applications of high-dimensional expanders. While at IAS, Liu will study the connections of high-dimensional expansion to analytical and topological properties of manifolds and also the applications of expanding partially ordered sets to property testing.

Yang Liu

Theoretical Computer Science · Institute for Advanced Study

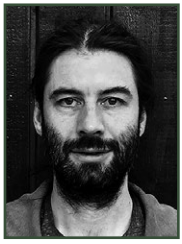
Funding provided by the National Science Foundation

Yang Liu is broadly interested in mathematics and theoretical computer science. His research focuses on the design of efficient algorithms based on graph theory, convex optimization, and high-dimensional geometry.

Lucia Lopez de Medrano

Real, Complex, Tropical, and Enumerative Geometry and Geometry of Matroids · Universidad Nacional Autónoma de México · *f*

Lucia Lopez de Medrano is interested in the geometry of matroids and its relation to tropical geometry, Chern-Schwartz-MacPherson (CSM) cycles of matroids, real algebraic geometry and patchworking, and topology of tropical varieties.



Oliver Lorscheid

Algebraic Geometry, Combinatorics, Number Theory · University of Groningen · *f*

Funding provided by the National Science Foundation

Oliver Lorscheid is interested in matroid theory, tropical geometry, and the field with one element. While at IAS, he will be working on projects that revolve around representations and moduli spaces of matroids, and their connection with Lorentzian polynomials.

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vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Diane Maclagan

Algebraic Geometry · University of Warwick · *f*

Diane Maclagan is interested in combinatorial aspects of algebraic geometry, particularly tropical geometry. One recent focus is occurrences of matroids in algebraic geometry. She will take part in the special year on algebraic and geometric combinatorics.

Yelena Mandelshtam

Combinatorial Algebraic Geometry · Institute for Advanced Study

Bob Moses Fund

Yelena Mandelshtam is interested in problems involving algebraic geometry, combinatorics, and mathematical physics. She is particularly interested in the emerging field of positive geometry, in which all three of these areas come together. She hopes to make more contributions to this area during her time at IAS.

Peter Manohar

Theoretical Computer Science · Institute for Advanced Study

Funding provided by the National Science Foundation

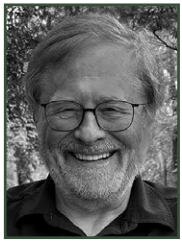
Peter Manohar is broadly interested in theoretical computer science, specifically in the areas of algorithms and coding theory. His current research is focused on designing spectral algorithms for semirandom instances of optimization problems.

Mateusz Michalek

Algebraic Combinatorics, Algebraic Geometry · Universität Konstanz

Funding provided by the Charles Simonyi Endowment

Mateusz Michalek is interested in interactions among different branches of mathematics and applications: examples include toric varieties, relations to lattice polytopes and combinatorics; algebraic geometry, relations of combinatorial methods and varieties of complete quadrics and collineations; and tensors and applications in complexity theory.



Alexander Migdal

Theoretical Physics · New York University · *v*

Funding provided by the Simons Foundation

Alexander Migdal is interested in connections between turbulence and the number theory in singular topological solutions of the Euler equations, and in Loop equations in gauge theory and fluid dynamics.

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vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Leonardo Mihalcea

Algebraic Geometry, Algebraic Combinatorics, Schubert Calculus · Virginia Polytechnic Institute and State University

Funding provided by the Charles Simonyi Endowment

Leonardo Mihalcea is interested in all flavors of Schubert calculus, such as the K-theoretic, quantum, and cotangent versions. While at IAS, he will study Chern-Schwartz-MacPherson (CSM) and motivic Chern classes of Schubert cells and varieties, the quantum K-theory ring of flag manifolds, and its connections to integrable systems and physics.

Djordje Milicevic

Analysis on Arithmetic Manifolds, Automorphic Forms, Analytic Number Theory · Bryn Mawr College

Funding provided by the Charles Simonyi Endowment

Djordje Milicevic is interested in analytic aspects of automorphic forms (their spectral theory and mass distribution) as well as in the analytic theory of L-functions and exponential sums. While at IAS, Milicevic will research non-spherical Maass forms and spectral geometry on arithmetic hyperbolic manifolds.

Elizabeth Milicevic

Algebraic and Arithmetic Geometry, Representation Theory, Combinatorics · Haverford College

Elizabeth Milicevic is interested in answering geometric questions about algebraic varieties, such as affine flag varieties, using the methods of algebraic combinatorics and combinatorial representation theory. While at IAS, Milicevic will study problems in quantum and affine Schubert calculus and Kazhdan-Lusztig polynomials.

Alejandro Morales

Algebraic, Geometric, and Enumerative Combinatorics · Université du Québec à Montréal · *s*

Funding provided by an anonymous donor

Alejandro Morales is interested in linear extensions of posets and objects related to Schubert polynomials. He also studies a rich family of polytopes (called flow polytopes) of graphs related to representation theory and diagonal harmonics. While at IAS, Morales wants to study Lorentzian properties of symmetric functions.

Igor Pak

Combinatorics and Discrete Probability · University of California, Los Angeles · *f*

Currently, Igor Pak is working on combinatorial inequalities coming from both probabilistic and algebraic combinatorics. Pak is especially interested in computational complexity aspects.

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vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Stan Palasek

Partial Differential Equations · Institute for Advanced Study · *v*
Funding provided by the National Science Foundation

Stan Palasek is interested in partial differential equations, particularly turbulence and blow-up phenomena in incompressible fluids.

Greta Panova

Algebraic Combinatorics · University of Southern California · *f*

Greta Panova is interested in applications and interactions with integrable probability and computational complexity theory. Separately, Panova works on modeling in molecular biology.

Jeungeun Park

Mathematical Biology · State University of New York at New Paltz
Funding provided by the National Science Foundation; AMIAS Member

Jeungeun Park is interested in partial differential equations, particularly their applications in biology. Park's recent work includes modeling bacterial movement at various levels, using both classical and computational methods.

Sung Gi Park

Algebraic Geometry · Institute for Advanced Study and Princeton University · *vri*

Sung Gi Park is interested in birational geometry and Hodge theory. Park's recent works focus on applications of the theory of mixed Hodge modules to problems in birational geometry, particularly concerning singularities and hyperbolicity.

Sam Payne

Algebraic Geometry · The University of Texas at Austin
Funding provided by the Charles Simonyi Endowment

Sam Payne is interested in geometry, topology, and arithmetic of algebraic varieties, with particular attention to combinatorial structures therein. Payne's current research is centered around the cohomology of arithmetic groups and moduli spaces.

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vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Catherine Eva Pfaff

Geometric Group Theory · Queen's University at Kingston
Bob Moses Fund

Catherine Eva Pfaff's mathematical interests focus around deformation spaces of weighted graphs and surfaces, and the dynamics of their symmetry groups acting on them.

Huy Tuan Pham

Combinatorics, Probability, Theoretical Computer Science · Stanford University

Huy Tuan Pham's main research interest is in probabilistic and extremal combinatorics and related applications in probability theory, additive combinatorics, and theoretical computer science. His recent focus includes the study of thresholds and other high-dimensional phenomena and their connections.

Cristian D. Popescu

Number Theory · University of California, San Diego · *f*

Cristian D. Popescu works in algebraic number theory and arithmetic geometry, with a focus on special values of motivic and p-adic L-functions. While at IAS, Popescu will focus on higher equivariant main conjectures in equivariant Iwasawa theory for Artin motives, and on developing an Iwasawa theory for t-motives and other related topics.

Doron Puder

Combinatorial and Geometric Group Theory · Tel Aviv University · *vnf*
Funding provided by the National Science Foundation

Doron Puder is interested in combinatorial, geometric, and probabilistic group theory, and in spectral gaps of random (Cayley) graphs and other manifolds. In particular, he is excited about probabilistic manifestations of topological and algebraic invariants of group elements.

Youming Qiao

Theoretical Computer Science · *s*
Funding provided by the Ky Fan and Yu-Fen Fan Endowment Fund

Youming Qiao is interested in computational complexity and algebraic computation. Some specific problems he has worked on include polynomial identity testing and isomorphism problems of algebraic structures.

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vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Orit Raz

Combinatorial Geometry, Discrete Mathematics · The Hebrew University of Jerusalem

Funding provided by the Charles Simonyi Endowment

Orit Raz is interested in questions in combinatorial geometry.

Semon Kirillovich Rezchikov

Symplectic Geometry · Institute for Advanced Study and Princeton University · *vri*

Semon Kirillovich Rezchikov's research has focused on foundational aspects of the invariants built from pseudoholomorphic curves. Rezchikov has also recently been working on complexifying symplectic geometry, which turns out to be connected to a quaternionic version of pseudoholomorphic curve theory and to the mysterious subject of three-dimensional mirror symmetry.

Julian Sahasrabudhe

Extremal and Probabilistic Combinatorics, Fourier Analysis, and Combinatorial Number Theory · University of Cambridge · *f*

Erik Ellentuck Fellow

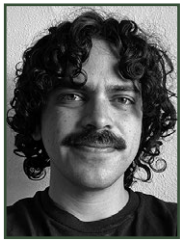
Julian Sahasrabudhe is interested in combinatorics and its links to probability theory and analysis. Most recently, he has been interested in random matrices, Ramsey theory, and sphere packing.

Cecília Salgado

Arithmetic Algebraic Geometry, Number Theory · University of Groningen · *f*

Funding provided by the National Science Foundation and the James D. Wolfensohn Fund

Cecília Salgado is interested in fibrations on algebraic varieties (e.g., elliptic fibrations on K3 surfaces), qualitative aspects of the sets of rational points of algebraic varieties, and their manifestations in coding theory.



Mario Sanchez

Matroids in Derived Categories and Valuations · Institute for Advanced Study

Funding provided by the National Science Foundation

Mario Sanchez is interested in the study of valuations of matroids and its categorification through the derived category of the permutahedral and stellahedral varieties.

Victoria M. Schleis

Combinatorics, Tropical Geometry · Durham University · *s*
Funding provided by the Charles Simonyi Endowment

Victoria M. Schleis is interested in the connections of matroid theory and algebraic geometry, in particular those appearing in tropical geometry. In her research, she likes to use both classical and computational methods. While at IAS, she plans on extending her research on tropical and matroidal quiver theory.

Petra Schwer

Geometric Group Theory · Heidelberg University
Funding provided by the Charles Simonyi Endowment

Petra Schwer's research interests lie at the interface between geometry and group theory. She is particularly interested in combinatorial and geometric aspects of group theory, non-positively curved spaces, and group actions on them.

Egor Shelukhin

Symplectic Topology and Dynamics · Université de Montréal · *vnf/s*
Funding provided by the National Science Foundation

While at IAS, Egor Shelukhin will study metric, algebraic, and topological aspects of transformation groups in symplectic topology, with a particular focus on methods of persistence modules and their barcodes.

Zvi Shem-Tov

Automorphic Forms · Institute for Advanced Study
Funding provided by the National Science Foundation

Zvi Shem-Tov is interested in distributional properties of automorphic forms. While at IAS, Shem-Tov will research such properties in the context of the quantum unique ergodicity problem for various locally symmetric spaces.

Ari Shnidman

Arithmetic Geometry · The Hebrew University of Jerusalem
Funding provided by the Ambrose Monell Foundation

Ari Shnidman is interested in rational points and algebraic cycles on algebraic varieties defined over global fields. While at IAS, Shnidman plans to study questions related to Hilbert's tenth problem over number fields, Ceresa cycles, and rational torsion points on abelian surfaces.

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vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Artane Jérémie Siad

Arithmetic Statistics · Institute for Advanced Study and Princeton University

Funding provided by the National Science Foundation

Artane Jérémie Siad is interested in arithmetic statistics and arithmetic topology. At IAS, he focuses on fundamental questions in class group statistics linked to quadratic invariants in spin geometry.

Connor Simpson

Combinatorial Algebraic Geometry · Institute for Advanced Study

Funding provided by the Simons Foundation

Connor Simpson is interested in the geometry of matroid Schubert varieties and flag varieties.

Daniel Soskin

Algebraic Combinatorics · Lehigh University

Funding provided by the National Science Foundation

Daniel Soskin's research interests lie at the intersection of algebra and combinatorics. Soskin is particularly interested in problems related to notions of positivity, cluster algebras, planar networks, and immanants.

Shashank Srivastava

Theoretical Computer Science · Institute for Advanced Study · *v*

Shashank Srivastava is interested in the theory of error-correcting codes, pseudorandomness, algorithm design for constraint satisfaction problems, and the intersection of these areas.

Alan Stapledon

Algebraic Geometry and Combinatorics · Sydney Mathematics Research Institute

Funding provided by the Charles Simonyi Endowment

Alan Stapledon is interested in connections between algebraic geometry and combinatorics. More specifically, he is studying intersections between Hodge theory, toric geometry, and Ehrhart theory.

f First Term · *s* Second Term · *v* Visitor · *dvp* Distinguished Visiting Professor · *vp* Visiting Professor
vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Robert M. Strain

Nonlinear Partial Differential Equations, Applied Mathematics, Mathematical Physics · University of Pennsylvania · *v/f*

The research of Robert M. Strain focuses on the mathematical analysis of non-linear partial differential equations which arise in physical contexts. He has proven results on partial differential equations from diverse areas, including fluid dynamics, kinetic theory, mathematical biology, and materials science.

Karen Uhlenbeck

Geometric Partial Differential Equations, Gauge Theory · The University of Texas at Austin · *dvp*

Karen Uhlenbeck works primarily on geometric partial differential equations. She has worked in the areas of the calculus of variations, minimal surfaces, harmonic maps, gauge theory, and integrable systems. Her current interest is in analysis connected with the best Lipschitz model for Teichmüller space of Thurston.

Ramon van Handel

Probability, Geometry, Analysis · Princeton University

Ramon van Handel is broadly interested in probability theory, analysis, geometry, and their interactions and connections with other areas of mathematics. His recent work has focused on high-dimensional phenomena and on convex geometry.

Peter van Hintum

Additive Combinatorics, Geometric Analysis · Institute for Advanced Study

Peter van Hintum is interested in additive combinatorics and its counterpart in geometric analysis. In particular, he has explored geometric inequalities and their stability for sumsets both in the discrete world of the integers and in the continuous world of the reals.

Sahana Vasudevan

Geometry · Institute for Advanced Study and Princeton University · *v*

Sahana Vasudevan is interested in metric geometry, symplectic geometry, and Teichmüller theory.

f First Term · *s* Second Term · *v* Visitor · *dvp* Distinguished Visiting Professor · *vp* Visiting Professor
vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Liz Vivas

Several Complex Variables, Holomorphic Dynamics · The Ohio State University · *s*

Liz Vivas is interested in holomorphic dynamic questions in several complex variables, as well as more classical notions of several complex analyses like Bergman and Hardy spaces.

Botong Wang

Algebraic Geometry, Topology and Combinatorics · University of Wisconsin–Madison · *vnf*

Funding provided by the National Science Foundation

Botong Wang is interested in applying algebra-geometric ideas to study problems in combinatorics, topology, and applied mathematics. While at IAS, Wang plans to study the interactions between algebraic varieties, matroids, and their Chern classes, and various positivity properties.

Joshua Wang

Geometry, Topology · Institute for Advanced Study and Princeton University · *vri*

Joshua Wang's research is in low-dimensional topology and its connections to other fields of mathematics, including gauge theory and representation theory.

Luya Wang

Symplectic Topology · Institute for Advanced Study and Princeton University

Giorgio and Elena Petronio Fellow II

Luya Wang is currently interested in the interactions between smooth and symplectic topology. At IAS, she will continue to study symplectic structures via existent techniques such as pseudoholomorphic curves and algebraic invariants in Floer theories, as well as building new tools in the Floer homotopy program.

Xiao (Griffin) Wang

Representation Theory, Algebraic Geometry · Institute for Advanced Study

Funding provided by the National Science Foundation

Xiao (Griffin) Wang is interested in geometrization of trace formulae, particularly through Hitchin-type fibrations. At IAS, Wang mainly plans to explore on two fronts: one is generalization to relative trace formulae; the other is the possible connection with beyond endoscopy program.

f First Term · *s* Second Term · *v* Visitor · *dvp* Distinguished Visiting Professor · *vp* Visiting Professor
vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Andreas Lorenzo Wieser

Homogeneous Dynamics · University of California, San Diego · *v/f, s*

Andreas Lorenzo Wieser is interested in homogeneous dynamics with a focus on applications in number theory. While at IAS, he will work on effective equidistribution problems for periodic orbits of semisimple groups and also investigate density and equidistribution problems for orbits of tori.

Jincheng Yang

Partial Differential Equations · Institute for Advanced Study

Funding provided by the National Science Foundation

Jincheng Yang is interested in analysis and partial differential equations related to fluid dynamics, in particular the regularity theory and turbulence phenomena of incompressible fluid models.

Bogdan Zavyalov

Number Theory, Algebraic Geometry · Institute for Advanced Study and Princeton University · *v*

Bogdan Zavyalov is interested in *p*-adic Hodge theory.

Mingjia Zhang

Langlands Program, p-adic Hodge Theory · Institute for Advanced Study and Princeton University · *vri*

Mingjia Zhang is interested in the Langlands program and *p*-adic Hodge theory. Zhang has been studying the geometry and cohomology of Shimura varieties, as well as the relation to their local analogues.

Siqing Zhang

Algebraic Geometry · Institute for Advanced Study

Funding provided by the National Science Foundation

Siqing Zhang is interested in the nonabelian Hodge theories in positive, zero, and mixed characteristics. He is also interested in perverse sheaves, algebraic groups, and moduli theory.

f First Term · *s* Second Term · *v* Visitor · *dvp* Distinguished Visiting Professor · *vp* Visiting Professor
vri Veblen Research Instructor · *vnf* von Neumann Fellow · *vbf* Veblen Fellow

Tong Zhou

Algebraic and Arithmetic Geometry · Institute for Advanced Study

Funding provided by the National Science Foundation

At IAS, Tong Zhou will research sheaf theories in positive characteristic and in non-Archimedean analytic contexts, especially from a microlocal point of view: the vanishing cycle, singular support, characteristic cycle, and index formulae. He is also interested in applications to the Langlands program.

Karen EDGE Fellowship

In a partnership with IAS, the Karen EDGE Fellowship works to support and enhance the research programs and collaborations of mid-career mathematicians, as well as promote greater diversity and inclusion in mathematics. The fellowship was created with the generous support of Abel Prize winner Karen Uhlenbeck, Distinguished Visiting Professor in the School of Mathematics, in conjunction with the EDGE Foundation.

KAREN EDGE FELLOWS

Malena Español

Henok Mawi

Mariana Smit Vega Garcia

School of Natural Sciences

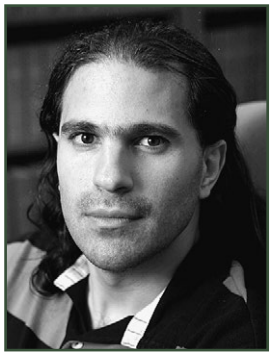
Administrative Officer: Michelle Sage

The School of Natural Sciences, established in 1966, provides a unique atmosphere for research in broad areas of theoretical physics, astronomy, and systems biology.

From its earliest days, the Institute has been a leading center for fundamental physics, contributing substantially to many of its central themes, which now interrelate with mathematics, astrophysics, and biology. Members in the astrophysics research group employ an array of tools from theoretical physics, large-scale computer simulations, and ground- and space-based observational studies to investigate the origin and composition of the universe, and to use the universe as a laboratory to study fundamental physics. At the Simons Center for Systems Biology, established in the School in 2004, the tools of modern physics and mathematics are being applied to biological investigation.

Areas of current interest in theoretical physics include elementary particle physics, particle phenomenology, string theory, quantum theory, and quantum gravity, and their relationship to geometry, theoretical and observational astrophysics, and cosmology. The astrophysics group combines theory with modern observational studies to understand a wide variety of astrophysical phenomena, from nearby planets to distant galaxies, from black holes to the dark matter and dark energy that dominate the evolution of the universe. The Simons Center conducts research at the interface of biology and the physical sciences, developing theoretical and experimental methods necessary for studying the collective behavior of biomolecules, cells, and organisms, exploring how individual components can give rise to complex, collective phenomena.

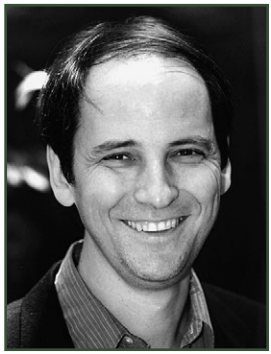
The School also sponsors Prospects in Theoretical Physics (PiTP), a two-week residential summer program traditionally held at the Institute for promising graduate students and postdoctoral scholars, who attend lectures and sessions on the latest advances and open questions in the field of theoretical physics.



Nima Arkani-Hamed

Gopal Prasad Professor · Particle Physics

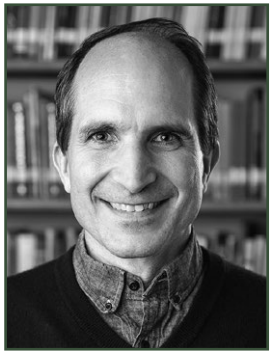
One of the leading particle physics phenomenologists of his generation, Nima Arkani-Hamed is concerned with the relation between theory and experiment. His research has shown how the extreme weakness of gravity, relative to other forces of nature, might be explained by the existence of extra dimensions of space, and how the structure of comparatively low-energy physics is constrained within the context of string theory. He has taken a lead in proposing new physical theories that can be tested at the Large Hadron Collider at CERN in Switzerland.



Stanislas Leibler

Professor · Biology

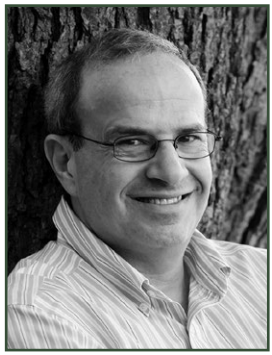
Stanislas Leibler has made contributions to theoretical and experimental biology, extending the interface between physics and biology to develop new solutions and approaches to problems. Interested in the quantitative description of microbial systems on both cellular and population levels, Leibler is developing the theoretical and experimental methods necessary for studying the collective behavior of biomolecules, cells, and organisms. By selecting a number of basic questions about how simple genetic and biochemical networks function in bacteria, he and his laboratory colleagues are beginning to understand how individual components can give rise to complex, collective phenomena.



Juan Maldacena

Carl P. Feinberg Professor · Theoretical Physics

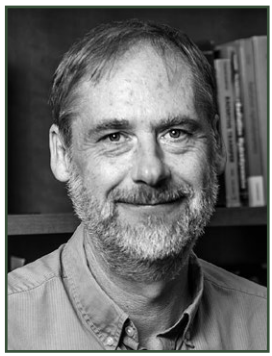
Juan Maldacena's work focuses on quantum gravity, string theory, and quantum field theory. He has proposed a relationship between quantum gravity and quantum field theories that elucidates various aspects of both theories. He is studying this relationship further in order to understand the deep connection between black holes and quantum field theories, and he is also exploring the connection between string theory and cosmology.



Nathan Seiberg

Charles Simonyi Professor · Mathematical Physics

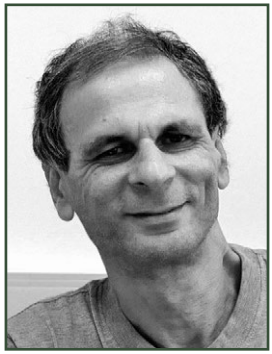
Nathan Seiberg's research focuses on various aspects of string theory, quantum field theory, and particle physics. He has made deep contributions to the understanding of the dynamics of quantum field theories, especially two-dimensional conformal field theories and supersymmetric quantum field theories. His exact solutions of supersymmetric systems have uncovered many new and unexpected phenomena, including the fundamental role of electric-magnetic duality in these theories. These exact solutions have led to many applications in physics and in mathematics. Recently, he combined insights from his earlier work to shed new light on quantum field theories in three space-time dimensions, which are also of interest to condensed matter physics.



James Stone

Professor · Computational Astrophysics

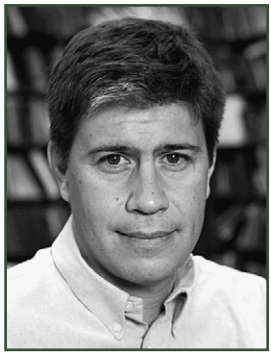
James Stone has developed novel numerical algorithms that have shaped the field of computational astrophysics and ushered in a new era of precision simulations with a wide range of applications. Stone's research is focused on fluid dynamics, particularly magnetohydrodynamics, for which he has developed some of the most powerful and widely used astrophysical codes. He has contributed groundbreaking methods to address a few of the field's most challenging problems, resulting in foundational insights into the nature of giant molecular clouds, the evolution of accretion disks, the process of planetary migration, and the phenomena of radiation transport.



Michail Tsodyks

C.V. Starr Professor · Theoretical Neuroscience

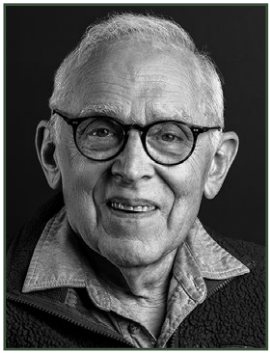
Misha Tsodyks is a leading theoretical neuroscientist whose research has influenced important areas of neurobiology and the development of a quantitative understanding of brain functioning and human cognitive abilities. His work is focused on identifying neural algorithms that define functions of cortical systems and, in recent years, various aspects of cognitive behavior. From demonstrating the importance of sparsity in neural networks to providing deep insights into the mechanisms of short-term synaptic plasticity and working and associative memory, Tsodyks has devised conceptual models that make quantitative testable predictions for experiments.



Matias Zaldarriaga

Richard Black Professor · Astrophysics and Cosmology

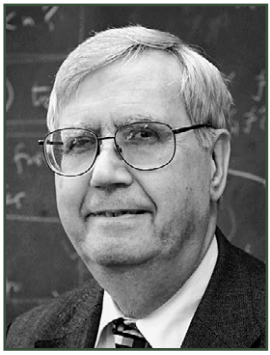
Matias Zaldarriaga has made many influential and creative contributions to our understanding of the early universe, particle astrophysics, and cosmology as a probe of fundamental physics. Much of his work centers on understanding the clues about the earliest moments of our universe encoded in the Cosmic Microwave Background, in the faint glow of radiation generated by the Big Bang, and in the distribution of matter in the late universe.



Stephen L. Adler

Professor Emeritus · Particle Physics

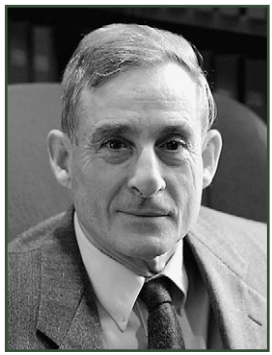
In a series of remarkable, difficult calculations, Stephen Adler demonstrated that abstract ideas about the symmetries of fundamental interactions could be made to yield concrete predictions. The successful verification of these predictions was a vital step toward the modern Standard Model of particle physics. In more recent work, he has been exploring generalized forms of quantum mechanics, both from a theoretical and a phenomenological standpoint. He has developed new algorithms for multidimensional integration, and is currently exploring a novel proposal for the "dark energy" that drives the accelerated expansion of the universe. He is also studying horizonless "dynamical gravastars" as alternatives to mathematical black holes at the center of galaxies.



Peter Goddard

Professor Emeritus · Mathematical Physics

Peter Goddard's research concerns quantum field theory and string theory. With his collaborators, he has made pioneering contributions to these areas, in particular: the quantization of the relativistic string; the "no ghost theorem" of string theory; electric-magnetic duality in gauge theories; the construction of conformal field theories; and the realization of gauge symmetry in string theory. Before serving as the eighth Director (2004–12) of the Institute for Advanced Study, he was Master of St. John's College and Professor of Theoretical Physics in the University of Cambridge, where he played a leading role in establishing the Isaac Newton Institute for Mathematical Sciences and the University of Cambridge Centre for Mathematical Sciences.



Peter Goldreich

Professor Emeritus · Astrophysics

Peter Goldreich has made profound and lasting contributions to planetary science and astrophysics, providing fundamental theoretical insights for understanding the rotation of planets, the dynamics of planetary rings, pulsars, astrophysical masers, the spiral arms of galaxies, oscillations of the sun and white dwarfs, turbulence in magnetized fluids, and planet formation. His current research is focused on the production of impact spherules.

Arnold J. Levine

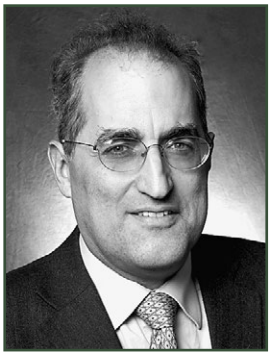
Professor Emeritus · Biology

Arnold J. Levine is a widely acclaimed leader in cancer research. In 1979, Levine and others discovered the p53 tumor suppressor protein, a molecule that inhibits tumor development. He established the Simons Center for Systems Biology at the Institute, concentrating on research at the interface of molecular biology and the physical sciences. Recognizing the potential of convergence research in the life sciences, Levine has inaugurated a program of research collaborations, in partnership with Stand Up to Cancer (and others), that bring together quantitative scientists from theoretical physics, computer science, and mathematics, with biologists and clinicians, to develop novel approaches to solve important problems in cancer research. He also leads the NSF–sponsored Cancer Convergence Education Network, and focuses on fostering convergence research to produce fundamental insights in the areas of immunology and infectious diseases.

Scott Tremaine

Professor Emeritus · Astrophysics

Scott Tremaine has made seminal contributions to understanding the formation and evolution of planetary systems, comets, black holes, star clusters, galaxies, and galaxy systems. He predicted the Kuiper belt of comets beyond Neptune and, with Peter Goldreich, the existence of shepherd satellites and density waves in Saturn's ring system, as well as the phenomenon of planetary migration. He interpreted double-nuclei galaxies, such as the nearby Andromeda galaxy, as eccentric stellar disks, and elucidated the role of dynamical friction in galaxy evolution.



Edward Witten

Professor Emeritus · Mathematical Physics

Edward Witten's work exhibits a unique combination of mathematical power and physics insight, and his contributions have significantly enriched both fields. He has greatly contributed to the modern interest in superstrings as a candidate theory for the unification of all known physical interactions. Most recently, he has explored quantum duality symmetries of field theories and string theories, opening significant new perspectives on particle physics, string theory, and topology.

Uddipan Banik

Theoretical Astrophysics · Institute for Advanced Study and Princeton University

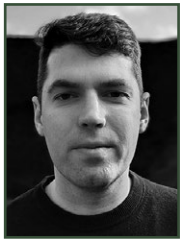
Uddipan Banik is interested in galactic dynamics, galaxy formation and evolution, dark matter, kinetic theory, and structure formation. While at IAS, Banik will conduct research on the relaxation of collisionless and weakly collisional system (e.g., galaxies, cold and self-interacting dark matter halos, and collisionless plasma).

Sirio Belga Fedeli

Systems Biology · Institute for Advanced Study

Funding provided by the Simons Foundation

Sirio Belga Fedeli's research focuses on the mathematics of principles that govern cellular processes. Belga Fedeli's interests include the collective behavior and dynamics of ecological systems.



Andreas Blommaert

Theoretical Physics · Institute for Advanced Study

Marvin L. Goldberger Member; additional funding provided by the Fund for Memberships in Natural Sciences

Andreas Blommaert studies quantum gravity and quantum black holes. In particular, Blommaert attempts to understand black holes (and their interiors) by developing a precise understanding of low-dimensional models of quantum gravity, with simple holographic duals.

Nianyi Chen

Astrophysics · Institute for Advanced Study and Max-Planck-Institut für Astrophysik

Funding provided by Schmidt Futures

Nianyi Chen is interested in using numerical simulations to model the evolution of galaxies across cosmic time as well as the connection between massive black holes and their host galaxies. While at IAS, she will develop simulations for characterizing the observation signatures of such evolution through different probes and scales.

Stephen Chen

Cosmology · Institute for Advanced Study

Funding provided by the National Science Foundation

Stephen Chen is interested in the large-scale structure of the universe and studies its evolution and use to constrain fundamental physics, with an emphasis on perturbative methods. A particular recent interest has involved using these techniques in the arena of cross-correlations, which he plans to further develop at the Institute.

Sihao Cheng

Astrophysics · Institute for Advanced Study and Perimeter Institute for Theoretical Physics

AMIAS Member; additional funding provided by the Fund for Memberships in Natural Sciences

Sihao Cheng is interested in using statistical analysis to understand our universe, including topics in cosmology, stellar physics, and extrasolar planets. He is working on developing analytical tools inspired by neural networks and studying their connection to and applications in physics.

Alexander Chernoglazov

High-Energy Astrophysics · University of Maryland

Funding provided by Schmidt Futures

Alexander Chernoglazov is a theoretical high-energy astrophysicist interested in the kinetic physics of plasmas and radiation mechanisms in the magnetospheres of compact objects (e.g., neutron stars and black holes). While at IAS, Chernoglazov will work on explaining the thermal X-ray emissions from the surfaces of pulsars and the dynamics of pulsar wind nebulae.

Yichul Choi

Theoretical Physics

Roger Dashen Member; additional funding provided by the Fund for Memberships in Natural Sciences

Yichul Choi studies topological and global aspects of quantum field theory. In particular, his research focuses on symmetries, anomalies, and their generalizations. He is interested in applying new generalized symmetry principles to particle physics phenomenology and condensed matter physics.

Samuel Cohen

Ecology, Biophysics, Statistical Physics · Institute for Advanced Study

Starr Foundation Member in Biology

While at IAS, Samuel Cohen will research the dynamics and organization of complex terrestrial ecosystems, in particular involving agroecology.

Biwei Dai

Cosmology · Institute for Advanced Study

Funding provided by The Ambrose Monell Foundation; Corning Glass Works Foundation Fellowship

Biwei Dai is interested in developing and applying physics-motivated machine learning models to understand the fundamental properties of the universe from large-scale structure datasets. He currently works on the data analysis of weak gravitational lensing at the field level.

Rebecca Rimai Diesing

Astrophysics · Institute for Advanced Study and Columbia University
Ralph E. and Doris M. Hansmann Member; additional funding provided by the Fund for Natural Sciences

Rebecca Rimai Diesing is interested in the acceleration and astrophysical impact of cosmic rays. She is currently using a detailed model of cosmic ray acceleration to better understand the evolutions and environments of extreme astrophysical phenomena, such as supernova remnants, novae, and winds launched by active galactic nuclei.

Alexander Dittmann

Astrophysics · Institute for Advanced Study
NASA Einstein Fellow

Alexander Dittmann works on a number of topics in theoretical and computational astrophysics. His research often focuses on the interactions between binary systems and their accretion disks, and using X-ray observations of neutron stars to glean insight into the nature of matter at supranuclear densities.

Sergei Dubovsky

Particle Theory, Cosmology, String Theory · New York University
IBM Einstein Fellow

Sergei Dubovsky is interested in the study of cosmology, astrophysical black holes, and the discovery of axion-like particles utilizing string theory.

Nick Early

Combinatorial and Geometric Aspects of QFT Amplitudes · Max-Planck-Institute für Mathematik in den Naturwissenschaften
Funding provided by the European Research Council for the UNIVERSE+ Project

Nick Early is interested in the interplay between real, complex, and tropical algebraic geometry, combinatorics, and scattering amplitudes. While at IAS, he will continue to explore a proposal by CEGM for a possible generalization of QFT amplitudes, and to pursue new connections with algebraic and geometric combinatorics.

Callum W. Fairbairn

Theoretical Astrophysics · Institute for Advanced Study
Funding provided by the W. M. Keck Foundation Fund and the Fund for Memberships in Natural Sciences

Callum W. Fairbairn's research concerns the nonlinear dynamics of distorted astrophysical discs, protoplanetary gas-dust dynamics, planet formation processes, planet-disc interactions, disc instabilities, and debris discs.

Xiaohui Fan

Extragalactic Astronomy and Cosmology · University of Arizona · *s*
Funding provided by the Fund for Memberships in Natural Sciences

Xiaohui Fan is an observational extragalactic astronomer. His main interests lie in the study of quasars, supermassive black holes, galaxy formation, cosmic reionization, and survey astronomy. At IAS, he will work on using new data from the James Webb Space Telescope to understand the formation and growth of the earliest supermassive black holes in the universe.

Hadleigh Frost

Theoretical Physics · Oxford University, Merton College
Funding provided by the U.S. Department of Energy and the Sivian Fund

Hadleigh Frost is interested in algebraic and combinatorial problems that arise when computing scattering amplitudes in quantum field theory and string theory, in order to better understand the physics of particle scattering at weak and strong coupling.

Eric Gawiser

Astrophysics, Cosmology · Rutgers, The State University of New Jersey · *f*
IBM Einstein Fellow

At IAS, Eric Gawiser will measure the star formation histories and physical properties of galaxies in the early universe discovered by NASA's James Webb Space Telescope. He will determine the relationship between galaxies and dark matter halos using a nonparametric method. These efforts will improve our understanding of galaxy formation and cosmic acceleration.

Antonis Georgiou

Human Memory · Institute for Advanced Study
Martin A. and Helen Chooljian Member in Biology; additional funding provided by the Charles L. Brown Membership in Biology Fund

Antonis Georgiou studies mathematical models of human memory, including forgetting dynamics.

Alfredo Guevara

High-Energy Physics · Harvard University
Funding provided by the U.S. Department of Energy and the Sivian Fund

Alfredo Guevara studies scattering amplitudes and their application in understanding gravity within quantum field theory. More broadly, Guevara is interested in the study of black hole physics.

Richard Hahnloser

Neuroinformatics · Eidgenössische Technische Hochschule Zürich · *s*
Eric and Wendy Schmidt Member in Biology

Richard Hahnloser's interests are in neural principles underlying vocal learning and imitation in songbirds. His work aims to decode the neural networks of the song system and to understand the structural and functional plasticity of these networks to environmental influences.

Chris Hamilton

Astrophysics · Institute for Advanced Study · *m*
John N. Bahcall Fellow; additional funding provided by the Sivian Fund

Chris Hamilton's research concerns the dynamics of galaxies, globular clusters, binary stars, and planetary systems; compact object mergers (LIGO/Virgo gravitational-wave progenitors); and the kinetic theory of stellar systems and plasmas.

Holmfridur Sigridar Hannesdottir

Theoretical Physics · Institute for Advanced Study · *m*
Funding provided by the U.S. Department of Energy; J. Robert Oppenheimer Endowed Fund

Holmfridur Sigridar Hannesdottir is interested in exploring the theoretical foundations of quantum field theory. Her work focuses on how physical principles are imprinted in the analytic structure and infrared divergences of scattering amplitudes.

Nathan Haouzi

Mathematical Physics · Institute for Advanced Study
Funding provided by the National Science Foundation

Nathan Haouzi studies string theory and quantum field theory in various dimensions. Haouzi is particularly interested in the underlying mathematical structures that explain or motivate physical dualities. Some of his recent work explores new aspects of the BPS/CFT correspondence, and its relation to the representation theory of quantum groups.

Aidan Herderschee

Theoretical Physics · Institute for Advanced Study
Founders' Circle Member, in recognition of Edward and Kiyomi Baird; additional funding provided by the Simons Foundation

Aidan Herderschee's research focuses on scattering amplitudes in quantum field theory, gravity, and string theory. For example, Herderschee studies the classical limit of gravity amplitudes, specifically in relation to the analysis of gravitational waves emitted by inspiraling black holes.

Philip Hopkins

Theoretical Astrophysics · California Institute of Technology · *f*
IBM Einstein Fellow; additional funding provided by the Sivian Fund

Philip Hopkins is interested in the formation and evolution of astrophysical objects ranging from galaxies to stars to supermassive black holes to planets. His group studies these with large numerical simulations in order to explain observations and make new predictions for future observatories.

Yue Hu

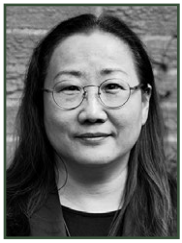
Theoretical Astrophysics · Institute for Advanced Study and California Institute of Technology
NASA Hubble Fellow

Yue Hu's research focuses on the ubiquitous turbulence and magnetic fields in astrophysics, as well as their role in cosmic ray transport, star formation, and galaxy evolution. At IAS, Hu will explore and study the largest magnetic field in galaxy clusters.

Daniel Louis Jafferis

String Theory, Supersymmetric Quantum Field Theory, Quantum Gravity · Harvard University · *vp/f*
IBM Einstein Fellow

Daniel Louis Jafferis is interested in utilizing string theory to describe quantum gravity and the use of gauge/gravity correspondence, entanglement entropy, and exact results in supersymmetric systems and quantum field theories.



Jinyoung Serena Kim

Protoplanetary Disc Evolution, Star and Planet Formation · The University of Arizona · *f*

While at IAS, Jinyoung Serena Kim will conduct research on protoplanetary disc evolution and star and planet formation environments, focusing on externally irradiated protoplanetary discs near massive stars, using observational data from ground-based and space telescopes and theoretical models.

Ryohei Kobayashi

Theoretical Physics · University of Maryland
Funding provided by the U.S. Department of Energy and the Sivian Fund

Ryohei Kobayashi works on quantum many-body systems in condensed matter physics and quantum field theory. He is interested in generalized symmetries, gauge theories, and quantum information protected by topological nature, which are found in phases of matter as a result of diverse patterns of quantum entanglement.

Nickolas Kokron

Cosmology · Institute for Advanced Study and Princeton University
Funding provided by the Fund for Natural Sciences

Nickolas Kokron is interested in the formation of large-scale dark matter structures in the universe and their connection to luminous tracers such as galaxies. He employs both numerical simulations and pen-and-paper theory in this study, with an emphasis on techniques that combine both paradigms.

Jonah Kudler-Flam

Theoretical Physics · Institute for Advanced Study
William D. Loughlin Member; additional funding provided by the National Science Foundation and the Fund for Memberships in Natural Sciences

Jonah Kudler-Flam is interested in quantum information theoretic aspects of quantum many-body physics and gravity. His research focuses on chaos and thermalization in quantum systems and, in parallel, the quantum physics of black holes.

Thomas Lam

Combinatorics · University of Michigan · *v/f*

Thomas Lam is a mathematician working at the interface of combinatorial algebraic geometry and scattering amplitudes in physics. While at IAS, he will develop the emerging relation between matroids and scattering amplitudes.

Nicolas Lenner

Biophysics, Ecology, Evolution · Institute for Advanced Study
Funding provided by the Simons Foundation

Nicolas Lenner's scientific background is in physics of dynamical biological systems, ranging from molecular dynamics to developmental processes of whole organisms. Lenner now applies this dynamical systems perspective to problems in ecology and evolution.

Samuel Leutheusser

Quantum Field Theory · Princeton University
Martin A. and Helen Chooljian Member; additional funding provided by the National Science Foundation and the Fund for Natural Sciences

Samuel Leutheusser is interested in understanding the nature of observables and measurement in quantum field theory and quantum gravity. While at IAS, Leutheusser aims to use operator algebra techniques to provide new perspectives and computational tools to understand local observables in quantum gravity.

Yen-Ting Lin

Astronomy, Astrophysics · Academia Sinica · *s*
Funding provided by the Bershadsky Fund

Yen-Ting Lin is interested in galaxies and clusters, particularly the galaxy-halo connection, the formation of galaxies, and the physics of galaxy clusters and their structures.

Qianshu Lu

Theoretical Particle Physics · Institute for Advanced Study and New York University
Funding provided by the National Science Foundation

Qianshu Lu studies the interplay between cosmology and particle theory. She is particularly interested in cosmological signatures of particle physics models that are motivated by constraints from quantum gravity.

Lia Medeiros

Astrophysics · Institute for Advanced Study and Princeton University · *v*

Lia Medeiros is interested in using extreme astrophysical objects and phenomena to test fundamental theories of physics. Currently, she works on several aspects of the Event Horizon Telescope. Her work primarily focuses on theoretical simulations, but she will sometimes delve into data analysis as well.

Noah Miller

High-Energy Physics · Institute for Advanced Study
Funding provided by the U.S. Department of Energy and the Sivian Fund

Noah Miller's work focuses on aspects of scattering amplitudes and symmetries in quantum field theory and quantum gravity.

Gregory Moore

Physical Mathematics · Rutgers, The State University of New Jersey · *dvp/s*
IBM Einstein Fellow

Gregory Moore is interested in mathematics and physics, and the applications of mathematics to the physics of quantum field theory and string theory, and vice versa.

f First Term · *s* Second Term · *m* Long-term Member · *v* Visitor
dvp Distinguished Visiting Professor · *jvp* Junior Visiting Professor · *ra* Research Associate

Beatrix Muehlmann

Quantum Gravity · Institute for Advanced Study

Funding provided by the National Science Foundation and the Sivian Fund

Beatrix Muehlmann is studying low-dimensional theories of quantum gravity. One central aspect of her work aims to construct explicit and rigorous models of de Sitter quantum gravity.

Vladimir Narovlansky

Quantum Field Theory · Princeton University

Funding provided by the National Science Foundation

Vladimir Narovlansky is interested in quantum field theories, disordered systems, and the study of models to better understand quantum gravity, particularly the double-scaled Sachdev-Ye-Kitaev (SYK) model.

Karl H. Palmquist

Systems Biology, Ecosystem Dynamics · Institute for Advanced Study

Starr Foundation Member in Biology; Martin A. and Helen Chooljian Member in Biology

Karl H. Palmquist is interested in biological complexity and how systems organize in space and time. He has developed experimental and theoretical approaches to study biological development, and is extending his thinking to the emergence of complex phenomena in soil ecosystems to address fundamental questions of sustainable agriculture.

Abhinav Prem

Theoretical Physics · Institute for Advanced Study

Funding provided by the U.S. Department of Energy, the Paul Dirac Fund, and the Sivian Fund

Abhinav Prem primarily works on topological states of matter, including symmetry-protected and fractonic phases, and on the dynamics of strongly interacting quantum systems, both in and out of equilibrium.

Mor Rozner

Astrophysics · Institute for Advanced Study and Gonville & Caius College, University of Cambridge

Mor Rozner is interested in planet formation, stellar and planetary dynamics, and gravitational wave sources.

f First Term · *s* Second Term · *m* Long-term Member · *v* Visitor
dvp Distinguished Visiting Professor · *jvp* Junior Visiting Professor · *ra* Research Associate

Giulio Salvatori

High-Energy Physics · Max-Planck-Institut für Physik

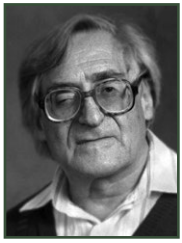
Giulio Salvatori is mostly interested in the study of scattering amplitudes. In this context, he has been investigating the connection between positive geometries, such as the amplituhedron, and amplitudes. Salvatori has also been working on semi-analytical techniques for the computation of Feynman diagrams necessary for processes being studied at the Large Hadron Collider.

Gabriela Sato-Polito

Cosmology · Institute for Advanced Study

Funding provided by the National Science Foundation

Gabriela Sato-Polito is interested in connecting new observations of the most elusive corners of the universe with tests of fundamental physics. Her recent work explores techniques to map the matter distribution in the distant universe, and measurements of gravitational waves by precisely timing pulsars.



Albert Schwarz

Theoretical Physics, Mathematics · University of California, Davis · *v/f*

Albert Schwarz is interested in various problems of quantum field theory and string theory. During his visit to IAS, Schwarz is planning to continue the analysis of the notion of inclusive scattering matrix that was introduced in his recent papers. In particular, he intends to apply this notion to the infrared problem in quantum electrodynamics.

Sahand Seifnashri

Theoretical Physics · Institute for Advanced Study

Funding provided by the Simons Foundation and the Fund for Memberships in Natural Sciences

Sahand Seifnashri works on quantum field theory and its applications in high-energy and condensed matter physics. He is interested in generalized symmetries, their anomalies, and understanding the structures of extended operators and defects in quantum field theory.

Nikita A. Sopenko

Mathematical Physics · Institute for Advanced Study

Funding provided by the National Science Foundation and the Fund for Memberships in Natural Sciences

Nikita A. Sopenko works on mathematical aspects of condensed matter physics and quantum field theory. In particular, he is interested in the classification of topological phases of matter.

Giovanni Maria Tomaselli

Gravitational Physics · Institute for Advanced Study
Funding provided by the Sivian Fund

Giovanni Maria Tomaselli is interested in theoretical and astrophysical aspects of black holes, gravitational-wave astronomy, and dark matter. His research has explored signatures of new ultralight particles in black hole binary inspirals.

Erez Urbach

Theoretical Physics · Institute for Advanced Study
Funding provided by the J. Robert Oppenheimer Endowed Fund

Erez Urbach is interested in quantum gravity, string theory, and holography. At IAS, Urbach will attempt to further understand quantum aspects of black holes and cosmology.

Michael Winer

Statistical Physics · Institute for Advanced Study
Funding provided by the U.S. Department of Energy

Michael Winer studies disordered systems, their phase transitions, thermodynamics, and dynamics. Much of his work focuses on the physics of glasses, and how it relates to important concepts ranging from holography to deep learning.

George Nathaniel Wong

Astrophysics · Institute for Advanced Study and Princeton University
Frank and Peggy Taplin Member

George Nathaniel Wong uses numerical methods and analytic modeling to study high-energy astrophysical phenomena, and especially accretion onto supermassive black holes. He is interested in predicting observational signatures of the connection between black holes and relativistic jets as might be observed by next-generation experiments.

Tomer Yavetz

Astrophysics · Institute for Advanced Study
Friends of the Institute for Advanced Study Member

Tomer Yavetz is interested in applying the tools of theoretical dynamics in order to understand a variety of phenomena, ranging from the orbits of Earth satellites to the nature of dark matter. His main focus is on studying the distribution and substructure of dark matter in the Milky Way.

f First Term · *s* Second Term · *m* Long-term Member · *v* Visitor
dvp Distinguished Visiting Professor · *jvp* Junior Visiting Professor · *ra* Research Associate

Weishun Zhong

Statistical Physics, Neuroscience, AI · Institute for Advanced Study

Eric and Wendy Schmidt Member in Biology; additional funding provided by the Simons Foundation

Weishun Zhong wants to understand natural and artificial intelligence through the lens of statistical physics. In particular, he is interested in how intelligent behaviors can arise in disordered systems and neural networks, and how complex many-body interactions affect the emergent computation capabilities in such systems.

Muni Zhou

Plasma Physics · Institute for Advanced Study and Princeton University

Funding provided by The Ambrose Monell Foundation; Bezos Member

Muni Zhou uses a combination of analytic theory and numerical experiments to study plasma physics problems such as magnetogenesis, plasma dynamos, and kinetic turbulence.

School of Social Science

Administrative Officer: Miriam Harris

Founded in 1973, the School of Social Science is dedicated to analyzing contemporary societies and social change. It harbors a pluralistic and critical approach to social research, and encourages multidisciplinary and international perspectives. Operating under the guiding principles of informality and collegiality, and with a shared understanding that the social sciences should neither be narrowly defined nor bound by disciplines, the School brings together scholars with various perspectives, methods, and topics, providing space for intellectual debate and mutual enrichment. Scholars are drawn from a wide range of fields, including but not limited to political theory, political economy, geography, law, sociology, anthropology, history, philosophy, and literature, to examine historical and contemporary problems.

Each year, the School designates a theme, which is neither exclusive nor excluding. The theme for the 2024–25 academic year is "The Politics of Migration and Displacement as a Form of Life," led by Didier Fassin, James D. Wolfensohn Professor at the Institute for Advanced Study, and Visiting Professor David Owen, professor in politics at the University of Southampton.

Although most people worldwide live in the country where they were born, the three percent who do not and, even more, the 0.5 percent who are forcibly displaced across borders, according to the United Nations, draw disproportionate political attention. Demographically marginal and often socially marginalized, they have come to occupy a central role in national imaginaries and ideologies of identity, often including xenophobic and racist motifs. While much has been written on immigration and asylum, on migrants and refugees, both from the normative perspective of moral and political philosophy and from the empirical standpoint of the social sciences, the theme year aims to address the connections between the politics of migration in its varied modes and displacement as a form of life. The theme will explore the ways in which the social sciences can inform normative approaches, and how critical thinking can nourish empirical approaches.

What are the historical convergences and variations in the modes of governmentality that constitute and regulate migration statuses and the living conditions of the displaced? How are the contemporary politics of border control shaped

by a colonial past, imperial present, and continuing practices of racial discrimination, regimes of membership and senses of belonging, technologies of surveillance and selection, regional arenas of cooperation and conflict, and the transnational externalization of migration governance? What tensions, or complementarities, exist between the logics of humanitarianization and securitization? Or between the exploitation of undocumented workers and the rejection of legal routes of entry and residence? How do people on the move invent individual and collective tactics of circumvention and strategies of resistance to carry out their projects? What forms of solidarity develop in relation to them? What affects and values are mobilized in the defense of exiles or the restriction of mobility?

These are only some of the questions that the theme seeks to address. The theme is open to all disciplines of the social sciences and the humanities, and will be attentive to research conducted within various national and transnational contexts and from diverse theoretical perspectives.

Wendy Brown

UPS Foundation Professor

Wendy Brown is a political theorist who investigates the subterranean powers shaping contemporary Euro-Atlantic polities, with particular attention to their deformations of democracy—its institutions, citizenries, and cultures. She has brought these concerns to her early studies of masculinism in political life, political identity, and discourses of tolerance, and, more recently, to her work on sovereignty and border fortification, neoliberal reason, and nihilism. She is currently writing a book on the intersection between ecological crises and crises of constitutional democracy, tentatively entitled "Who is the Demos Now?"

Didier Fassin

James D. Wolfensohn Professor

An anthropologist and sociologist who has conducted fieldwork in Senegal, Ecuador, South Africa, and France, Didier Fassin was initially trained as a physician in internal medicine and public health. He developed the domain of critical moral anthropology. His recent research was on the theory of punishment, the politics of life, and the public presence of the social science. He currently works on the control of borders and the policing of migrations. Recipient of the Nomis Distinguished Scientist Award, he is involved in a global program on crises, examining, in particular, the cases of migrants and refugees. He is also Professor at the Collège de France, where he holds the chair on Moral Questions and Social Issues.

Alondra Nelson

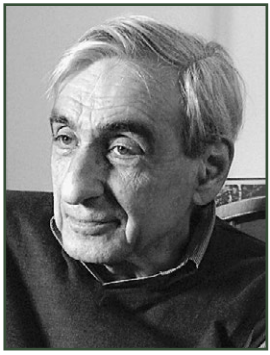
Harold F. Linder Professor

An acclaimed sociologist, Alondra Nelson examines questions in science, technology, and social inequality. Nelson's work offers a critical and innovative approach to the social sciences in fruitful dialogue with other fields. Her major research contributions are situated at the intersection of racial formation and social citizenship, on the one hand, and emerging scientific and technological phenomena, on the other. From 2021–23, she was deputy assistant to President Joe Biden and acting director and principal deputy director for science and society at the White House Office of Science and Technology Policy. She is currently at work on books about science and technology policy in the Obama and Biden administrations.

Joan Wallach Scott

Professor Emerita

Joan Wallach Scott's groundbreaking work has challenged the foundations of conventional historical practice, including the nature of historical evidence and historical experience and the role of narrative in the writing of history. Broadly, the object of her work is the question of difference in history: its uses, enunciations, implementations, justifications, and transformations in the construction of social and political life. Scott's books have focused on the vexed relationship of the particularity of gender to the universalizing force of democratic politics. Her most recent work explores the question of the ethical responsibility of history-writing.



Michael Walzer

Professor Emeritus

Michael Walzer has written about a wide variety of topics in political theory and moral philosophy, including political obligation, just and unjust war, nationalism and ethnicity, economic justice, and the welfare state. He has played a critical role in the revival of a practical, issue-focused ethics and in the development of a pluralist approach to political and moral life. Walzer's books include *Just and Unjust Wars* (1977), *Spheres of Justice* (1983), *On Toleration* (1997), *Arguing About War* (2004), and *The Paradox of Liberation* (2015); he served as co-editor of the political journal *Dissent* for more than three decades, retiring in 2014. Currently, he is working on issues to do with international justice and the connection of religion and politics, and also on a collaborative project focused on the history of Jewish political thought.

Tendayi Achiume

International Migration Law · Stanford Law School
Ashwin B. Chhabra and Daniela Bonafede-Chhabra Member

While at IAS, Tendayi Achiume will explore the ways in which transnational corporations (colonial and contemporary) have made and used borders and race together as technologies of economic profit. At the heart of her project is concern for the role of international law in facilitating corporate border and migration injustice.

Marc Aidinoff

History, Science and Technology Studies · ra

Marc Aidinoff studies the intersection of public policy, technology, and liberalism in the United States. At IAS, he will be working on a book about the computerization of the U.S. welfare state since 1974.

Diana Allan

Anthropology · McGill University

Diana Allan is an anthropologist and filmmaker studying histories of Palestinian displacement and exilic experience in Lebanon. While at IAS, she will be working on a book on refugee archives and completing a film, "Partition," which brings together colonial films from British Mandate Palestine with recordings from the Nakba Archive.

Mike Amezcua

History · Georgetown University
Roger W. Ferguson, Jr. and Annette L. Nazareth Member

Mike Amezcua is a historian of the United States, political economy, and Latinx peoples. At IAS, he will be working on a book that examines the evolution of Latino capitalist endeavors ranging from commercialist crusades to global trade in the twentieth and twenty-first centuries, providing a framework to understand Latino economic history in the U.S.

Ulla Berg

Migration Studies · Rutgers, The State University of New Jersey

Ulla Berg is a cultural and visual anthropologist interested in transnational migration, (im)mobilities, and contemporary politics and regimes of control in Latin America and among U.S. Latinx populations. While at IAS, Berg will research deportation and its aftermath between the Andean region of South America and the United States.

Hannah Bloch-Wehba

Law · Texas A&M University

Alfred Landecker Member

Hannah Bloch-Wehba is a legal scholar whose work examines the intersection of civil liberties, technology, and democratic accountability. While at the Institute, she will begin a book project exploring the relationship between technological change and the reshaping of public governance and power in the United States.

Çetin Çelik

Sociology of Migration, Education, Race and Ethnicity · Koç University, Istanbul

Wolfensohn Family Member

Çetin Çelik is interested in the fields of sociology of migration, sociology of education, and sociology of race and ethnicity. While at IAS, Çelik will write a book on ethnic boundaries, stigmas, and responses within the context of interactions between Syrian refugees and Turks in Turkey.

Paisley Currah

Political Science, Gender and Sexuality Studies · The City University of New York

Robbert Dijkgraaf Member

While at IAS, Paisley Currah will be working on his book, tentatively titled "The Politics of Sex Classification," situating the current wave of anti-trans legislation in the United States within a longer history of the regulation of gender.

Christine Custis

Ethical and Responsible AI Innovation · *ra*

While at IAS, Christine Custis will support the administration of convenings and outputs of the AI Policy and Governance Working Group (AIPGWG), led by Harold F. Linder Professor Alondra Nelson and hosted in Nelson's Science, Technology, and Social Values (ST&SV) Lab within the School of Social Science.

Sandipto Dasgupta

Political Theory, History of Political Thought · The New School for Social Research

Elizabeth and J. Richardson Dilworth Member; additional funding provided by the Fund for Historical Studies

Sandipto Dasgupta is a political theorist and historian of political thought, with a research interest in the political theory of empire, decolonization, and postcolonial presents. At IAS, he is working on a book on the emergence and decline of the concept of public ownership in the postcolonial world.

Nicholas De Genova

Migration and Border Studies, Critical Race Studies · University of Houston

Nicholas De Genova is a cultural anthropologist, focused on migration, borders, race, citizenship, and labor. At IAS, he will be working on a new book on "The Migrant Metropolis," examining how migrant projects of re-making life through urban place-making situate migrants as protagonists in global/postcolonial struggles.

Anne-Claire Defossez

Sociology · Institute for Advanced Study · *v*

Anne-Claire Defossez will be writing a book on women and politics in France. Defossez will also work on field data collected on the French-Italian border regarding migrations from African and Middle Eastern countries, analyzing their legal, social, and economic features, and the tensions between states' repression and local solidarity.

Rebio Díaz Cardona

Environmental Psychology, Social Theory, Puerto Rican Studies · City College of New York-LaGuardia Community College · *v*

Rebio Díaz Cardona is an environmental psychologist interested in grassroots placemaking and self-management projects in Puerto Rico and the geographies of writing in urban contexts. While at IAS, he will work on a series of essays on Puerto Rican society, blending personal narrative with insights from social and environmental psychology.

Gabriel Greenberg

Philosophy · University of California, Los Angeles · *v*

Gabriel Greenberg's research is concerned with non-linguistic communication, especially the ways that meaning is leveraged by pictures, diagrams, and facial expressions. While at IAS, Greenberg will be working on a book on iconic and symbolic representation.

Ayten Gündoğdu

Political Theory · Barnard College-Columbia University

Ayten Gündoğdu is a political theorist with research interests in modern and contemporary political thought, migration, and human rights. At IAS, she will be completing a book on migrant deaths and disappearances, examining the regime of impunity surrounding racialized operations of border violence.

Brian Jordan Jefferson

Political Geography · University of Illinois at Urbana-Champaign
Richard B. Fisher Member

Brian Jordan Jefferson studies political geography, political economy, and science and engineering. At IAS, he will work on a book that explores the integration of cybernetics into U.S. statecraft and the wider political consequences.

Rajbir Singh Judge

South Asian History, Intellectual History, Sikh Studies · California State University, Long Beach
AMIAS Member

Rajbir Singh Judge is interested in the writing of history, the Sikh tradition, and historical changes in nineteenth and twentieth century Punjab. While at IAS, he will be working on his book manuscript on contextual reason.

Nahoko Kameo

Sociology, Science and Technology · New York University
Infosys Member

Nahoko Kameo's research interests lie in the intersection of economic sociology and science and technology studies. At IAS, Kameo will be working on a book based on her ethnographic research in a social robotics laboratory in Japan, with a focus on humanoids and the questions surrounding interactional morality of human-robot interaction.

Raphaëlle Khan

International Relations and Global History · City College of New York · *v*

Raphaëlle Khan works at the intersection of international relations and global history, with a focus on non-Western perspectives in international relations, decolonization, and the Indo-Pacific region. At IAS, she is completing a book on the role played by formerly colonized countries (especially India) in the making of the twentieth century international order.

Dorota Koczanowicz

Cultural Studies, Art, Food Studies · University of Wroclaw, Poland · *v*

Dorota Koczanowicz is interested in the aesthetics and cultural value of food and eating. While at IAS, Koczanowicz will pursue a project exploring the role of art in the discourse on the climate crisis, with a particular focus on artists pondering foodways as implicated in the Anthropocene.

Leszek Koczanowicz

Philosophy, Political Science, Cultural Studies · SWPS University, Warsaw

Leszek Koczanowicz specializes in social theory and critical political theory, exploring the cultural dimension of politics. At IAS, he will be working on a project on the ethics, politics, and culture of migration and displacement.

R. L'Heureux Lewis-McCoy

Sociology, Education · New York University

R. L'Heureux Lewis-McCoy is interested in issues of space, race, and class. While at IAS, he will be working on his book manuscript currently entitled "Afterlives of Integration: Belonging and Community Power in Suburbia." He is primarily interested in minoritized communities' experiences and voices in majority spaces.

Iymon Majid

Political Science · Institute for Advanced Study

Iymon Majid is a political scientist with a focus on comparative political theory and modern South Asia. At IAS, he will be working on a new project studying the relationship between law, politics, and religion in Kashmir.

Jeanne Morefield

Political Theory · University of Oxford

Friends of the Institute for Advanced Study Member

Jeanne Morefield's research interests sit at the intersection of political theory, global intellectual history, and international relations. While at IAS, she will research the historical and contemporary relationship/overlap between sex trafficking panics, the liberal internationalist imaginary, and fascist conspiracy theories.

Ahmad Qais Munhazim

Political Science · Thomas Jefferson University

Ahmad Qais Munhazim is an interdisciplinary scholar of migration, war, gender, and sexuality studies. At IAS, Munhazim will work on their book project based on a de/colonial ethnography of displacement(s) in the lives of recently evacuated queer and trans Afghan refugees in the United States, Canada, Germany, and Ireland.

Juan Thomas Ordóñez

Migration Studies, Anthropology, Colombia · Universidad del Rosario, Bogotá Colombia

Juan Thomas Ordóñez studies Venezuelan migration to Colombia and migrants who cross the country looking to reach the U.S./Mexico border. While at IAS, he will work on Colombia's strategic position in global migration routes to North America and the ways borderlands are affected by global migration routes and policies.

David Owen

Philosophy, Political Theory, Migration Studies · University of Southampton · *vp*

While at IAS, David Owen will work on a project "On Not Being at Home in the World," which addresses different forms of displacement and un-homing in order to disclose dimensions of home and home-making as fundamental elements of human ethical life and as a way of conceptually linking justice and human flourishing.

Marie-Therese Png

Global AI Governance, AI Supply Chains, Critical Minerals · The Oxford Internet Institute · *ra*

Marie-Therese Png works in transnational alliance building at intersections of tech infrastructure, resource justice, and antimilitarism in geographies such as Taiwan, Brazil, Chile, and Costa Rica. Previously at the UN and DeepMind, at IAS she will research global AI governance, the geopolitics of AI supply chains, and critical minerals.

Mahua Sarkar

Guestwork and Transnational Labor Migration, Global Labor History · University of Toronto

Mahua Sarkar's research interests include contemporary guestwork, gestational surrogacy as a new form of gendered and racialized labor, socialist internationalism, and the politics of methods. While at IAS, Sarkar will focus on her book, "Moving Stories: Contemporary Guest Work and Bangladeshi Contract Migrants."

Bernardo Zacka

Political Theory · Massachusetts Institute of Technology

Funding provided by the Florence Gould Foundation Fund

Bernardo Zacka is a political theorist with an interest in ethnographic methods. His research focuses on how citizens ordinarily encounter the state. At IAS, he will be completing a book project on the architecture of welfare offices.

Director's Visitors

Director's Visitors contribute much to the vitality of the Institute. Scholars from a variety of fields, including areas not represented in the Schools, are invited to the Institute for varying periods of time, depending on the nature of their work.

Carson Bay

Biblical Studies, Classics, Jewish Studies, Religious Studies · ra

Carson Bay works on the religious texts and ideas of ancient Mediterranean cultures. He specializes in the language of race and identity, biblical reception history, and the writings and influence of the Jewish historian Flavius Josephus (c. 37–100 C.E.). His current book analyzes how the early-tenth century Hebrew text *Sefer Yosippon* deals with its Latin sources.

David Gyllenhaal

History, Religion · ra

David Gyllenhaal's research explores the rationalization process and impact of trauma on Greek- and Syriac-speaking Christians and Arabic-speaking Muslims during late antiquity.

Alex Reiss-Sorokin

History of Information Technology · Institute for Advanced Study and Princeton University

Alex Reiss-Sorokin is a socio-legal historian of information technology. At IAS, she will work on "Trust in Search: Credibility and Doubt in Legal Research Technologies," tracing how American legal professionals came to use and trust information technology for legal research, and how it transformed their work and expertise in the process.

Nataly Shahaf

History of China, Buddhism, Print Culture · Institute for Advanced Study and Princeton University

Nataly Shahaf, a historian of China, explores the nexus of religion, science, and culture. At IAS, she will be working on her book, "Multiple Exposures: Ghosts, Buddhism, and Visual Heritage in Early Twentieth-Century China," examining how visual media technologies have shaped and been shaped by religious ideas, beliefs, and practices.

f First Term · *s* Second Term · *ra* Research Associate

Edmond Shlomo Zuckier

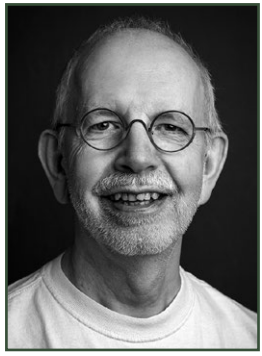
Rabbinic Literature, Philosophy of Religion · ra

Edmond Shlomo Zuckier is a scholar of rabbinic literature and philosophy of religion. His prior work has focused on concepts of sacrifice, atonement, and Halakhah (Jewish law). At IAS, Zuckier's research will focus on conceptions of divine will that emerged in antiquity and the medieval period across Judaism, Christianity, and Islam.

Legacy Programs

PROGRAM IN INTERDISCIPLINARY STUDIES (2002–2023)

The Program in Interdisciplinary Studies explored different ways of viewing the world, spanning a range of disciplines from physics to astrophysics, geology, paleontology, and biology, to artificial intelligence, cognitive psychology, and philosophy. As a program intended to engage new interdisciplinary questions and facilitate greater communication and collaboration between the four Schools, PIDS was dedicated to developing infrastructure for open-ended intellectual exchange to help expand the interface between formal research and the larger ecosystem of human knowledge. It brought to life After Hours Conversations—short, informal, cross-disciplinary talks occurring twice a week to discuss open problems in a variety of fields—a tradition continued by other Schools. The program was headed by Professor Emeritus Piet Hut, and during its tenure had a total of 67 Visitors.



Piet Hut

Professor Emeritus

Piet Hut's main research theme is "the Nature of Reality," as seen through the lenses of Math, Matter, and Mind. Some subthemes are: for Math, "Algorithms and Foundations"; for Matter, "Physics and Biology"; and for Mind, "Phenomenology and Contemplation." Hut's main research background is in computational astrophysics, with asteroid "17031 Piethut" named in his honor. He is one of the co-founders of the Earth-Life Science Institute at the Tokyo Institute of Technology. His current book projects include a Typology of Novelty, a study of origins, starting with the origin of the biosphere as the archetype for the origin of a self-organizing complex system, in collaboration with Eric Smith, and a comparative study of European science and philosophy with empirical studies of the mind in other cultures, in collaboration with Alexander Englert.

Alexander Englert

Philosophy · ra

Alexander Englert is a philosopher who works on the German Idealist tradition. He is interested in questions about meta-ethics, consciousness, and conceptions of life. He also has interests in the philosophy of religion. This year, a primary focus of research is the religious thought of Kurt Gödel.

ra Research Associate

ELECTRONIC COMPUTER PROJECT (1945–1957)

The Electronic Computer Project started in late 1945 when John von Neumann, IAS Faculty from 1933–55, joined forces with a group of engineers to design and build one of the first stored-program electronic digital computers at the Institute. The ECP's goal was to create the physical realization of Alan Turing's Universal Machine, theoretically conceived in 1936. The project's many notable achievements include producing the first short-term numerical predictions of the weather, calculating the results of the thermonuclear reaction of the first H-bomb in 1950, and developing von Neumann architecture, which is still used in many modern-day computer systems. Its progress reports, which described the specifications and design principles for the machine, were made freely and widely available in the public domain rather than being patented, heralding the ideals of open access long before such a notion existed. The IAS machine was used continually and productively until 1960. Over 140 individuals were engaged in the project over its duration at the Institute.

PAST DIRECTORS

(in order of service)

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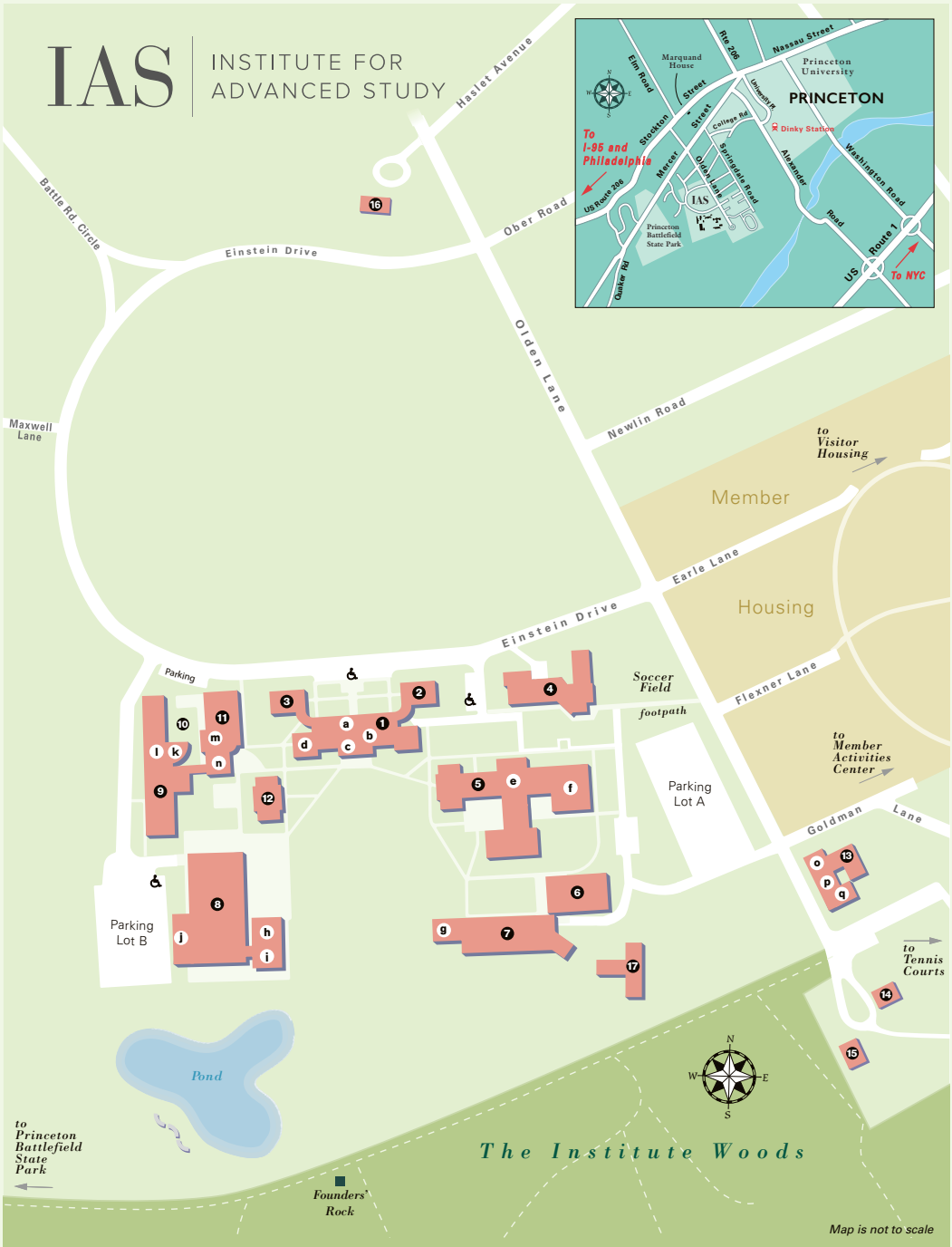

1 **Fuld Hall**
- **a** Reception
- **b** Mathematics–Natural Sciences Library (second floor)
- **c** Common Room
- **d** Director's Office

2 **Building A**
3 **Building B**
4 **Rubenstein Commons**
5 **Bloomberg Hall**
- **e** Lecture Hall
- **f** The Simons Center for Systems Biology

6 **Wolfensohn Hall**
7 **Simonyi Hall**
- **g** Lecture Hall

8 **Historical Studies–Social Science Library**
- **h** The Shelby White and Leon Levy Archives Center
- **i** White-Levy Room
- **j** Archives Storage

9 **West Building**
- **k** Lecture Hall (first floor)
- **l** Seminar Room (second floor)

10 **Birch Garden**
11 **Marilyn and James Simons Hall**
- **m** Dining Hall (first floor)
- **n** Dilworth Room (first floor)

12 **Building D**
13 **ECP Building** (225 S. Olden Lane)
- **o** Crossroads Nursery School
- **p** Fitness Center
- **q** Business Office

14 **310 S. Olden Lane**
15 **320 S. Olden Lane**
16 **Olden Farm** (97 Olden Lane)
17 **Modular Office Space**

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