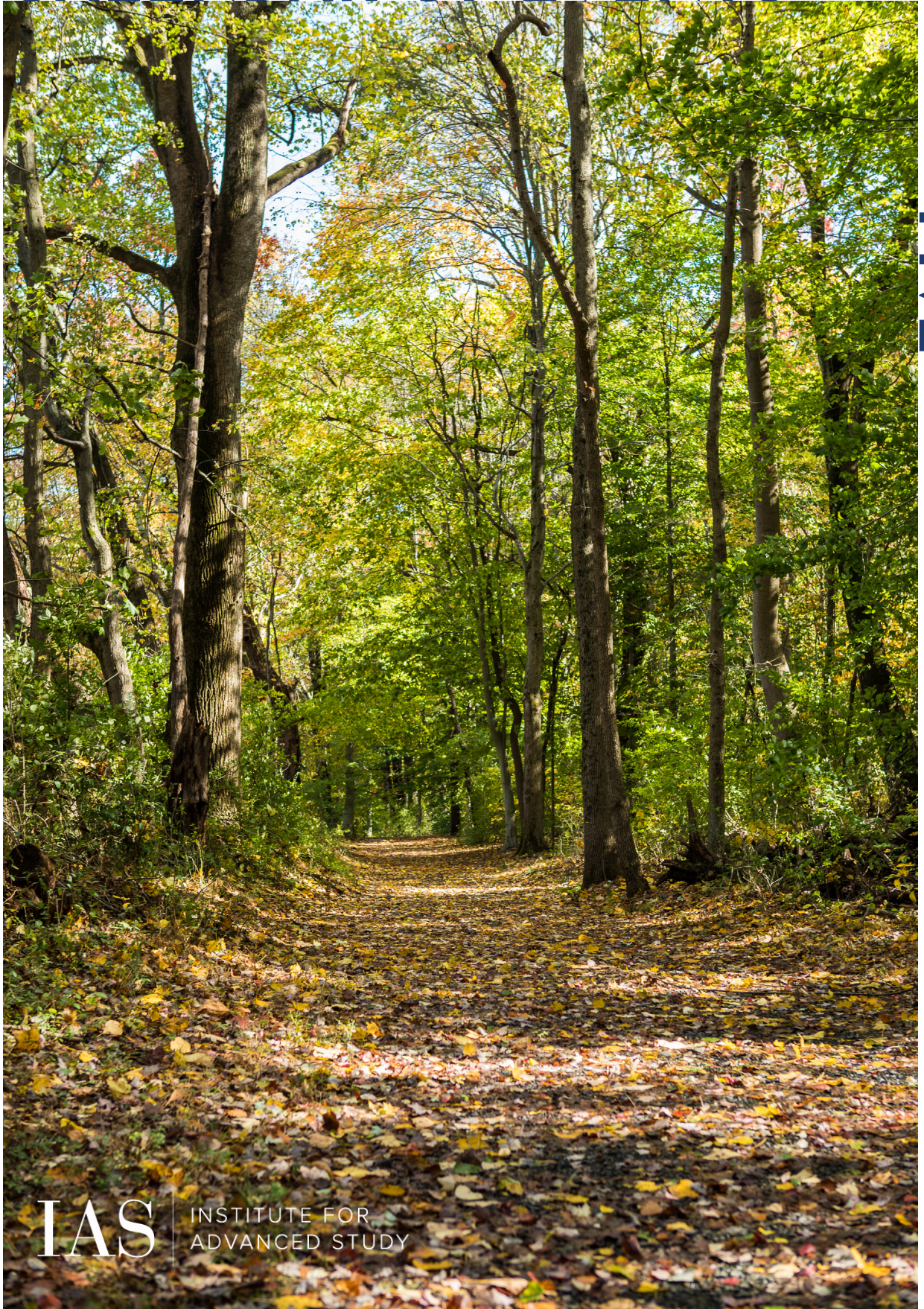


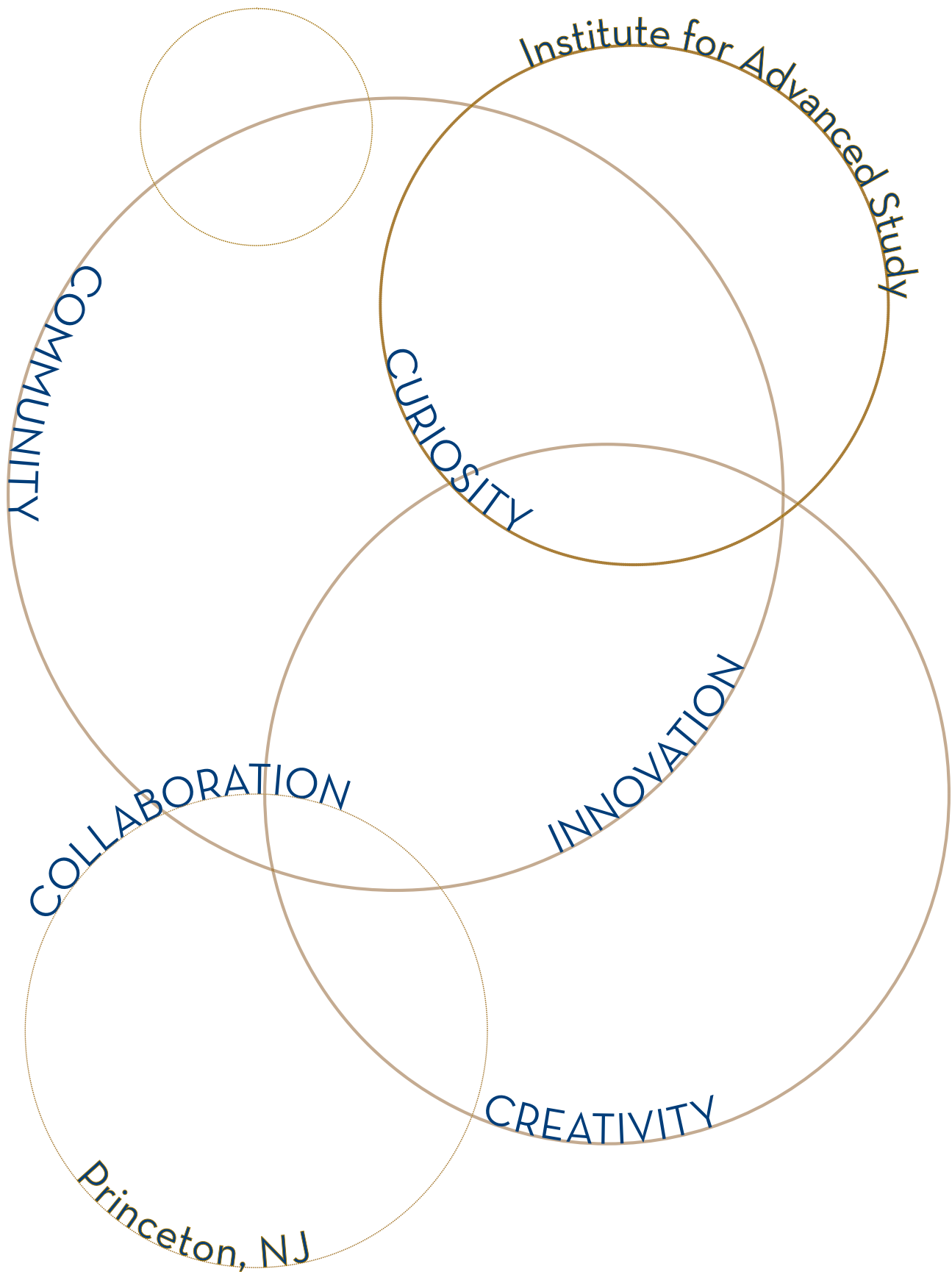
CALENDAR OF EVENTS

FALL 2019



IAS

INSTITUTE FOR
ADVANCED STUDY



It occurred to me by intuition, and music was the driving force behind that intuition. My discovery was the result of musical perception.

—Albert Einstein, Founding Professor in the School of Math/Natural Sciences, 1933–55

Inspiration comes in all forms, and the Fall 2019 events season at IAS is set to be uniquely exciting and enlightening. IAS events create a space where knowledge, discovery, and art intersect through a variety of mediums, across a spectrum of fields, and into new realms of thought.

I hope you will join us often throughout the season for film, literature, lectures, and musical performances that span the sciences and humanities.

As part of the special year in the School of Mathematics, a series of lectures on theoretical machine learning will explore the depths of deep learning and the underlying theories of computer algorithms with enormous power.

In a rapidly changing world of new technologies, mobility, and markets, we need to develop a critical understanding of the complexities of societal behavior and outcomes. The School of Social Science will confront the rise of automation and algorithms, among other profound transformations in the global economic order, as part of its annual theme, “Economy and Society,” which will also serve as the basis for the 2019–20 Film Series.

In an exploration of mastery, meaning, and experience, David Lang, who begins his second three-year term as Artist-in-Residence, will curate the Edward T. Cone Concerts and present a series of talks and special performances, all connected by the theme of VIRTUOSITY.

Returning to the stage of Wolfensohn Hall will be the Art History, History of Science, and Impact of the Past lectures, providing in-depth analysis and contemporary perspectives.



As always, I thank you for your ongoing support of and engagement with IAS. I look forward to welcoming you to the Institute for an events season designed to share and cultivate new knowledge and the discovery of art, ideas, and community.

Robbert Dijkgraaf

Robbert Dijkgraaf

Director and Leon Levy Professor

Economy and Society

A film series curated by the School of Social Science

For the past five years, the School of Social Science, collaborating with the Institute Film Series, has been curating films related to the theme studied in the School during the year. For 2019–2020, the theme “Economy and Society,” coordinated by Professor Didier Fassin and Marion Fourcade, Professor of Sociology at the University of California, Berkeley, will explore the intersection of experimental and empirical methods of study in both the world and the academy.



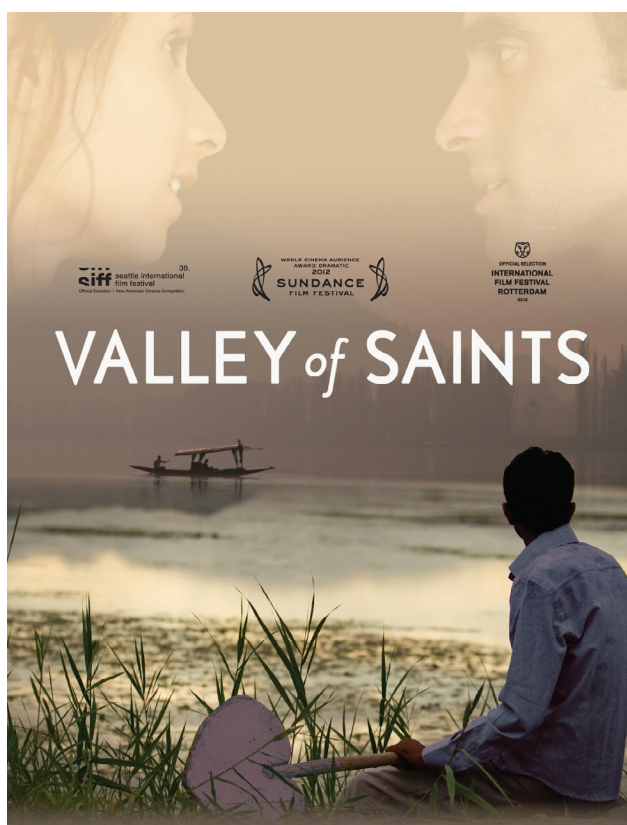
DIDIER FASSIN

James D. Wolfensohn Professor
School of Social Science
Institute for Advanced Study



MARION FOURCADE

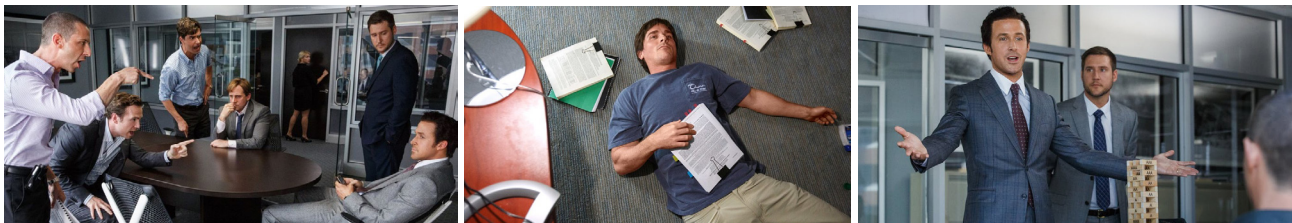
Visiting Professor
School of Social Science



The Big Short

(130 minutes)

WEDNESDAY, OCTOBER 2, 4:00 P.M.
WOLFENSOHN HALL



Adapted from the 2010 book *The Big Short: Inside the Doomsday Machine* by Michael Lewis, *The Big Short* shows the speculative practices that led to the housing bubble that in turn triggered the 2008 financial crisis. Based on real events involving a hedge fund manager, a foreign bank salesman, and two ambitious investors, it unveils in a humorous and yet pedagogic manner the complex mechanisms behind the crash, in particular how these unscrupulous misfits contributed to it and profited from it. In *The New York Times*, Neil Irwin wrote that “it is the strongest film explanation of the global financial crisis.” Directed by Adam McKay, the film won an Oscar for Best Adapted Screenplay.

A post-screening discussion will be led by **Sarah Quinn**, Associate Professor of Sociology, University of Washington, and **Benjamin Braun**, Senior Researcher, Max Planck Institute for the Study of Societies, both current Members in the School of Social Science.

Valley of Saints

(82 minutes)

WEDNESDAY, NOVEMBER 13, 4:00 P.M.
WOLFENSOHN HALL



The first film set in the endangered lake communities of Kashmir. War and poverty force Gulzar, a young tourist boatman, to run away with his best friend, but a military crackdown derails their escape. As they wait, a mysterious woman braving the curfew comes to research the dying lake. Gulzar falls for her, and rivalry and jealousy force him to choose between a new life and a new love.

Graduation

(128 minutes)

WEDNESDAY, DECEMBER 11, 4:00 P.M.
WOLFENSOHN HALL



Romeo Aldea (Adrian Titieni) is a seemingly honest doctor who regrets having settled in his native Romania, a country still teeming with corruption and back dealings. He channels his ambitions for a better life into his teenage daughter, Eliza (Maria Dragus), who's just one exam away from securing a scholarship to a prestigious British university. But when Eliza is attacked on the eve of her test, endangering her ability to pass, Romeo takes matters into his own hands to ensure her success.

A post-screening discussion will follow each film.



HISTORY of SCIENCE

The series in the history of science is dedicated to discussing themes, which are relevant to the IAS, including Big Data, human diversity, and the history of the physical sciences.



Engineering Philosophy: Machine Culture and Social and Intellectual Elites in the Second Industrial Revolution (1900 to 1930)

Adelheid Voskuhl

Associate Professor of History and Sociology of Science
University of Pennsylvania

TUESDAY, OCTOBER 1

Einstein's War: How World War I Made Relativity

Matt Stanley

Professor, Gallatin School of Individualized Study
New York University

TUESDAY, NOVEMBER 5



The History of Biostatistics and the Origins of Precision Medicine

Christopher Phillips

Associate Professor in the Department of History
Carnegie Mellon

TUESDAY, OCTOBER 22

Beyond Genius, Before Theory: Recovering the Lost World of Practice in Nineteenth-Century Chemistry

Catherine Jackson

Associate Professor in the History of Science
Official Fellow, Harris Manchester College
University of Oxford

TUESDAY, MARCH 31



All lectures will begin at 5:00 p.m. in the Dilworth Room

Family Science Talk: Einstein's Dream

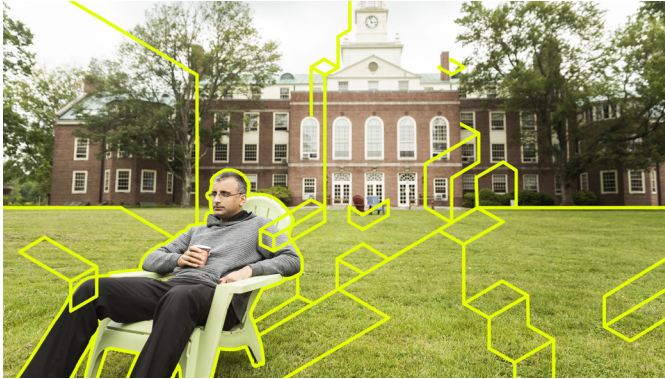
ROBBERT DIJKGRAAF

Director and Leon Levy Professor

A dynamic talk highlighting the legacy of the legendary scholar and the ongoing search for a theory to unite the fundamental forces of the universe, presented by Robbert Dijkgraaf

SATURDAY, OCTOBER 19, 11:00 A.M.
SIMONS HALL





Primes and Knots

AKSHAY VENKATESH

Robert and Luisa Fernholz Professor, School of Mathematics

FRIDAY, OCTOBER 25, 5:30 P.M.

WOLFENSOHN HALL

Photo by Sasha Maslov for Quanta Magazine; Illustration by Olena Shmahalo/Quanta Magazine

Social and Ethical Challenges in Machine Learning

WEDNESDAY, NOVEMBER 6, 5:30 P.M.

WOLFENSOHN HALL

Support for this program is provided by a generous grant from Eric and Wendy Schmidt.



PEDRO DOMINGOS

Professor of Computer Science and Engineering
University of Washington



MARY GRAY

Senior Researcher
Microsoft Research



Architecture in Two Dimensions: The Case For and Against Drawing

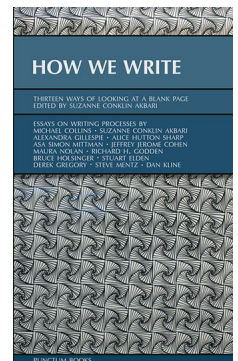
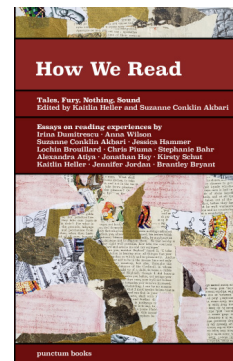
ALINA PAYNE

Paul E. Geier Director of Villa I Tatti
Alexander P. Misheff Professor of History of Art and Architecture
Harvard University

WEDNESDAY, NOVEMBER 20, 5:30 P.M.

WOLFENSOHN HALL

This public lecture is made possible by the
Dr. S.T. Lee Fund for Historical Studies.



What is the Value of the Humanities? How We Read (and Write) Today

SUZANNE CONKLIN AKBARI
Professor, School of Historical Studies

WEDNESDAY, DECEMBER 4, 5:30 P.M.

WOLFENSOHN HALL

This public lecture is graciously sponsored by the
Friends of the Institute for Advanced Study.

Theory of Deep Learning: Where Next?

This workshop seeks to bring together deep learning practitioners and theorists to discuss progress that has been made on deep learning theory, and to identify promising avenues where theory is possible and useful. There will be several invited talks each day and also spotlight talks by young researchers. Talks will include topics such as adaptivity and generalization in deep learning, dimensionality and mode collapse, and neural networks.

TUESDAY, OCTOBER 15–FRIDAY, OCTOBER 18

TUESDAY, OCTOBER 15

Speakers to Include:



Chris Manning
Stanford University



Rong Ge
Duke University



Anima Anandkumar
NVIDIA/California
Institute of Technology



Sanjeev Arora
Institute for Advanced
Study/Princeton University



Gintare Karolina Roy
Institute for Advanced Study



Daniel Roy
University of Toronto



Ke Li
Institute for Advanced Study



Behnam Neyshabur
Google

WEDNESDAY, OCTOBER 16

Speakers to Include:



Yann LeCun
Facebook AI Research



Joan Bruna
New York University



Aleksander Madry
Massachusetts Institute of
Technology



Michael Collins
Google AI



Simon Du
Institute for Advanced Study



Jason Lee
Princeton University

THURSDAY, OCTOBER 17

Speakers to Include:



Léon Bottou
Facebook AI Research



Raman Arora
Johns Hopkins University



Bin Yu
University of California,
Berkeley



Nathan Srebro
Toyota Technological
Institute at Chicago



Tengyu Ma
Stanford University



Chi Jin
Institute for Advanced Study

FRIDAY, OCTOBER 18

Speakers to Include:



Sham Kakade
University of Washington



Surya Ganguli
Stanford University



Rachel Ward
University of Texas at Austin



Mikhail Belkin
Ohio State University



Stefanie Jegelka
Massachusetts Institute of
Technology

This workshop is organized by Sanjeev Arora (IAS/Princeton University), Joan Bruna (IAS/NYU), Rong Ge (IAS/Duke), Suriya Gunasekar (Toyota Technical Institute), Jason Lee (IAS/USC), Bin Yu (IAS/UC Berkeley)

Support for this program is provided by a generous grant from Eric and Wendy Schmidt.



David Lang

Artist-in-Residence

David Lang is a Pulitzer Prize-winning composer who begins his second three-year term as IAS Artist-in-Residence. As part of his residency, Lang will pursue his creative work as part of the Institute community and exchange ideas with scholars from all disciplines. In an exploration of mastery, meaning, and experience, Lang will also curate the 2019–20 Edward T. Cone Concert Series and present a series of talks and special presentations, all connected by the theme of VIRTUOSITY.

Lang's recent works include his opera *prisoner of the state*, which premiered in June 2019 with the New York

Philharmonic; the score for Paolo Sorrentino's film *Youth*, which received Academy Award and Golden Globe nominations; *man made*, a concerto for So Percussion and orchestra; *anatomy theater*, an opera written in collaboration with visual artist Mark Dion; *the public domain*, a commission from Lincoln Center for one thousand amateur singers; and *the loser*, an opera based on the novel by Thomas Bernhard, for which Lang served as librettist, composer, and stage director. Lang is

Edward T. Cone Concert Series 2019–2020



VIRTUOSITY: Season 1

VIRTUOSITY explores the relationships between composer, performer, and listener that are revealed through the performance of virtuosic music. Since music began, musicians have thrilled listeners by performing some seemingly impossible musical task, right before our eyes. It is a way musicians show off—they show us something they can do that we, as listeners, can't. We usually think of music that is “virtuosic” as music that asks performers to play faster, or higher, or to conquer some obviously impossible hurdle, but there are many other ways that composers make music “hard to play” and many other ways musicians can show off. This series of concerts looks at how composers and performers focus on certain parameters of music and make them virtuosic.

This concert series is graciously underwritten by the Edward T. Cone Foundation.

Meredith Monk & Vocal Ensemble

Meredith Monk is one of the world's most inventive composers. She has had to be inventive—since the 1960s, she has pioneered a way of performing that is so genre-defying that no individual existing medium or structure can wholly describe her. Starting as a singer and a composer, she soon began mixing dance, theater, costume, and film into her performances. She invented her own sonic vocabulary that was beyond traditional language and notation. In order to make work that crosses so many boundaries, she has had to invent her own way of making it, her own way of teaching it, and her own way of training a generation of singers and performers in how to perform it with her. The result is the creation of a way of singing that is unmatched in its immediacy, its intimacy, and its invention.

At these concerts, Monk will be joined by renowned members of her Vocal Ensemble, Katie Geissinger and Allison Sniffin.



Photo taken by Julieta Cervantes

FRIDAY, OCTOBER 4, 8:00 P.M.

SATURDAY, OCTOBER 5, 8:00 P.M.

Conrad Tao

Robert Schumann's *Kreisleriana* is a piece we often think of when we think of virtuosic romantic piano music—flashy, brilliant, massive, astonishingly and jaw-droppingly hard. Schumann was both a composer and a virtuoso pianist. Pianist Conrad Tao, himself a composer and a virtuoso, performs the Schumann and other works by composer/pianists that explore the shifting equilibrium between composer and performer.



FRIDAY, NOVEMBER 15, 8:00 P.M.

SATURDAY, NOVEMBER 16, 8:00 P.M.

All concerts begin at 8 p.m. in Wolfensohn Hall.

A reception in the Fuld Hall Common Room will follow the Saturday performances.

For tickets and more information, visit www.ias.edu/air

Coming this Spring: Farmhouse/Whorehouse

AN ARTIST PRESENTATION BY SUZANNE BOCANEGRA

Starring Lili Taylor

Part artist talk, part memoir, part gleefully rambling cultural essay, Suzanne Bocanegra's (bottom right) performance work mines her Texan upbringing, aesthetic influences, and far-reaching imagination to make sense of our collective subconscious. In *Farmhouse/Whorehouse*, inspired by her grandparents who lived on a small farm across the road from the Chicken Ranch (better known as the "Best Little Whorehouse in Texas"), Bocanegra uses text, costumes, country music, and video projections to consider the American



myth of rural utopia. Following her acclaimed collaborations with actors Paul Lazar (*When a Priest Marries a Witch*) and Frances McDormand (*Bodycast*), this third installment in the series enlists the talents of Brooklyn-based actress Lili Taylor (bottom left), notable for her appearances in such award-winning indie films as *Mystic Pizza* (1988), *Say Anything...* (1989), *Dogfight* (1991), *Short Cuts* (1993) and *I Shot Andy Warhol* (1996).

For nearly 90 years, the Institute for Advanced Study has invested in the world's top scientists and scholars to pursue research that may transform the way we understand our world. In 1930, co-founders Louis Bamberger and Caroline Bamberger-Fuld made a landmark gift of \$5 million to create the Institute with the mission of pushing beyond the present limits of human knowledge.

Today, the Institute continues this mission and still relies on philanthropy to support its “inn for intellectuals.” Unlike universities, IAS does not have revenue streams such as tuition, licensing, or intellectual property.

A gift in support of the Institute is an act of visionary thinking that will have exponential impact spanning disciplines, continents, and generations. Thank you for your partnership in supporting over 250 scholars and the academic freedom that makes breakthroughs possible.

Ways to Give

There are many ways of including IAS in your philanthropic plans: with gifts of annual support, major gifts of endowment and program support, or gifts made in conjunction with your estate planning process.



Estate Planning

Established in 1966, the Legacy Society recognizes donors to the Institute who have made a planned gift, or informed the Institute of a bequest intention or other provision in their estate plans. The Institute depends upon the generous support of people who value its mission to advance basic research, and who appreciate the exponential impact of its work across disciplines, continents, and decades. The Legacy Society is an important part of sustaining our mission.

Planned gifts include:

- Bequests
- IRA Distributions
- Charitable Gift Annuities
- Charitable Remainder Trusts
- Charitable Lead Trusts
- Real Estate

Would you like to talk about a gift?

Please call the IAS Development Office at 609-951-4464 for more information.
Thank you!

Become a Friend of IAS

Beyond these public events, IAS invites you to engage in a more significant way by becoming a Friend of the Institute, with access to a host of additional exclusive events. Friends make an annual membership contribution and are partners in the advancement of the highest level of research and scholarships. As such, they are encouraged to participate in the intellectual and cultural life of IAS.

Friends have the opportunity to interact with the Institute's distinguished Faculty and Members, and to attend lectures, symposia, informal talks, concerts, films, and family programs. Moreover, they receive Institute publications and are granted access to our libraries and dining hall.

Friends membership begins at \$1,750 and provides vital support throughout the year.

Friends Giving Levels

Friend (\$1,750-\$2,499)

Benefits include access to:

- Friends Talks
- Lectures and scholarly gatherings
- Concerts, films, and other cultural events
- Social events and family programs
- Institute libraries and publications
- The Institute's Dining Hall

25th Anniversary Circle (\$2,500-\$4,999)

Benefits include all of the above, as well as:

- A year's guest membership for a friend or colleague

Director's Circle (\$5,000-\$9,999)

Benefits include all of the above, as well as:

- Invitations to special events hosted by the Director
- Use of Marquand House for a private party

Chairman's Circle (\$10,000-\$24,999)

Benefits include all of the above, as well as:

- An invitation to join the Board of Trustees and Faculty for dinner

Founders' Circle (\$25,000 and more)

Benefits include all of the above, as well as:

- Friends who engage with the Institute at this level may support a Member in the School of their choice for one year.



To become a Friend, please call
609-734-8008, email friends@ias.edu,
or visit www.ias.edu/give/friends
Thank you!

OCTOBER

| | | | |
|-----------|----------------------|---------|--------------------------------|
| 1 | Tuesday, 5:00 p.m. | Lecture | Adelheid Voskuhl |
| 2 | Wednesday, 4:00 p.m. | Film | The Big Short |
| 4 | Friday, 8:00 p.m. | Concert | Meredith Monk & Vocal Ensemble |
| 5 | Saturday, 8:00 p.m. | Concert | Meredith Monk & Vocal Ensemble |
| 15 | Tuesday, 9:00 a.m. | Lecture | Theory of Deep Learning |
| 16 | Wednesday, 9:00 a.m. | Lecture | Theory of Deep Learning |
| 17 | Thursday, 9:00 a.m. | Lecture | Theory of Deep Learning |
| 18 | Friday, 9:00 a.m. | Lecture | Theory of Deep Learning |
| 19 | Saturday, 11:00 a.m. | Talk | Robbert Dijkgraaf |
| 22 | Tuesday, 5:00 p.m. | Lecture | Christopher Phillips |
| 25 | Friday, 5:30 p.m. | Lecture | Akshay Venkatesh |

NOVEMBER

| | | | |
|-----------|----------------------|---------|------------------------------|
| 5 | Tuesday, 5:00 p.m. | Lecture | Matt Stanley |
| 6 | Wednesday, 5:30 p.m. | Lecture | Pedro Domingos and Mary Gray |
| 13 | Wednesday, 4:00 p.m. | Film | Valley of Saints |
| 15 | Friday, 8:00 p.m. | Concert | Conrad Tao |
| 16 | Saturday, 8:00 p.m. | Concert | Conrad Tao |
| 20 | Wednesday, 5:30 p.m. | Lecture | Alina Payne |

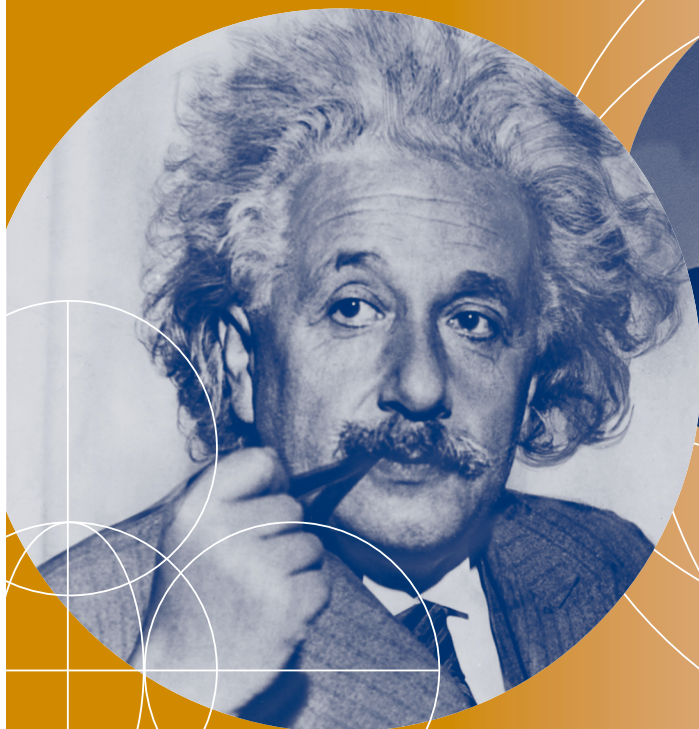
DECEMBER

| | | | |
|-----------|----------------------|---------|------------------------|
| 4 | Wednesday, 5:30 p.m. | Lecture | Suzanne Conklin Akbari |
| 11 | Wednesday, 4:00 p.m. | Film | Graduation |

IASEINSTEINGALA

3.12.20

AN EVENING OF
CELEBRATION + DISCOVERY



HONORING

Sir James D. Wolfensohn

Wolfensohn & Company, IAS Board Chair Emeritus

6 pm • The Glasshouse NYC

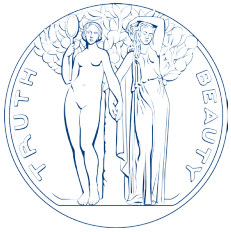
For information: Karla Cosgriff at 609-951-4409 or gala@IAS.edu

www.IAS.edu/gala



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CALENDAR OF EVENTS

Fall 2019

