

# RECORD OF EVENTS

## School of Historical Studies

### September 26

Medieval Studies Seminar ♦ *First Term Introductions* ♦ **Patrick J. Geary**, Andrew W. Mellon Professor, School of Historical Studies

### September 27

Modern International Relations Seminar ♦ *Informal Group Discussion*

### October 4

Early Modern History Seminar ♦ *“Black Like Me”: African Catholicism and White Hostility* ♦ **Erin Rowe**, Johns Hopkins University; Member, School of Historical Studies

Modern International Relations Seminar ♦ *Informal Group Discussion*

### October 5

Lunchtime Colloquia Series ♦ *First Term Introductions* ♦ **Angelos Chaniotis**, Professor, School of Historical Studies

### October 10

Ancient Studies Seminar ♦ *The Ostraca of Maresha* ♦ **Avner Ecker**, The Hebrew University of Jerusalem

### October 11

Modern International Relations Seminar ♦ *Seeing Red: France and the People’s Republic of China, 1949–2005* ♦ **Catherine Clark**, Massachusetts Institute of Technology; Member, School of Historical Studies

### October 12

Lunchtime Colloquia Series ♦ *Understanding Is Within One’s Grasp (liaoran zaiwo 瞭然在握): The Healer’s Body-as-Technology in Classical Chinese Medicine* ♦ **Marta Hanson**, Johns Hopkins University; Member, School of Historical Studies

### October 16

East Asian Studies Seminar ♦ *Wukong’s Itinerary to India* ♦ **Minoru Inaba**, Kyoto University; Member, School of Historical Studies

### October 17

Near Eastern Studies at the Institute for Advanced Studies Lecture Series ♦ *The Corpus of the Arabic Science of Weights: Textual Tradition, Theoretical Scope, and Significance in the History of Mechanics* ♦ **Mohammed Abattouy**, Mohammed V University

### October 18

Art History Seminar ♦ *A Pope for a Pope: Michelangelo’s Non-finito and Baronio’s Christian Antiquarianism* ♦ **Carolina Mangone**, Princeton University; Member, School of Historical Studies

Modern International Relations Seminar ♦ *Expert Capital: Houston and the Making of a Service Empire* ♦ **Betsy Beasley**, Harvard University; Member, School of Historical Studies

Early Modern History Seminar ♦ *Eighteenth-Century Slow Time: Seven Propositions* ♦

**Jonathan Sachs**, Concordia University, Montreal; Member, School of Historical Studies

### October 19

Lunchtime Colloquia Series ♦ *How Marco Polo Got Home* ♦ **Timothy Brook**, The University of British Columbia; Member, School of Historical Studies

### October 24

Ancient Studies Seminar ♦ *The Reform of the Monetary System and the Control of the Monetary Exchange in Egypt in the Second Century B.C.* ♦ **Fabienne Burkhalter**, Université Lille 3; Member, School of Historical Studies

Medieval Studies Seminar ♦ *Byzantium and Big History: Climate, Environment, and Society in the Premodern World* ♦ **Adam Izdebski**, Jagiellonian University, Krakow; Member, School of Historical Studies

### October 25

Near Eastern Studies Seminar ♦ *“Unconventional” Kalām Texts: Examples from the Zaydī Literature* ♦ **Jan Thiele**, Consejo Superior de Investigaciones Científicas.

### October 26

Lunchtime Colloquia Series ♦ *Medieval Nordic Laws—When? Why? How?* ♦ **Stefan Brink**, University of Aberdeen; Member, School of Historical Studies

### October 30

Art History Seminar ♦ *Metaphors of Love and Birth in Andrea del Sarto’s “Madonna del Sacco”* ♦ **Jonathan Unglaub**, Brandeis University; Member, School of Historical Studies

East Asian Studies Seminar ♦ *Narrating the Concept of the Great State* ♦ **Timothy Brook**, The University of British Columbia; Member, School of Historical Studies

### November 1

Early Modern History Seminar ♦ *The Invention of the Amboyna Massacre* ♦ **Alison Games**, Georgetown University; Member, School of Historical Studies

Modern International Relations Seminar ♦ *Business Groups and the United States’ Support for European Integration, 1946 to 1986* ♦ **Janick Marina Schaufelbuehl**, Université de Lausanne; Member, School of Social Science

### November 2

Lunchtime Colloquia Series ♦ *Q. Sulpicius Maximus, Poet, Eleven Years Old* ♦ **Kathleen Coleman**, Harvard University; Member, School of Historical Studies

### November 6

East Asian Studies Seminar ♦ *Making Confinement Confucian: Imprisoned Officials and Their Families* ♦ **Ying Zhang**, The Ohio State University; Member, School of Historical Studies

Art History Seminar ♦ *Pictorial Replication* ♦ **Michael Koortbojian**, Princeton University

### November 7

Medieval Studies Seminar ♦ *Images of Sacred Blackness* ♦ **Erin Rowe**, Johns Hopkins University; Member, School of Historical Studies

### November 8

Modern International Relations Seminar ♦ *Informal Group Discussion*

### November 9

Lunchtime Colloquia Series ♦ *Problematizing the Political Prisoner: The Case of Ming China (1368–1644)* ♦ **Ying Zhang**, The Ohio State University; Member, School of Historical Studies

### November 13

Art History Seminar ♦ *The Byzantine Idiom in Medieval Spain Just Before and Just After the Medieval Conquest* ♦ **Cecily Hilsdale**, McGill University; Member, School of Historical Studies

East Asian Studies Seminar ♦ *Men of One Age: Japanese Fieldworkers in the Transwar World* ♦ **Miriam Kingsberg Kadia**, University of Colorado; Member, School of Social Science

### November 14

Ancient Studies Seminar ♦ *Constantine’s Arch and His Military Image at Rome* ♦ **Michael Koortbojian**, Princeton University

Medieval Studies Seminar ♦ *Comparing Princely Rank in Late Medieval Europe: Why and How?* ♦ **Jörg Peltzer**, Universität Heidelberg; Member, School of Historical Studies

### November 15

Early Modern History Seminar ♦ *The Fire (Trading in the World)* ♦ **Timothy Brook**, The University of British Columbia; Member, School of Historical Studies

Near Eastern Studies Seminar ♦ *The Bible in its Near Eastern Contexts (Ancient, Medieval, Modern): Philological Perspectives on the Pentateuch, Syriac, Samaritan, and Arabic Bible. A Panel Discussion* ♦

**Sabine Schmidtke**, Professor, School of Historical Studies; **George Kiraz**, Beth Mardutho: The Syriac Institute; Member, School of Historical Studies; **Konrad Schmid**, Universität Zürich; Member, School of Historical Studies; **Stefan Schorch**, Martin-Luther-Universität Halle-Wittenberg; Member, School of Historical Studies

#### November 16

Lunchtime Colloquia Series ♦ *The Dot Between Philology and Numerical Notation* ♦ **George Kiraz**, Beth Mardutho: The Syriac Institute; Member, School of Historical Studies

#### November 20

Art History Seminar ♦ *The Thing I Have Loved the Best: Significant Jewels* ♦ **Cynthia Hahn**, Hunter College, The City University of New York; Member, School of Historical Studies

#### November 21

Ancient Studies Seminar ♦ *Rotten Limbs and Runny Noses: Modern Reflections on Ancient Geriatrics* ♦ **Hartwin Brandt**, Otto-Friedrich-Universität of Bamberg; Member, School of Historical Studies

Medieval Studies Seminar ♦ *Low Status Cloth and Dress in the Carolingian World* ♦ **Valerie Garver**, Northern Illinois University; Member, School of Historical Studies

#### November 22

Near Eastern Studies Seminar ♦ *The Perception of Slavs/Saqaliba in Arabic Sources of the Ninth to Twelfth Centuries* ♦ **Eduard Mühle**, Westfälische Wilhelms-Universität Münster; Member, School of Historical Studies

#### November 27

East Asian Studies Seminar ♦ *Upending Convention: "Lettered" Experimentation and New Technologies in Turn-of-the-Century Hangzhou* ♦ **Eugenia Lean**, Columbia University; Member, School of Historical Studies

#### November 28

Medieval Studies Seminar ♦ *Integration and Persistence in Post-migration Longobard Society: Textual and Genomic Evidence* ♦ **Patrick J. Geary**, Andrew W. Mellon Professor, School of Historical Studies

#### November 29

Early Modern History Seminar ♦ *Preamble and Introduction, "Understanding Is Within One's Grasp (liaoran zaiwo 瞭然在握): The Healer's Body-as-Technology in Classical Chinese Medicine"* ♦ **Marta Hanson**, Johns Hopkins University; Member, School of Historical Studies

Near Eastern Studies Seminar ♦ *A Names Ontology for Middle East History* ♦ **Will Hanley**, Florida State University; Member, School of Historical Studies

#### November 30

Lunchtime Colloquia Series ♦ *Toward a Social History of Jewish Marriage in Medieval Northern Europe* ♦ **Elisheva Baumgarten**, The Hebrew University of Jerusalem; Member, School of Historical Studies

#### December 4

East Asian Studies Seminar ♦ *Assembling Communities of Culinary and Mortuary Practice—Rethinking Zhou Contact with Their Western Neighbors (1046–771 B.C.E.)* ♦ **Yitzchak Jaffe**, New York University

#### December 5

Medieval Studies Seminar ♦ *The Notion of Slavic Unity during the Middle Ages* ♦ **Eduard Mühle**, Westfälische Wilhelms-Universität Münster; Member, School of Historical Studies

#### December 6

Near Eastern Studies Seminar ♦ *Isaiah, a Biblical Prophet and His Message in Islamic Tradition* ♦ **Sebastian Günther**, Georg-August-Universität Göttingen; Member, School of Historical Studies

Modern International Relations Seminar ♦ *Informal Group Discussion*

#### December 7

Lunchtime Colloquia Series ♦ *Spaces of Non-alignment* ♦ **Vladimir Kulić**, Florida Atlantic University; Member, School of Historical Studies

S. T. Lee Lecture ♦ *The Visual Culture of Iranian Twelver Shiism in the Qajar Period* ♦ **Ulrich Marzolph**, Akademie der Wissenschaften zu Göttingen

#### December 7–9

Shii Studies: The State of the Art International Conference ♦ *Opening Remarks* ♦ **Sabine Schmidtke**, Professor, School of Historical Studies ♦ *A Medieval Nusayri Shaykh's Disputations and the Study of the Nusayris in Western Academia* ♦ **Mushegh Asatryan**, University of Calgary ♦ *The Past, Present, and Future of Druze Studies* ♦ **Samer Traboulsi**, University of North Carolina at Asheville ♦ *Pir Sabzali and the Missing Sources of Ismaili History* ♦ **Shafique N. Virani**, University of Toronto ♦ *Documentary Sources on Ismatism in Badakhshan: Genealogical History and the Construction of Confessional Identity in Badakhshan* ♦ **Jo-Ann Gross**, The College of New Jersey ♦ *Occultist Imamophilia in Timurid-Safavid Iran* ♦ **Matthew Melvin-Koushki**, University of South Carolina ♦ *The Uniqueness of the Fatimid State* ♦ **Yaacov Lev**, Bar-Ilan University ♦ *Islamic Reform in Contemporary Iran: The Shiite Legacy* ♦ **Soroush Dabbagh**, University of Toronto ♦ *Between the Lines: Reading the History of Papers from Early Manuscripts in the Glaser Collection Held in Berlin* ♦ **Anne Regourd**, University of Copenhagen ♦ *Imamic Governance and Shari'a Justice in Twentieth-Century Yemen* ♦ **Brinkley**

**Messick**, Columbia University ♦ *From Kūfā to Yemen to Baghdad: The Evolution of Zaydī Dialectics on the Imamate* ♦ **Nebil A. Husayn**, University of Miami ♦ *The Parting of Ways Between 'Alid Shi'ism and 'Abbāsīd Shi'ism in the Wake of the 'Abbāsīd Revolution: A Reexamination* ♦ **Deborah Tor**, University of Notre Dame ♦ *New Evidence for the History of Iranian Jewry and Imāmī-Jewish Relations from Shī'ī Manuscript Repositories in Iran* ♦ **Dennis Halft**, Ben-Gurion University of the Negev ♦ *Jewish-Shii Studies: Past Contributions and Future Prospects* ♦ **Ehud Krinis**, Ben-Gurion University of the Negev ♦ *Levy Billig (1897–1936): An Understudied Episode in the History of Shī'ī Studies* ♦ **Roy Vilozny**, University of Haifa ♦ *Al-Mā'mūn's Translators: Sectarian Genealogies of the Graeco-Arabic Translation Movement* ♦ **Amin Ehteshami**, University of California, Berkeley ♦ *Historicization of Shi'ism and Shi'itization of History: Forty Years of Imami Studies from Henry Corbin to Mohammad Ali Amir-Moezzi* ♦ **Mathieu Terrier**, Centre National de la Recherche Scientifique, Paris ♦ *The Contemporary Shī'a Seminary in Iran: Opponents and Adherents of Philosophy and Sufism* ♦ **Seyed Amir Hossein Asghari**, Indiana University ♦ *Dating Versions of the Karbalā' Story* ♦ **Torsten Hylén**, Dalarna University ♦ *"The Disciples of al-Shaykh": Imāmī Legal Scholarship after al-Ṭūsī (d. 460/1067)* ♦ **Ali Rida Rizek**, Georg-August-Universität Göttingen ♦ *The ijāza of al-'Allāma al-Hillī to the Banū Zuhra: Sources for the History of the School of Hilla* ♦ **Aun Hasan Ali**, University of Colorado ♦ *Notes on the Life and Legacy of al-Shahīd al-Thānī, Zayn al-Dīn al-'Āmilī* ♦ **Devin Stewart**, Emory University ♦ *How Do We Deal with Imamic Hadith? The Case of the Historical Development in the Imams' Statements of Khums* ♦ **Edmund Hayes**, Universiteit Leiden ♦ *Early Shī'ī Law: Limitations and Possibilities of Current Scholarship* ♦ **Robert Gleave**, University of Exeter ♦ *The Problem of Additions in the Manuscript Tradition of the Ikhwān al-Ṣafā'* ♦ **Carmela Baffioni**, Institute for Ismaili Studies, London ♦ *Fatimid Ritual: From Mamluk to Modern Scholarship* ♦ **Daniella Talmon-Heller**, Ben-Gurion University of the Negev ♦ *Is mā'īlism as Shī'ism: The Construction of a Historical Category of Analysis* ♦ **Rodrigo Adem**, Harvard University ♦ *Shī'ism as Epic in the 'Alī Nāmāh* ♦ **George Warner**, SOAS, University of London ♦ *The Origins, Usage, and Indeterminacy of Sectarian Labels: "Batris" and "Rafidis" as Case Studies* ♦ **Michael Dann**, University of Illinois at Urbana-Champaign ♦ *Early Shī'ī Discourse on Religious Leadership: Penitence, Revolution, and Eschatology after Imam Ḥusayn* ♦ **Mohammad Sagha**, The University of Chicago ♦ *Mu'tazilism Ignored, Espoused, and Negotiated: Imami Interpretations of the Covenant Verse* ♦ **Hussein Abdulsater**, University of Notre Dame ♦ *Shiite Anti-Sunni Polemics and the Sunni Tafsiṛ Tradition* ♦ **Walid Saleh**, University of Toronto ♦ *Questioning Center and Periphery in Modern Shi'ism* ♦ **Simon Wolfgang Fuchs**, Albert-Ludwigs-Universität Freiburg

## December 11

Art History Seminar ♦ *Architecture of Non-alignment in Post-war Yugoslavia* ♦ **Vladimir Kulić**, Florida Atlantic University; Member, School of Historical Studies

## December 12

Ancient Studies Seminar ♦ *How God Became a Lawgiver: The Torah's Place in the History of Ancient Near Eastern Law* ♦ **Konrad Schmid**, Universität Zürich; Member, School of Historical Studies

Medieval Studies Seminar ♦ *Scandinavia and Its Neighbours, A.D. 700–1100: An Attempt of a Synthesis* ♦ **Stefan Brink**, University of Aberdeen; Member, School of Historical Studies

## December 14

Lunchtime Colloquia Series ♦ *Apes, Slaves, and Global Markets: Boundaries of Humanity in Enlightenment Debates* ♦ **Silvia Sebastiani**, École des Hautes Études en Sciences Sociales, Paris; Member, School of Historical Studies

## December 15

Early Modern History Seminar ♦ *Literati Men, Talented Women, and the Practice of Polygamy* ♦ **Weijing Lu**, University of California, San Diego; Member, School of Historical Studies

## December 18

Art History Seminar ♦ *The Orientation of Renaissance Art* ♦ **Alexander Nagel**, New York University; Member, School of Historical Studies

## December 21

Lunchtime Colloquia Series ♦ *Painting as Miraculous Birth: Raphael's Sistine Madonna* ♦ **Jonathan Unglaub**, Brandeis University; Member, School of Historical Studies

## January 16

Medieval Studies Seminar ♦ *Second Term Introductions* ♦ **Patrick J. Geary**, Andrew W. Mellon Professor, School of Historical Studies

## January 18

Lunchtime Colloquia Series ♦ *Second Term Introductions* ♦ **Angelos Chaniotis**, Professor, School of Historical Studies

## January 22

East Asian Studies Seminar ♦ *The Role of China in Japanese Literary Historiography of the Meiji Period (1868–1912)* ♦ **William Hedberg**, Arizona State University; Member, School of Historical Studies

## January 23

Medieval Studies Seminar ♦ *Representation of and Responsibility for the Realm: A Cause for Social Differentiation in Late Medieval England and the Empire?* ♦ **Jörg Peltzer**, Universität Heidelberg; Member, School of Historical Studies

## January 24

Modern International Relations Seminar ♦ *Informal Group Discussion*

## January 25

Lunchtime Colloquia Series ♦ *Looking Within: Early Modern Jewelry as Devotion, Power, and Identity* ♦ **Cynthia Hahn**, Hunter College, The City University of New York; Member, School of Historical Studies

## January 29

East Asian Studies Seminar ♦ *Asian Borderlands and Millenarianism, 1850–1900* ♦ **Kwangmin Kim**, University of Colorado; Member, School of Historical Studies

## January 30

Medieval Studies Seminar ♦ *A Living Law and the Living Landscapes: The Byzantine Rural Code (Nomos Georgikos) and Its Textual History* ♦ **Adam Izdebski**, Jagiellonian University, Krakow; Member, School of Historical Studies

## January 31

Early Modern History Seminar ♦ *Encountering the Future in Games of Chance* ♦ **Nicholas Baker**, Macquarie University; Member, School of Historical Studies

## February 1

Lunchtime Colloquia Series ♦ *Divination and the Body in Ancient China* ♦ **Constance Cook**, Lehigh University; Member, School of Historical Studies

## February 5

East Asian Studies Seminar ♦ *Feelings and the Logic of Space in the Lineage Novel of Late Chosŏn Korea (1392–1910)* ♦ **Ksenia Chizhova**, Princeton University

## February 6

Medieval Studies Seminar ♦ *The Legend of Prester John* ♦ **John Eldevik**, Hamilton College; Member, School of Historical Studies

## February 7

Modern International Relations Seminar ♦ *Informal Group Discussion*

## February 8

Lunchtime Colloquia Series ♦ *Provincializing Ecologies: Environmental Change and the End of Antiquity* ♦ **Adam Izdebski**, Jagiellonian University, Krakow; Member, School of Historical Studies

## February 13

Ancient Studies Seminar ♦ *Andragoras—A Seleukid Governor in Iran* ♦ **Marek Olbrycht**, University of Rzeszów; Member, School of Historical Studies

## February 13–14

Genomics and Archaeology Workshop ♦ *Analyses of Genomic, Archaeological, and Isotopic Data from Pannonia and Italy* ♦ **Krishna Veeramah**, Stony Brook University, The State University of New York; and **Patrick J. Geary**, Andrew W. Mellon Professor, School of Historical Studies ♦ *Panel—Response and Reactions* ♦ **Falko Daim**, Römisch-Germanisches Zentralmuseum, Mainz; and **Philipp von Rummel**, Deutsches Archäologisches Institut, Berlin ♦ *Further Response and Reactions* ♦ **Walter Pohl**, Österreichische Akademie der Wissenschaften; and **Frans Theuws**, Universiteit Leiden ♦ *How Might Genomics Be Integrated into the Ongoing Research Projects of the Panelists in Different Regions of Eurasia and North Africa?* ♦ **Falko Daim**, Römisch-Germanisches Zentralmuseum, Mainz; **Philipp von Rummel**, Deutsches Archäologisches Institut, Berlin; **Walter Pohl**, Österreichische Akademie der Wissenschaften; and **Frans Theuws**, Universiteit Leiden

## February 14

Early Modern History Seminar ♦ *What Law Is It There? Corsican Transregional Families, Trials, and Legal Knowledge in the Western Mediterranean (1590–1630)* ♦ **Guillaume Calafat**, Université Paris 1 Pantheon-Sorbonne; Member, School of Historical Studies

Modern International Relations Seminar ♦ *Informal Group Discussion*

## February 15

Lunchtime Colloquia Series ♦ *From Paris to Beijing and Back Again, 1973–1974* ♦ **Catherine Clark**, Massachusetts Institute of Technology; Member, School of Historical Studies

## February 19

Art History Seminar ♦ *Nativities, Central Italy, 1250–1450: Between Historia and Imago, the Rise of an Intercession Image?* ♦ **Giulia Puma**, Université de Nice Sophia Antipolis

## February 20

Ancient Studies Seminar ♦ *A Rose Garden in Paradise: The Talmud and Manichaeism in a Sasanian Context* ♦ **Geoffrey Herman**, The Hebrew University of Jerusalem; Member, School of Historical Studies

Medieval Studies Seminar ♦ *Medieval Jewish Epitaphs* ♦ **Elisheva Baumgarten**, The Hebrew University of Jerusalem; Member, School of Historical Studies

## February 21

Modern International Relations Seminar ♦ *Informal Group Discussion*

## February 22

Lunchtime Colloquia Series ♦ *Imperfect Michelangelo* ♦ **Carolina Mangone**, Princeton University; Member, School of Historical Studies



## February 26

Art History Seminar ♦ *Marcel Breuer's Work at the IAS* ♦ **John Davies**, John Davies Design

East Asian Studies Seminar ♦ *Ritual Healing: The Body-as-Technology in Mid-Seventh-Century Tang China* ♦ **Marta Hanson**, Johns Hopkins University; Member, School of Historical Studies

## February 27

Ancient Studies Seminar ♦ *Roman Archaeology and the Politics of Power: Varro, Emperor Caesar, and the Spolia Opima* ♦ **Frederik Vervaeke**, The University of Melbourne; Member, School of Historical Studies

Medieval Studies Seminar ♦ *Symptomatic Subjects: Bodies, Signs, and Narratives in Late Medieval England* ♦ **Julie Orlemanski**, The University of Chicago

## February 28

Near Eastern Studies Seminar ♦ *The Syriac Community in the Late Ottoman Period: Digging in the Archives of Mardin* ♦ **George Kiraz**, Beth Mardutho: The Syriac Institute; Member, School of Historical Studies

Modern International Relations Seminar ♦ *Informal Group Discussion*

## March 1

Lunchtime Colloquia Series ♦ *Recent Excavation and Research at the Sanctuary of Zeus at Mt. Lykaion, Arcadia* ♦ **David Gilman Romano**, The University of Arizona; Member, School of Historical Studies

## March 5

Art History Seminar ♦ *The Medieval and the Age of Technological Reproducibility: The Central Role of the Gothic in Weimar-Era Debates on Original and Copy* ♦ **William Diebold**, Reed College; Member, School of Historical Studies

East Asian Studies Seminar ♦ *Mao Zedong Between Caopi and Yuan Shikai: Another Look at Twentieth-Century Chinese History* ♦ **Zvi Ben-Dor Benite**, New York University

## March 6

Medieval Studies Seminar ♦ *Ex Oriente: Isaak und der Weisse Elefant* ♦ **William Diebold**, Reed College; Member, School of Historical Studies

## March 8

Lunchtime Colloquia Series ♦ *Fascist Departures: Travel Writing and Transnational Encounters on the Periphery of Hitler's New Europe* ♦ **Rory Yeomans**, Member, School of Historical Studies

## March 12

East Asian Studies Seminar ♦ *Marriage and Intimacy in Late Imperial China* ♦ **Weijing Lu**, University of California, San Diego; Member, School of Historical Studies

## March 13

Ancient Studies Seminar ♦ *Thinking with Monsters: On the Societal Productivity of Ancient Greek Monsters* ♦ **Henry Heitmann-Gordon**, Ludwig-Maximilians-Universität München

Medieval Studies Seminar ♦ *A Singular and Plural Beast* ♦ **Jamie Kreiner**, University of Georgia; Member, School of Historical Studies

## March 14

Early Modern History Seminar ♦ *Building the Marital Bond* ♦ **Weijing Lu**, University of California, San Diego; Member, School of Historical Studies

## March 15

Lunchtime Colloquia Series ♦ *Learning and Spirituality Without Prophets and Scriptures, as Seen by the Medieval Muslim Scholar Ibn Tufayl* ♦ **Sebastian Günther**, Georg-August-Universität Göttingen; Member, School of Historical Studies

## March 16

Epigraphic Friday ♦ *Epigraphy Between Philology and Technology* ♦ **Christopher Jones**, Harvard University ♦ *New Epigraphic Evidence from the Sanctuary of Zeus on Mount Lykaion* ♦ **Kyle Mahoney**, Sewanee: The University of the South ♦ *What Was the Xenike Lusis?* ♦ **Elizabeth Meyer**, University of Virginia ♦ *An Isolympian and Isopythian Festival in a Hellenistic Inscription from Messene* ♦ **Nino Luraghi**, Princeton University ♦ *Heracles Hoplophylax, Iudaioi, and a Palm Grove: A Fresh Look at I. Smyrna 697* ♦ **Martin Hallmannsecker**, University of Oxford ♦ *Naukleroi in Roman Miletus* ♦ **Ilias Arnautoglou**, Academy of Athens; Member, School of Historical Studies ♦ *The Photographs and Squeezes in the Louis Robert Archive* ♦ **Glen W. Bowersock**, Professor Emeritus, School of Historical Studies ♦ *Grammar and Ideology on Roman Imperial Milestones* ♦ **Carlos Noreña**, University of California, Berkeley; Member, School of Historical Studies ♦ *Remarks on Greek Inscriptions from Parthian Susa* ♦ **Marek Olbrycht**, University of Rzeszów; Member, School of Historical Studies ♦ *Herakles, Melqart, and the "Middle Ground": What Inscriptions Can Tell* ♦ **Marco Santini**, Princeton University ♦ *Constantine the Great and the Octagonal Church in Syrian Antioch* ♦ **Hartwin Brandt**, Otto-Friedrich-Universität Bamberg; Member, School of Historical Studies ♦ *Greek Inscriptions in the Poetry of Cavafy* ♦ **Angelos Chaniotis**, Professor, School of Historical Studies

## March 20

Art History Seminar ♦ *Cartier-Bresson's Work in China* ♦ **Catherine Clark**, Massachusetts Institute of Technology; Member, School of Historical Studies

Ancient Studies Seminar ♦ *Law and the Imperial Imaginary in Republican Rome* ♦ **Carlos Noreña**, University of California, Berkeley; Member, School of Historical Studies

## March 21

Near Eastern Studies Seminar ♦ *How to Translate Arcane Knowledge: Devising an Arabic Rendition of a Pythagorean Terminus Technicus* ♦ **Anna Izdebska**, Jagiellonian University, Krakow

## March 22

Lunchtime Colloquia Series ♦ *We Have Discovered America! The United States in the Syrian Imagination, 1946–1963* ♦ **Kevin Martin**, Indiana University; Member, School of Historical Studies

## March 27

Ancient Studies Seminar ♦ *Mt. Lykaion as the Arcadian Birthplace of Zeus* ♦ **David Gilman Romano**, The University of Arizona; Member, School of Historical Studies

East Asian Studies Seminar ♦ *The Expanding Boundaries of Slavery in Tang China* ♦ **Don Wyatt**, Middlebury College

## March 28

Early Modern History Seminar ♦ *Boundaries of Humanity: Orangutans, Slaves, and Global Markets in Enlightenment Debates* ♦ **Silvia Sebastiani**, École des Hautes Études en Sciences Sociales, Paris; Member, School of Historical Studies

Near Eastern Studies Seminar ♦ *"We Have Discovered America": The U.S. in the Syrian Imagination, 1946–1963* ♦ **Kevin Martin**, Indiana University; Member, School of Historical Studies

Medieval Studies Seminar ♦ *Reliquaries and Memory* ♦ **Cynthia Hahn**, Hunter College, The City University of New York; Member, School of Historical Studies

Modern International Relations Seminar ♦ *Informal Group Discussion*

## March 29

Lunchtime Colloquia Series ♦ *The Invention and Legacies of the Amboyna Massacre* ♦ **Alison Games**, Georgetown University; Member, School of Historical Studies

## April 2

Art History Seminar ♦ *French State Propaganda Film for Gas Industry and Yves Klein's Tableaux-feu* ♦ **Brian Jacobson**, University of Toronto

East Asian Studies Seminar ♦ *Divination and the Body in Ancient China* ♦ **Constance Cook**, Lehigh University; Member, School of Historical Studies

April 4

Modern International Relations Seminar ♦ *Informal Group Discussion*

April 3

Ancient Studies Seminar ♦ *The Representation of Space in Graeco-Roman Relief Sculpture* ♦ **Michael Koortbojian**, Princeton University.

April 5

Lunchtime Colloquia Series ♦ *The German Atlantic: Recovering an Invisible World* ♦ **David Blackburn**, Vanderbilt University; Member, School of Historical Studies

April 9

Art History Seminar ♦ *Work in Progress on Joint Project on Guercino's Saint Petronilla* ♦ **Jonathan Unglaub**, Brandeis University; Member, School of Historical Studies; and **Carolina Mangone**, Princeton University; Member, School of Historical Studies

April 11

Modern International Relations Seminar ♦ *Informal Group Discussion*

April 12

Lunchtime Colloquia Series ♦ *Mass Deportations, Slave Wars, and the Augustan Pax Servilis* ♦ **Frederik Vervaeke**, The University of Melbourne; Member, School of Historical Studies

April 28–30

Workshop: Climate, Archaeology, and History in the Eurasian Middle Ages ♦ *Evidence for Medieval Volcanic Eruptions and Their Climatic Impacts* ♦ **Clive Oppenheimer**, University of Cambridge ♦ *East Asia Hydroclimate Estimates of 8th–13th-Century Ocean Temperatures* ♦ **Gabriel Vecchi**, Princeton University ♦ *Climate Models for Historical Applications: A General Introduction* ♦ **Jane Baldwin**, Princeton University ♦ *Hunnic Movements and Strategies: A Response to Climatic Fluctuations?* ♦ **Susanne Hakenbeck**, University of Cambridge ♦ *Seismic Events and Climate in the Archaeological Records of The Uyghur Khaganate: the Case of Por-Bajin* ♦ **Irina Arzhantseva**, Institute of Ethnology and Anthropology Russian Academy of Science ♦ *Why Not Karakorum? A New Look at an Old City* ♦ **Jan Bemann**, Universität Bonn ♦ *In the Service of the Khan? Artisans of Karakorum in the Light of Archaeological and Written Sources* ♦ **Susanne Reichert**, Universität Bonn ♦ *Climate and Empire in the Early Medieval Carpathian Basin: Huns, Avars, and Magyars* ♦ **Johannes Preiser-Kapeller**, Österreichische Akademie der Wissenschaften ♦ *Water and Climate Factors in the Early Medieval Culture Changes on the Lower Syr-Darya* ♦ **Heinrich Härke**, Eberhard Karls Universität Tübingen ♦

*Nile Variability and Egyptian Civilization* ♦

**Joseph Manning**, Yale University ♦ *Cultural and Social Change in the First Millennium B.C. With or Without Climate Change* ♦ **Ursula Brosseder**, Universität Bonn ♦ *Climate Push and Pull: A Hidden Driver of Geopolitical Cycle in China* ♦ **Qing Pei**, Education University of Hong Kong ♦ *Consilience in the Understanding of the Past: Building Connections Between Paleoclimatology, Palynology, and Economic History* ♦ **Adam Izdebski**, Jagiellonian University, Krakow ♦ *The Contribution of Climate Science to History: Questions, Fallacies, and Prospects* ♦ **Nicola Di Cosmo**, Luce Foundation Professor of East Asian History, School of Historical Studies

May 2

Early Modern History Seminar ♦ *The "Explanation of the Fingers and Palms"* ♦ **Marta Hanson**, Johns Hopkins University; Member, School of Historical Studies

May 15

Early Modern History Seminar ♦ *Henry Robinson's Mediterranean Experience (1604–1673): Tuscany, Trade, and Toleration in Seventeenth-Century England* ♦ **Guillaume Calafat**, Université Paris 1 Pantheon-Sorbonne; Member, School of Historical Studies

May 30

Early Modern History Seminar ♦ *The History of Women and the Science of Man in the Scottish Enlightenment* ♦ **Silvia Sebastiani**, École des Hautes Études en Sciences Sociales, Paris; Member, School of Historical Studies

June 4

Early Modern History Seminar ♦ *The Execution of Franz Ferdinand Engelsberger* ♦ **Yaacov Deutsch**, David Yellin College of Education, Jerusalem

June 6–9

Shii Studies Research Program Conference: The Zaydi Manuscript Tradition ♦ *Imam al-Mu'ayyad Yahyā b. Ḥamza's (d. 1348) Decree Legitimizing Confiscating and Selling Certain Types of Waqf* ♦ **Eirik Hovden**, University of Bergen ♦ *The Origins of the Adhān: Reports from the Family of 'Alī* ♦ **Nebil Husayn**, University of Miami ♦ *Practices of Zaydi Power in Medieval and Modern Yemen* ♦ **Daniel Mahoney**, Universität Wien ♦ *Kitāb al-Asās li-'Aqā'id al-Akyās* ♦ **Michael Payne**, Brown University ♦ *Negotiating Historicity of Qāḍī Nu'mān's (d. 363/974) Sources: Examining "Kitāb al-īḍāh" through a Zaydi Collection*, "Kutub Muḥammad b. Sallām b. Sayyār al-Kūfī" ♦ **Kumail Rajani**, University of Exeter ♦ *Wilfred Madelung's "Der Imam al-Qāsim b. Ibrāhīm und die Glaubenslehre der Zaiditen"* ♦ **Ekaterina Pukhovaia**, Princeton University ♦ *Daylamī Dynastic Structures, Military-Factional Politics, and the Zaydī Imāmate of the South Caspian* ♦ **Mohammad Sagha**, The University of Chicago ♦ *Notes on the History of Urūl al-Fiḡh and al-Qāḍī al-Nu'mān's Ikhtilāf usūl*

*al-madhābīb* ♦ **Devin Stewart**, Emory University ♦ *Takmilatu Majmu' al Hadi ilal Haqq* ♦ **Nuran Uoek**, Ankara University and Princeton University ♦ *Zaydism in Iran and Yemen* ♦ **Ali Zaherinezhad**, Universität Hamburg

June 28–29

Dots, Marginalia, and Peritexts in Middle Eastern Manuscripts Workshop ♦ *Paratextual Material in the Mansur Collection* ♦ **Sabine Schmidtke**, Professor, School of Historical Studies ♦ *The ijazat among the Zaydies: the Case of Majmu' al-ijazat by Ahmad al-Miswari* ♦ **Hassan Farhang Ansari**, Long-term Member, School of Historical Studies ♦ *The Masora as a Paratext* ♦ **Elvira Martín Contreras**, Centro de Ciencias Humanas y Sociales ♦ *Inscriptions and Scribbles on Margins of Hebrew Manuscripts from the Maghreb* ♦ **Yael Barouch**, The Hebrew University of Jerusalem ♦ *Chapter Divisions and the Transmission History of the MSS of the Tosefta* ♦ **Binyamin Katzoff**, The Hebrew University of Jerusalem ♦ *Hagiopolite Lectionary Rubrics in Arabic Gospels* ♦ **Robert Turnbull** ♦ *The Significance of Variae Lectiones and their Sigla in Hadith Collections* ♦ **Ali Zaherinezhad**, Universität Hamburg ♦ *Toward a Reading History of al-Jahiz's "Kitāb al-Hayawan"* ♦ **Jeannie Miller**, University of Toronto ♦ *Peritextual Encoding of Metatron* ♦ **Aryeh M. Krawczyk**, The Emanuel Ringelblum Jewish Historical Institute ♦ *Ornithomorphic Imagery and Rinceaux in P. Cotsen-Princeton 1* ♦ **Alyssa Cady**, Princeton University ♦ *Astrology in the Mamlūk Sultanate* ♦ **Fien De Block**, Ghent University ♦ *Dot Wars* ♦ **Jonathan Loopstra**, University of Northwestern, St. Paul ♦ *Syriac Transmission Eusebian Apparatus* ♦ **Jeremiah Coogan**, University of Notre Dame ♦ *Syriac Manuscript Peritexts and the Chaldaean Schism of 1552* ♦ **Lucy Parker**, University of Oxford ♦ *Some Notes on Muḥammad Pārsā's (d. 822/1420) Library* ♦ **Akram Habibulla**, Indiana University ♦ *Peritext as Textual Genealogy: Case Studies from Ottoman Manuscripts* ♦ **Aslihan Gürbüz**, McGill University ♦ *Popular Heroic Stories . . . Ottoman* ♦ **Elif Sezer Aydınli**, Istanbul Şehir University ♦ *Word Division in West Semitic* ♦ **Aaron Koller**, Yeshiva University ♦ *Peritextual Indicators of Use and Transmission in Ancient Egyptian Funerary Texts* ♦ **Niv Allon**, Metropolitan Museum of Art ♦ *Reading Between the Lines: Interpreting Glosses in Sumerian Royal Hymns* ♦ **Szilvia Jáka-Sövegjártó**, Universität Heidelberg ♦ *The Language of Paper* ♦ **Meredith Quinn**, Harvard University ♦ *Dotology: Towards a Typology* ♦ **George Kiraz**, Beth Mardutho: The Syriac Institute; Member, School of Historical Studies

## School of Mathematics

### September 14

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *2<sup>n</sup>-Selmer Groups, 2<sup>n</sup>-Class Groups, and Goldfeld's Conjecture* ♦ **Alex Smith**, Harvard University

### September 18

Computer Science/Discrete Mathematics Seminar I ♦ *Rigorous RG: A Provably Efficient and Possibly Practical Algorithm for Simulating 1D Quantum Systems* ♦ **Umesh Vazirani**, University of California, Berkeley

### September 21

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *Cohomology of p-adic Stein Spaces* ♦ **Wiesława Nizioł**, École Normale Supérieure de Lyon; Member, School of Mathematics

### September 26

Short Talks by Postdoctoral Members ♦ *Chromatic Homotopy Theory* ♦ **Irina Bobkova**, Member, School of Mathematics ♦ *Computing Maps between Fukaya Categories via Morse Trees* ♦ **Nathaniel Bottman**, Member, School of Mathematics ♦ *Homotopy Type Theory: Working Invariantly in Homotopy Theory* ♦ **Guillaume Brunerie**, Member, School of Mathematics ♦ *A Converse to a Theorem of Gross-Zagier, Kolyvagin, and Rubin* ♦ **Ashay Burungale**, Université Paris 13; Member, School of Mathematics ♦ *Towards Optimal Ramsey Graphs and Randomness Extractors* ♦ **Eshan Chattopadhyay**, Member, School of Mathematics ♦ *Period Map: Past, Present, and the Future* ♦ **Gao Chen**, Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *Lifting Theorems in Communication Complexity and Applications* ♦ **Toniann Pitassi**, University of Toronto; Visiting Professor, School of Mathematics

### September 27

Short Talks by Postdoctoral Members ♦ *Moduli Interpretations for Noncongruence Modular Curves* ♦ **William Yun Chen**, Member, School of Mathematics ♦ *Analysis and Design of Convolutional Networks via Hierarchical Tensor Decompositions* ♦ **Nadav Cohen**, Member, School of Mathematics ♦ *Diophantine Analysis and Special Sets* ♦ **Vesselin Dimitrov**, Member, School of Mathematics ♦ *Topological Structure of the Spectrum for Ergodic Schrödinger Operators* ♦ **Rui Han**, Member, School of Mathematics ♦ *Representations of p-adic Groups* ♦ **Jessica Fintzen**, Member, School of Mathematics

### September 28

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *Kloosterman Sums and Siegel Zeros* ♦ **James Maynard**, Member, School of Mathematics

### September 29

Short Talks by Postdoctoral Members ♦ *Mechanized Reasoning in Mathematics* ♦ **Kuen-Bang Favonia Hou**, Member, School of Mathematics ♦ *Liquid Crystals and Interacting Dimer Models* ♦ **Ian Jauslin**, Member, School of Mathematics ♦ *Joint Equidistribution of CM Points* ♦ **Ilya Khayutin**, Princeton University; Veblen Research Instructor, School of Mathematics ♦ *Some Problems Related to Partial Sums of Fourier Integrals* ♦ **Jongchon Kim**, University of Wisconsin–Madison; Member, School of Mathematics ♦ *Categorical Actions in Geometry and Representation Theory* ♦ **Clemens Koppensteiner**, Member, School of Mathematics ♦ *The Quantum Best Separable State Problem and Classical Connections* ♦ **Pravesh Kothari**, Princeton University; Member, School of Mathematics

### October 2

Computer Science/Discrete Mathematics Seminar I ♦ *Crossing the Logarithmic Barrier for Dynamic Boolean Data Structure Lower Bounds* ♦ **Omri Weinstein**, Columbia University

Seminar on Theoretical Machine Learning ♦ *Hyperparameter Optimization: A Spectral Approach* ♦ **Elad Hazan**, Princeton University

Short Talks by Postdoctoral Members ♦ *Weights of Mod p Automorphic Forms* ♦ **Bao V. Le Hung**, Member, School of Mathematics ♦ *Multivariate Trace Inequalities* ♦ **Marius Christopher Lemm**, California Institute of Technology; Member, School of Mathematics ♦ *A<sup>∞</sup> Structures as a Language for Open Gromov–Witten Theory* ♦ **Sara Tukachinsky**, Member, School of Mathematics ♦ *p-adic L-Functions and Iwasawa Main Conjectures* ♦ **Zheng Liu**, Member, School of Mathematics ♦ *Zeros of Laplace Eigenfunctions and Propagation of Smallness* ♦ **Aleksandr Logunov**, Member, School of Mathematics ♦ *The Distribution of Primes and Zeros of Riemann's Zeta Function* ♦ **James Maynard**, Member, School of Mathematics

### October 3

Locally Symmetric Spaces Seminar ♦ *Motivic Correlators and Locally Symmetric Spaces* ♦ **Alexander Goncharov**, Yale University; Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *Elementary Open Problems in Algebra (with Consequences in Computational Complexity)* ♦ **Avi Wigderson**, Herbert H. Maass Professor, School of Mathematics

### October 4

Short Talks by Postdoctoral Members ♦ *On Weak Epsilon Nets and the Radon Number* ♦ **Shay Moran**, University of California, San

Diego; Member, School of Mathematics ♦ *From Representations of the Symmetric Group to Branched Covers of the Disk* ♦ **Amitai Netser Zernik**, Member, School of Mathematics ♦ *The Mystery of Over-Parametrization in Neural Networks* ♦ **Behnam Neyshabur**, Member, School of Mathematics ♦ *Twisted Integral Orbit Parametrizations* ♦ **Aaron Pollack**, Member, School of Mathematics ♦ *Algebraic Groups in Positive Characteristic* ♦ **Srimathy Srinivasan**, Member, School of Mathematics ♦ *Geometry of the Smallest 1-Form Laplacian Eigenvalue on Hyperbolic Manifolds* ♦ **Michael Lipnowski**, Member, School of Mathematics

### October 5

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *Unlikely Intersections for Algebraic Curves in Positive Characteristic* ♦ **David W. Masser**, Universität Basel; Visitor, School of Mathematics

### October 6

Mathematical Conversations ♦ *Cohomology and Cryptography* ♦ **Akshay Venkatesh**, Stanford University; Distinguished Visiting Professor, School of Mathematics

Short Talks by Postdoctoral Members ♦ *The Local Multiplicity Problem for the Ginzburg–Rallis Model and the Generalized Shalika Model* ♦ **Chen Wan**, Member, School of Mathematics ♦ *Formulas Related to Zastava Spaces* ♦ **Jonathan Peiyu Wang**, Member, School of Mathematics ♦ *Finer Virtual Structure for Moduli Spaces of Holomorphic Curves* ♦ **Dingyu Yang**, Member, School of Mathematics ♦ *Geometry of Shimura Varieties* ♦ **Rong Zhou**, Member, School of Mathematics ♦ *The Relative Trace Formula Approach to the Global Gan–Gross–Prasad Conjecture for Unitary Groups* ♦ **Michał Zydor**, Member, School of Mathematics ♦ *The Geometry and Topology of Minimal Surfaces in  $\mathbb{R}^3$  of Finite Total Curvature* ♦ **Otis Chodosh**, Veblen Research Instructor, School of Mathematics

### October 7

Workshop on Topology: Identifying Order in Complex Systems ♦ *Discrete Conformal Geometry of Polyhedral Surfaces and Its Applications* ♦ **Feng Luo**, Rutgers, The State University of New Jersey ♦ *On Morse Index Estimates for Minimal Surfaces* ♦ **Davi Maximo**, University of Pennsylvania ♦ *Fast Predictive Models for Image Registration* ♦ **Marc Niethammer**, The University of North Carolina at Chapel Hill ♦ *Personalized Cancer Therapy Using Molecular Landscape Topology and Thermodynamics* ♦ **Edward Rietman**, University of Massachusetts ♦ *Consistent Manifold Representation for Topological Data Analysis* ♦ **Tim Sauer**, George Mason University



## October 9

Princeton/IAS Symplectic Geometry Seminar ♦ *Wrapped Floer Theory and Homological Mirror Symmetry for Toric Calabi–Yau Manifolds* ♦ **Yoel Groman**, Columbia University

Computer Science/Discrete Mathematics Seminar I ♦ *Barriers for Rank Methods in Arithmetic Complexity* ♦ **Rafael Oliveira**, University of Toronto

Emerging Topics Working Group ♦ *An Introduction to Quantum Chaos* ♦ **Stéphane Nonnemacher**, Université Paris-Sud 11 ♦ *Fractal Uncertainty Principle and Its Applications* ♦ **Semyon Dyatlov**, Massachusetts Institute of Technology

Members' Seminar ♦ *Analysis and Topology on Locally Symmetric Spaces* ♦ **Akshay Venkatesh**, Stanford University; Distinguished Visiting Professor, School of Mathematics

## October 10

Locally Symmetric Spaces Seminar ♦ *Cohomology of Arithmetic Groups and Automorphic Forms: An Introduction* ♦ **Laurent Clozel**, Université Paris-Sud 11; Member, School of Mathematics ♦ *Transfer Operators for (Relative) Functoriality “Beyond Endoscopy” I* ♦ **Yiannis Sakellaridis**, Rutgers, The State University of New Jersey; von Neumann Fellow, School of Mathematics

Emerging Topics Working Group ♦ *Semiclassical Analysis, Chaotic Dynamics, and Fractal Uncertainty Principle* ♦ **Semyon Dyatlov**, Massachusetts Institute of Technology ♦ *Proof of Fractal Uncertainty Principle* ♦ **Ruixiang Zhang**, Member, School of Mathematics ♦ *Control of Eigenfunctions on Hyperbolic Surfaces* ♦ **Long Jin**, Purdue University

Computer Science/Discrete Mathematics Seminar II ♦ *Structural Aspects of the Null–Cone Problem in Invariant Theory* ♦ **Ankit Garg**, Microsoft Research New England

## October 11

Emerging Topics Working Group ♦ *An Introduction to Dolgopyat’s Method* ♦ **Frédéric Naud**, Université d’Avignon ♦ *Fractal Uncertainty Principle: Improving over the Volume Bound* ♦ **Semyon Dyatlov**, Massachusetts Institute of Technology ♦ *Limit Sets in Higher Dimensions* ♦ **Michael Magee**, Durham University

## October 12

Working Group on Algebraic Number Theory

Emerging Topics Working Group ♦ *Long Time Propagation of Waves and the Hyperbolic Parametrix* ♦ **Stéphane Nonnemacher**, Université Paris-Sud 11 ♦ *An Introduction to Dolgopyat’s Method (continued)* ♦ **Frédéric Naud**, Université d’Avignon

Joint IAS/Princeton University Number Theory Seminar ♦ *On Residues of Eisenstein Series—through a Cohomological Lens* ♦ **Joachim Schwermer**, Universität Wien; Member, School of Mathematics

## October 13

Emerging Topics Working Group ♦ *Fourier Decay for Limit Sets* ♦ **Semyon Dyatlov**, Massachusetts Institute of Technology ♦ *The Sum-Product Theorem* ♦ **Elon Lindenstrauss**, The Hebrew University of Jerusalem

## October 16

Princeton/IAS Symplectic Geometry Seminar ♦ *Compactification of Moduli Spaces of J-Holomorphic Maps Relative to SNC Divisors* ♦ **Mohammad Tehrani**, Stony Brook University, The State University of New York

Seminar on Theoretical Machine Learning ♦ *Keeping IT Cool: Machine Learning for Data Center Cooling* ♦ **Nevena Lazić**, Google

Hermann Weyl Lectures ♦ *On the Mathematical Theory of Black Holes I* ♦ **Sergiu Klainerman**, Princeton University

## October 17

Locally Symmetric Spaces Seminar ♦ *Cohomology of Arithmetic Groups and Automorphic Forms: An Introduction (continued)* ♦ **Laurent Clozel**, Université Paris-Sud 11; Member, School of Mathematics ♦ *Transfer Operators for (Relative) Functoriality “Beyond Endoscopy” II* ♦ **Yiannis Sakellaridis**, Rutgers, The State University of New Jersey; von Neumann Fellow, School of Mathematics

Hermann Weyl Lectures ♦ *On the Mathematical Theory of Black Holes II* ♦ **Sergiu Klainerman**, Princeton University

## October 18

Mathematical Conversations ♦ *Spectral Gaps Without Frustration* ♦ **Marius Christopher Lemm**, California Institute of Technology; Member, School of Mathematics

Hermann Weyl Lectures ♦ *On the Mathematical Theory of Black Holes III* ♦ **Sergiu Klainerman**, Princeton University

## October 19

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *The Arithmetic Intersection Conjecture* ♦ **Michael Rapoport**, University of Maryland and Universität Bonn

## October 23

Princeton/IAS Symplectic Geometry Seminar ♦ *Wrapped Fukaya Categories and Functors* ♦ **Yuan Gao**, Stony Brook University, The State University of New York

Computer Science/Discrete Mathematics Seminar I ♦ *A Nearly Optimal Lower Bound on the Approximate Degree of  $AC^0$*  ♦ **Mark Bun**, Princeton University

Members' Seminar ♦ *Geometry and Arithmetic of Sphere Packings* ♦ **Alex Kontorovich**, Rutgers, The State University of New Jersey; von Neumann Fellow, School of Mathematics

## October 24

Locally Symmetric Spaces Seminar ♦ *Cohomology of Arithmetic Groups and Eisenstein Series—an Introduction* ♦ **Joachim Schwermer**, Universität Wien; Member, School of Mathematics ♦ *Motivic Correlators and Locally Symmetric Spaces II* ♦ **Alexander Goncharov**, Yale University; Member, School of Mathematics

Joint IAS/Princeton University Number Theory Seminar ♦ *Elliptic Curves of Rank Two and Generalised Kato Classes* ♦ **Francesc Castella**, Princeton University

Computer Science/Discrete Mathematics Seminar II ♦ *On the Strength of Comparison Queries* ♦ **Shay Moran**, University of California, San Diego; Member, School of Mathematics

## October 25

Mathematical Conversations ♦ *How Deep Is Your Proof?* ♦ **Toniann Pitassi**, University of Toronto; Visiting Professor, School of Mathematics

Analysis Seminar ♦ *Nematic Liquid Crystal Phase in a System of Interacting Dimers* ♦ **Ian Jauslin**, Member, School of Mathematics

## October 26

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *A Converse Theorem of Gross–Zagier and Kolyvagin: CM Case* ♦ **Ye Tian**, Chinese Academy of Sciences, Beijing

Analysis Seminar ♦ *Quasi-periodic Solutions to Nonlinear PDEs* ♦ **Wei-Min Wang**, Université Paris-Sud 11

## October 30

Princeton/IAS Symplectic Geometry Seminar ♦ *Weinstein Manifolds through Skeletal Topology* ♦ **Laura Starkston**, Stanford University

Computer Science/Discrete Mathematics Seminar I ♦ *Fooling Intersections of Low-Weight Halfspaces* ♦ **Rocco Servedio**, Columbia University

Members' Seminar ♦ *High Density Phases of Hard-Core Lattice Particle Systems* ♦ **Ian Jauslin**, Member, School of Mathematics

### October 31

Locally Symmetric Spaces Seminar ♦ *Cohomology of Arithmetic Groups and Eisenstein Series— an Introduction (continued)* ♦ **Joachim Schwermer**, Universität Wien; Member, School of Mathematics ♦ *Motivic Correlators and Locally Symmetric Spaces III* ♦ **Alexander Goncharov**, Yale University; Member, School of Mathematics

Joint IAS/Princeton University Number Theory Seminar ♦ *Nonlinear Descent on Moduli of Local Systems* ♦ **Junho Peter Whang**, Princeton University

Computer Science/Discrete Mathematics Seminar II ♦ *Cap-Sets in  $(F_q)^n$  and Related Problems* ♦ **Zeev Dvir**, Princeton University; von Neumann Fellow, School of Mathematics

### November 1

Mathematical Conversations ♦ *The Three Pillars of Statistical Machine Learning: Then and Now* ♦ **Nadav Cohen**, Member, School of Mathematics

Analysis Seminar ♦ *Structure Theorems for Intertwining Wave Operators* ♦ **Wilhelm Schlag**, The University of Chicago; Visiting Professor, School of Mathematics

### November 2

Joint IAS/Princeton University Number Theory Seminar ♦ *On the Notion of Genus for Division Algebras and Algebraic Groups* ♦ **Andrei S. Rapinchuk**, University of Virginia; Member, School of Mathematics

Analysis Seminar ♦ *Two-Bubble Dynamics for the Equivariant Wave Maps Equation* ♦ **Jacek Jendrej**, The University of Chicago

### November 3

Special Seminar ♦ *Introduction to the Works of Takuro Mochizuki* ♦ **Pierre Deligne**, Professor Emeritus, School of Mathematics

### November 6

Princeton/IAS Symplectic Geometry Seminar ♦ *Morse–Bott Cohomology from Homological Perturbation* ♦ **Zhengyi Zhou**, University of California, Berkeley

Computer Science/Discrete Mathematics Seminar I ♦ *Language Edit Distance,  $(\min, +)$ -matrix Multiplication, and Beyond* ♦ **Barna Saha**, University of Massachusetts

Workshop on Motives, Galois Representations, and Cohomology around the Langlands Program ♦ *Functoriality and Algebraic Cycles* ♦ **Kartik Prasanna**, University of Michigan ♦  *$p$ -adic Etale Cohomology of  $p$ -adic Symmetric Spaces* ♦ **Pierre Colmez**, Université Pierre et Marie Curie; Member, School of Mathematics ♦ *The Mod  $p$  Derived Spherical Hecke Algebra: Structure and Applications* ♦ **Niccolò Ronchetti**,

Stanford University ♦ *Algorithms for the Topology of Arithmetic Groups and Hecke Actions* ♦ **Michael Lipnowski**, Member, School of Mathematics

Seminar on Theoretical Machine Learning ♦ *Naturalizing a Programming Language* ♦ **Sida Wang**, Visitor, School of Mathematics

### November 7

Workshop on Motives, Galois Representations, and Cohomology around the Langlands Program ♦ *Higher Hida Theory* ♦ **Vincent Pilloni**, Centre National de la Recherche Scientifique, Paris ♦ *Modularity Lifting Theorems for Non-regular Symplectic Representations* ♦ **George Boxer**, The University of Chicago ♦ *Potential Automorphy of Some Compatible Systems over CM Fields* ♦ **Patrick Allen**, University of Illinois at Urbana–Champaign; Member, School of Mathematics ♦ *Automorphy of Mod 3 Representations over CM Fields* ♦ **Chandrashekar Khare**, University of California, Los Angeles

Computer Science/Discrete Mathematics Seminar II ♦ *Pseudorandom Generators for Unordered Branching Programs* ♦ **Eshan Chattopadhyay**, Member, School of Mathematics

### November 8

Workshop on Motives, Galois Representations, and Cohomology around the Langlands Program ♦ *Topological and Arithmetic Intersection Numbers Attached to Real Quadratic Cycles* ♦ **Henri Darmon**, McGill University ♦ *An Euler System for Genus 2 Siegel Modular Forms* ♦ **David Loeffler**, University of Warwick ♦ *A Derived Hecke Algebra in the Context of the Mod  $p$  Langlands Program* ♦ **Rachel Ollivier**, The University of British Columbia ♦ *Computations in the Topology of Locally Symmetric Spaces* ♦ **Mark McConnell**, Princeton University

Analysis Seminar ♦ *Time Quasi-periodic Gravity Water Waves in Finite Depth* ♦ **Massimiliano Berti**, Scuola Internazionale Superiore di Studi Avanzati, Trieste, Italy

### November 9

Workshop on Motives, Galois Representations, and Cohomology around the Langlands Program ♦ *Pseudorepresentations and the Eisenstein Ideal* ♦ **Preston Wake**, University of California, Los Angeles ♦ *Higher Eisenstein Elements in Weight 2 and Prime Level* ♦ **Emmanuel Lecouturier**, Institut de Mathématiques de Jussieu–Paris Rive Gauche ♦ *Exceptional Splitting of Reductions of Abelian Surfaces with Real Multiplication* ♦ **Yunqing Tang**, Princeton University ♦ *Models for Galois Deformation Rings* ♦ **Brandon Levin**, The University of Chicago

### November 10

Workshop on Motives, Galois Representations, and Cohomology around the Langlands Program ♦ *Solvable Descent for Cuspidal*

*Automorphic Representations of  $GL(n)$*  ♦ **Laurent Clozel**, Université Paris-Sud 11; Member, School of Mathematics ♦ *Zagier’s Conjecture on  $\zeta_F(4)$*  ♦ **Alexander Goncharov**, Yale University; Member, School of Mathematics

### November 13

Princeton/IAS Symplectic Geometry Seminar ♦ *Odd Sphere Bundles and Symplectic Manifolds* ♦ **Li-Sheng Tseng**, University of California, Irvine

Computer Science/Discrete Mathematics Seminar I ♦ *Learning Models: Connections between Boosting, Hard-Core Distributions, Dense Models, GAN, and Regularity I* ♦ **Russell Impagliazzo**, University of California, San Diego

Seminar on Theoretical Machine Learning ♦ *Towards a Better Understanding of Neural Networks: Learning Dynamics, Interpretability, and RL Generalization* ♦ **Maithra Raghu**, Cornell University

Members’ Seminar ♦ *Decomposition Theorem for Semi-simple Algebraic Holonomic  $D$ -Modules* ♦ **Takuro Mochizuki**, Kyoto University

### November 14

Locally Symmetric Spaces Seminar ♦ *A Remark on Cohomology of Locally Symmetric Spaces* ♦ **Joseph Bernstein**, Tel Aviv University; Member, School of Mathematics ♦ *Automorphic Forms and Motivic Cohomology I* ♦ **Akshay Venkatesh**, Stanford University; Distinguished Visiting Professor, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *Learning Models: Connections between Boosting, Hard-Core Distributions, Dense Models, GAN, and Regularity II* ♦ **Russell Impagliazzo**, University of California, San Diego

### November 15

Special Seminar ♦ *Wild Harmonic Bundles and Related Topics I* ♦ **Takuro Mochizuki**, Kyoto University

Analysis Seminar ♦ *Thin Monodromy and Lyapunov Exponents, via Hodge Theory* ♦ **Simion Filip**, Harvard University

### November 16

Working Group on Algebraic Number Theory

### November 17

Special Seminar ♦ *Wild Harmonic Bundles and Related Topics II* ♦ **Takuro Mochizuki**, Kyoto University

### November 20

Special Seminar ♦ *How to Modify the Langlands Dual Group* ♦ **Joseph Bernstein**, Tel Aviv University; Member, School of Mathematics



Members' Seminar ♦ *Representations of Kauffman Bracket Skein Algebras of a Surface* ♦ **Helen Wong**, Carleton College; von Neumann Fellow, School of Mathematics

#### November 21

Locally Symmetric Spaces Seminar ♦ *Automorphic Forms and Motivic Cohomology II* ♦ **Akshay Venkatesh**, Stanford University; Distinguished Visiting Professor, School of Mathematics

Joint IAS/Princeton University Number Theory Seminar ♦ *Joint Equidistribution of CM Points* ♦ **Ilya Khayutin**, Princeton University; Veblen Research Instructor, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *A Practical Guide to Deep Learning* ♦ **Richard Zemel**, University of Toronto; Visitor, School of Mathematics

#### November 27

Princeton/IAS Symplectic Geometry Seminar ♦ *Open Gopakumar–Vafa Conjecture for Rational Elliptic Surfaces* ♦ **Yu-Shen Lin**, Harvard University

Computer Science/Discrete Mathematics Seminar I ♦ *Locally Testable and Locally Correctable Codes Approaching the Gilbert–Varshamov Bound* ♦ **Shubhangi Saraf**, Rutgers, The State University of New Jersey

Seminar on Theoretical Machine Learning ♦ *Beyond Log-Concavity: Provable Guarantees for Sampling Multi-Modal Distributions Using Simulated Tempering Langevin Monte Carlo* ♦ **Holden Lee**, Princeton University

Members' Seminar ♦ *Everything You Wanted to Know about Machine Learning but Didn't Know Whom to Ask* ♦ **Sanjeev Arora**, Princeton University; Visiting Professor, School of Mathematics

#### November 28

Locally Symmetric Spaces Seminar ♦ *Automorphic Forms and Motivic Cohomology III* ♦ **Akshay Venkatesh**, Stanford University; Distinguished Visiting Professor, School of Mathematics

Joint IAS/Princeton University Number Theory Seminar ♦ *Shimura Curves and New abc Bounds* ♦ **Hector Pasten**, Harvard University

Computer Science/Discrete Mathematics Seminar II ♦ *Geometric Complexity Theory from a Combinatorial Viewpoint* ♦ **Greta Panova**, University of Pennsylvania; von Neumann Fellow, School of Mathematics

#### November 29

Ruth and Irving Adler Expository Lecture in Mathematics ♦ *Lattices: From Geometry to Cryptography* ♦ **Oded Regev**, New York University

Mathematical Conversations ♦ *Approximate Prime Numbers* ♦ **James Maynard**, Member, School of Mathematics

Analysis Seminar ♦ *Nonuniqueness of Weak Solutions to the Navier–Stokes Equation* ♦ **Tristan Buckmaster**, Princeton University

#### November 30

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *Locally Symmetric Spaces:  $p$ -adic Aspects* ♦ **Laurent Fargues**, Institut de Mathématiques de Jussieu–Paris Rive Gauche

#### December 4

Princeton/IAS Symplectic Geometry Seminar ♦ *Open Gromov–Witten Theory of  $(\mathbb{C}P^1, \mathbb{R}P^1)$  in All Genera and Gromov–Witten Hurwitz Correspondence* ♦ **Amitai Netser Zernik**, Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar I ♦ *General Strong Polarization* ♦ **Madhu Sudan**, Harvard University

Joint IAS/Princeton University Number Theory Seminar ♦ *Torsion for Abelian Varieties of Type III and New Cases of the Mumford–Tate Conjecture* ♦ **Victoria Cantoral Farfan**, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy

Members' Seminar ♦ *Algebraic Combinatorics: Applications to Statistical Mechanics and Complexity Theory* ♦ **Greta Panova**, University of Pennsylvania; von Neumann Fellow, School of Mathematics

#### December 5

Locally Symmetric Spaces Seminar ♦ *Motivic Correlators and Locally Symmetric Spaces IV* ♦ **Alexander Goncharov**, Yale University; Member, School of Mathematics

Joint IAS/Princeton University Number Theory Seminar ♦ *Automorphy for Coherent Cohomology of Shimura Varieties* ♦ **Jun Su**, Princeton University

Computer Science/Discrete Mathematics Seminar II ♦ *Short Proofs Are Hard to Find (Joint Work with Toni Pitassi and Hao Wei)* ♦ **Ian Mertz**, University of Toronto

#### December 6

Analysis Seminar ♦ *Spectral Gaps without Frustration* ♦ **Marius Christopher Lemm**, California Institute of Technology; Member, School of Mathematics

#### December 7

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *From Counting Markoff Triples to Apollonian Packings; a Path via Elliptic K3 Surfaces and Their Ample Cones* ♦ **Arthur Baragar**, University of Nevada, Las Vegas

#### December 8

Mathematical Conversations ♦ *Proofs from Algorithms, Algorithms from Proofs* ♦ **Pravesh Kothari**, Princeton University; Member, School of Mathematics

Special Seminar ♦ *Diophantine Analysis in Thin Orbits* ♦ **Alex Kontorovich**, Rutgers, The State University of New Jersey; von Neumann Fellow, School of Mathematics ♦ *Markoff Surfaces and Strong Approximation* ♦ **Alexander Gamburd**, The Graduate Center, The City University of New York ♦ *Integral Points on Markoff-Type Cubic Surfaces* ♦ **Amit Ghosh**, Oklahoma State University ♦ *An Asymptotic for the Growth of Markoff–Hurwitz Triples* ♦ **Ryan Ronan**, Baruch College, The City University of New York ♦ *Integral Points and Curves on Moduli of Local Systems* ♦ **Junho Peter Whang**, Princeton University

#### December 11

Princeton/IAS Symplectic Geometry Seminar ♦ *Recent Developments in Knot Contact Homology* ♦ **Lenny Ng**, Duke University

Computer Science/Discrete Mathematics Seminar I ♦ *Recent Advances in High-Dimensional Robust Statistics* ♦ **Daniel Kane**, University of California, San Diego

Seminar on Theoretical Machine Learning ♦ *Learning with Little Data* ♦ **Richard Zemel**, University of Toronto; Visitor, School of Mathematics

Members' Seminar ♦ *Rigidity and Recurrence in Symplectic Dynamics* ♦ **Matthias Schwarz**, Universität Leipzig; Member, School of Mathematics

#### December 12

Locally Symmetric Spaces Seminar ♦ *Derived Deformation Rings for Group Representations* ♦ **Søren Galatius**, Stanford University ♦ *Transfer Operators between Relative Trace Formulas in Rank One* ♦ **Yiannis Sakellaridis**, Rutgers, The State University of New Jersey; von Neumann Fellow, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *A PSPACE Construction of a Hitting Set for the Closure of Small Algebraic Circuits* ♦ **Amir Shpilka**, Tel Aviv University

#### December 13

Mathematical Conversations ♦ *Real Zeros of Random Polynomials in Several Variables* ♦ **Peter Sarnak**, Professor, School of Mathematics

Analysis Seminar ♦ *Sieve Methods: What Are They, and What Are They Good For?* ♦ **James Maynard**, Member, School of Mathematics

#### December 14

Joint IAS/Princeton University Number Theory Seminar ♦ *Ordinary Primes in Hilbert Modular Varieties* ♦ **Junecue Suh**, University of California, Santa Cruz

#### December 19

Locally Symmetric Spaces Seminar ♦ *Transfer Operators between Relative Trace Formulas in Rank One II* ♦ **Yiannis Sakellaridis**, Rutgers, The State University of New Jersey; von Neumann Fellow, School of Mathematics

#### January 16

Locally Symmetric Spaces Seminar ♦ *Working Group on Microlocal Analysis and Automorphic Forms* ♦ **Akshay Venkatesh**, Stanford University; Distinguished Visiting Professor, School of Mathematics ♦ *Modular Symbols and Arithmetic* ♦ **Romyar Sharifi**, University of California, Los Angeles; Member, School of Mathematics

#### January 17

Mathematical Conversations ♦ *Connections between Homotopy Theory and Number Theory* ♦ **Irina Bobkova**, Member, School of Mathematics

#### January 22

Computer Science/Discrete Mathematics Seminar I ♦ *The Matching Problem in General Graphs Is in Quasi-NC* ♦ **Ola Svensson**, École Polytechnique Fédérale de Lausanne

Members' Seminar ♦ *On a Conjecture for  $p$ -Torsion in Class Groups of Number Fields* ♦ **Lillian B. Pierce**, Duke University; von Neumann Fellow, School of Mathematics

#### January 23

Locally Symmetric Spaces Seminar ♦ *Modular Symbols and Arithmetic* ♦ **Romyar Sharifi**, University of California, Los Angeles; Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *A Constant-Factor Approximation Algorithm for the Asymmetric Traveling Salesman Problem* ♦ **Ola Svensson**, École Polytechnique Fédérale de Lausanne

#### January 24

Mathematical Conversations ♦ *Zeros of Laplace Eigenfunctions* ♦ **Aleksandr Logunov**, Member, School of Mathematics

#### January 25

Seminar on Theoretical Machine Learning ♦ *Prediction and Control of Linear Dynamical Systems* ♦ **Cyril Zhang**, Princeton University

#### January 29

Computer Science/Discrete Mathematics Seminar I ♦ *Explicit, Epsilon-Balanced Codes Close to the Gilbert–Varshamov Bound* ♦ **Amnon Ta-Shma**, Tel Aviv University

Members' Seminar ♦ *Symmetries of Hamiltonian Actions of Reductive Groups* ♦ **David Ben-Zvi**, The University of Texas at Austin; Member, School of Mathematics

#### January 30

Locally Symmetric Spaces Seminar ♦ *Introduction to Spherical Varieties, I* ♦ **Michal Zydor**, Member, School of Mathematics ♦ *Modular Symbols and Arithmetic* ♦ **Romyar Sharifi**, University of California, Los Angeles; Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *Explicit, Epsilon-Balanced Codes Close to the Gilbert–Varshamov Bound* ♦ **Amnon Ta-Shma**, Tel Aviv University

#### January 31

Mathematical Conversations ♦ *Randomness to Structure* ♦ **Alex Kontorovich**, Rutgers, The State University of New Jersey; von Neumann Fellow, School of Mathematics

Analysis Seminar ♦ *Concentration Inequalities for Linear Cocycles and Their Applications to Problems in Dynamics and Mathematical Physics* ♦ **Silvius Klein**, Pontifical Catholic University of Rio de Janeiro ♦ *Möbius Disjointness Conjecture: Uniform Convergence and Entropy* ♦ **Mariusz Lemanczyk**, Nicolaus Copernicus University in Torun, Poland

#### February 1

Seminar on Theoretical Machine Learning ♦ *Two Approaches to (Deep) Learning with Differential Privacy* ♦ **Kunal Talwar**, Google Brain

#### February 5

Princeton/IAS Symplectic Geometry Seminar ♦ *Immersed Lagrangians near SYZ Singular Fibers* ♦ **Mohammed Abouzaid**, Columbia University

Computer Science/Discrete Mathematics Seminar I ♦ *Locally Repairable Codes, Storage Capacity, and Index Coding* ♦ **Arya Mazumdar**, University of Massachusetts

Members' Seminar ♦ *Some Things You Need to Know about Machine Learning but Didn't Know Whom to Ask (The Grad School Version)* ♦ **Sanjeev Arora**, Princeton University; Visiting Professor, School of Mathematics

#### February 6

Locally Symmetric Spaces Seminar ♦ *Moment Map for Spherical Varieties (after F. Knop)* ♦ **Michal Zydor**, Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *Outlier-Robust Estimation via Sum of Squares* ♦ **Pravesh Kothari**, Princeton University; Member, School of Mathematics

#### February 7

Mathematical Conversations ♦ *An Introduction to Univalent Foundations* ♦ **Daniel R. Grayson**, University of Illinois at Urbana-Champaign; Visitor, School of Mathematics

Analysis Seminar ♦ *Nodal Sets of Laplace Eigenfunctions* ♦ **Aleksandr Logunov**, Member, School of Mathematics

#### February 8

Joint IAS/Princeton University Number Theory Seminar ♦ *The Galois Action on the Stable Homology of Symplectic Groups over  $Z$*  ♦ **Akshay Venkatesh**, Stanford University; Distinguished Visiting Professor, School of Mathematics

Working Seminar in Algebraic Number Theory

#### February 12

Princeton/IAS Symplectic Geometry Seminar ♦ *Critical Toric Surfaces and Applications* ♦ **Weiwei Wu**, University of Georgia

Computer Science/Discrete Mathematics Seminar I ♦ *Nonlinear Dimensionality Reduction for Faster Kernel Methods in Machine Learning* ♦ **Christopher Musco**, Massachusetts Institute of Technology

Members' Seminar ♦ *Cocycles, Lyapunov Exponents, Localization* ♦ **Wilhelm Schlag**, The University of Chicago; Visiting Professor, School of Mathematics

#### February 13

Locally Symmetric Spaces Seminar ♦ *Moment Map for Spherical Varieties (after F. Knop)* ♦ **Michal Zydor**, Member, School of Mathematics, and **Yiannis Sakellaridis**, Rutgers, The State University of New Jersey; von Neumann Fellow, School of Mathematics ♦ *The Ngô Action via Geometric Satake* ♦ **David Ben Zvi**, The University of Texas at Austin; Member, School of Mathematics

Joint IAS/Princeton University Number Theory Seminar ♦ *Abstract Homomorphisms of Algebraic Groups and Applications* ♦ **Igor Rapinchuk**, Michigan State University

Computer Science/Discrete Mathematics Seminar II ♦ *Model Theory and Ultraproducts* ♦ **Maryanthe Malliaris**, The University of Chicago; von Neumann Fellow, School of Mathematics

#### February 14

Mathematical Conversations ♦ *The Ubiquity of Matrix Tuples across Mathematics* ♦ **Avi Wigderson**, Herbert H. Maass Professor, School of Mathematics

Analysis Seminar ♦ *On the Long-Term Dynamics of Nonlinear Dispersive Evolution Equations* ♦ **Wilhelm Schlag**, The University of Chicago; Visiting Professor, School of Mathematics

#### February 15

Joint IAS/Princeton University Number Theory Seminar ♦ *Categorical Representations of Reductive Groups* ♦ **David Ben-Zvi**, The University of Texas at Austin; Member, School of Mathematics

Working Seminar in Algebraic Number Theory

#### February 19

Princeton/IAS Symplectic Geometry Seminar ♦ *Quantum Periods Theorem for Landau–Ginzburg Potentials* ♦ **Dmitry Tonkonog**, University of California, Berkeley

#### February 20

Locally Symmetric Spaces Seminar ♦ *Knop’s Paper on Harish-Chandra Homomorphism for Reductive Group Actions* ♦ **Jonathan Peiyu Wang**, Member, School of Mathematics ♦ *Local to Global Relations of Periods* ♦ **Erez M. Lapid**, Weizmann Institute of Science; Member, School of Mathematics

Joint IAS/Princeton University Number Theory Seminar ♦ *Diophantine Approximation with Arithmetically Small Points* ♦ **Vesselin Dimitrov**, Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *Some Closure Results for Polynomial Factorization* ♦ **Mrinal Kumar**, Harvard University

#### February 21

Mathematical Conversations ♦ *Dimension and Support of the Harmonic Measure; or, What Do Brownian Travelers See?* ♦ **Svitlana Mayboroda**, University of Minnesota; von Neumann Fellow, School of Mathematics

#### February 22

Working Group on Algebraic Number Theory

Seminar on Theoretical Machine Learning ♦ *On the Optimization of Deep Networks: Implicit Acceleration by Overparameterization* ♦ **Nadav Cohen**, Member, School of Mathematics

#### February 26

Princeton/IAS Symplectic Geometry Seminar ♦ *Chain Level Loop Bracket and Pseudo-holomorphic Disks* ♦ **Kei Irie**, Kyoto University

Computer Science/Discrete Mathematics Seminar I ♦ *A Tight Bound for Hypergraph Regularity* ♦ **Guy Moshkovitz**, Harvard University

Members’ Seminar ♦ *Representations of  $p$ -adic Groups* ♦ **Jessica Fintzen**, Member, School of Mathematics

#### February 27

Locally Symmetric Spaces Seminar ♦ *Invariant Differential Operators on Spherical Varieties (continued)* ♦ **Jonathan Peiyu Wang**, Member, School of Mathematics ♦ *Local to Global Relations of Periods (continued)* ♦ **Erez M. Lapid**, Weizmann Institute of Science; Member, School of Mathematics

Joint IAS/Princeton University Number Theory Seminar ♦ *Concentration Properties of Theta Lifts* ♦ **Farrell Brumley**, Université Paris 13; Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *On the Communication Complexity of Classification Problems* ♦ **Roi Livni**, Princeton University

#### February 28

Mathematical Conversations ♦ *Bad Behavior* ♦ **Lillian B. Pierce**, Duke University; von Neumann Fellow, School of Mathematics

Analysis Seminar ♦ *Local Eigenvalue Statistics of Random Band Matrices* ♦ **Tatyana Shcherbina**, Princeton University

#### March 1

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *Fontaine–Mazur Conjecture in the Residually Reducible Case* ♦ **Lue Pan**, Princeton University

Seminar on Theoretical Machine Learning ♦ *Small-Loss Bounds for Online Learning with Partial Information* ♦ **Thodoris Lykouris**, Cornell University

#### March 5

Princeton/IAS Symplectic Geometry Seminar ♦ *Floer Cohomology and Maslov Flow* ♦ **Chris Woodward**, Rutgers, The State University of New Jersey

Computer Science/Discrete Mathematics Seminar I ♦ *Boolean Function Analysis: Beyond the Boolean Cube* ♦ **Yuval Filmus**, Technion–Israel Institute of Technology

Workshop on Representation Theory and Analysis on Locally Symmetric Spaces ♦ *Representations of  $p$ -adic Groups* ♦ **Jessica Fintzen**, Member, School of Mathematics ♦ *Supercuspidal L-Packets* ♦ **Tasho Kaletha**, University of Michigan ♦ *Wave-Front Set of Some Representations of Unipotent Reduction of the Group  $SO(2n+1)$*  ♦ **Jean-Loup Waldspurger**, Institut de Mathématiques de Jussieu–Paris Rive Gauche

#### March 6

Workshop on Representation Theory and Analysis on Locally Symmetric Spaces ♦ *About the Conjecture of Sakellaridis and Venkatesh on the Discrete Series for Archimedean Symmetric Spaces* ♦

**Colette Moeglin**, Institut de Mathématiques de Jussieu–Paris Rive Gauche ♦ *The Plancherel Formula for  $L^2(GL_n(F) \backslash GL_n(E))$  and Applications to the Ichino–Ikeda and Formal Degree Conjectures for Unitary Groups* ♦ **Raphael Beuzart-Plessis**, Centre National de la Recherche Scientifique, Paris ♦ *Restriction Problem for Non-generic Representation of Arthur Type* ♦ **Wee Teck Gan**, National University of Singapore ♦ *Relative Character Asymptotics and Applications* ♦ **Paul Nelson**, Eidgenössische Technische Hochschule Zürich

Computer Science/Discrete Mathematics Seminar II ♦ *Boolean Function Analysis: Beyond the Boolean Cube (continued)* ♦ **Yuval Filmus**, Technion–Israel Institute of Technology

#### March 7

Workshop on Representation Theory and Analysis on Locally Symmetric Spaces ♦ *Thin Part of Arithmetic Locally Symmetric Spaces* ♦ **Mikolaj Fraczyk**, Alfréd Rényi Institute of Mathematics, Hungarian Academy of Sciences, Budapest ♦ *Analytic Torsion for Congruence Quotients of  $SL(n, \mathbf{R})/SO(n)$*  ♦ **Jasmin Matz**, The Hebrew University of Jerusalem ♦ *Endoscopy and Cohomology Growth on Unitary Groups* ♦ **Simon Lindsay Marshall**, University of Wisconsin–Madison; Member, School of Mathematics

#### March 8

Workshop on Representation Theory and Analysis on Locally Symmetric Spaces ♦ *Special Cycles on Simple Shimura Varieties* ♦ **Wei Zhang**, Massachusetts Institute of Technology ♦ *Admissible Height Pairings of Algebraic Cycles* ♦ **Shouwu Zhang**, Princeton University ♦ *Arithmetic Theta Series* ♦ **Stephan Kudla**, University of Toronto ♦ *Euler Classes Transgressions and Eisenstein Cohomology of  $GL_N$*  ♦ **Nicolas Bergeron**, Institut de Mathématiques de Jussieu

#### March 9

Workshop on Representation Theory and Analysis on Locally Symmetric Spaces ♦ *The Present State of the Jacquet–Rallis Trace Formula* ♦ **Pierre-Henri Chaudouard**, Institut de Mathématiques de Jussieu–Paris Rive Gauche ♦  *$Ax$ -Schanuel for Shimura Varieties* ♦ **Jacob Tsimerman**, University of Toronto ♦ *Endoscopy and Cohomology Growth on Unitary Groups* ♦ **Simon Lindsay Marshall**, University of Wisconsin–Madison; Member, School of Mathematics ♦ *Nodal Domains for Maass Forms* ♦ **Peter Sarnak**, Professor, School of Mathematics

#### March 12

Princeton/IAS Symplectic Geometry Seminar ♦ *Higher Ribbon Graphs* ♦ **David Nadler**, University of California, Berkeley



Members' Seminar ♦ *Math for Underprivileged High School Kids* ♦ **Rajiv Gandhi**, Program on Algorithmic and Combinatorial Thinking (PACT), and **Dan Zaharopol**, Bridge to Enter Advanced Mathematics (BEAM)

### March 13

Locally Symmetric Spaces Seminar ♦ *Concentration Properties of Automorphic Forms and Spherical Varieties* ♦ **Farrell Brumley**, Université Paris 13; Member, School of Mathematics ♦ *Period Mappings Are Definable in the O-Minimal Structure  $\mathbf{R}_{\{\text{an}, \text{exp}\}}$*  ♦ **Jacob Tsimerman**, University of Toronto ♦ *Bounds for Character Twists of L-Functions* ♦ **Paul Nelson**, Eidgenössische Technische Hochschule Zürich

Joint IAS/Princeton University Number Theory Seminar ♦ *The Weyl Law for Algebraic Tori* ♦ **Ian Petrow**, Eidgenössische Technische Hochschule Zürich

Computer Science/Discrete Mathematics Seminar II ♦ *Abstract Convexity, Weak Epsilon-Nets, and Radon Number* ♦ **Shay Moran**, University of California, San Diego; Member, School of Mathematics

### March 14

Mathematical Conversations ♦ *Synthetic Homotopy Theory: Going Beyond Set-Level Mathematics* ♦ **Guillaume Brunerie**, Member, School of Mathematics

### March 15

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *Fourier–Jacobi Cycles and Derivative of L-Functions* ♦ **Yifeng Liu**, Northwestern University

### March 19

Computer Science/Discrete Mathematics Seminar I ♦ *Operator Scaling via Geodesically Convex Optimization, Invariant Theory, and Polynomial Identity Testing* ♦ **Yuanzhi Li**, Princeton University

Members' Seminar ♦ *The Hidden Landscape of Localization* ♦ **Svitlana Mayboroda**, University of Minnesota; von Neumann Fellow, School of Mathematics

### March 20

Locally Symmetric Spaces Seminar ♦ *Concentration Properties of Automorphic Forms and Spherical Varieties (continued)* ♦ **Farrell Brumley**, Université Paris 13; Member, School of Mathematics ♦ *Semiclassical Analysis, Amplification, and Subconvexity* ♦ **Simon Lindsay Marshall**, University of Wisconsin–Madison; Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *Operator Scaling via Geodesically Convex Optimization, Invariant Theory, and Polynomial Identity Testing (continued)* ♦ **Yuanzhi Li**, Princeton University

### March 21

Analysis Seminar ♦ *Vertical Perimeter versus Horizontal Perimeter* ♦ **Assaf Naor**, Princeton University; Member, School of Mathematics

### March 26

Princeton/IAS Symplectic Geometry Seminar ♦ *Open Quantum Kirwan Map* ♦ **Guangbo Xu**, Princeton University

Computer Science/Discrete Mathematics Seminar I ♦ *Circuit Lower Bounds for Nondeterministic Quasi-Polytime: An Easy Witness Lemma for NP and NQP* ♦ **Cody Murray**, Massachusetts Institute of Technology

Members' Seminar ♦ *Kazhdan–Lusztig Theory for Matroids* ♦ **June Huh**, Visiting Professor, School of Mathematics

### March 27

Locally Symmetric Spaces Seminar ♦ *Semiclassical Analysis, Amplification, and Subconvexity* ♦ **Simon Lindsay Marshall**, University of Wisconsin–Madison; Member, School of Mathematics ♦ *Analytic Aspects of Arthur's Trace Formula* ♦ **Tobias Finis**, Universität Leipzig

Joint IAS/Princeton University Number Theory Seminar ♦ *Summation Formulae and Speculations on Period Integrals Attached to Triples of Automorphic Representations* ♦ **Jayce Getz**, Duke University; Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar II ♦ *Heisenberg Geometry and the Goemans–Linial SDP* ♦ **Assaf Naor**, Princeton University; Member, School of Mathematics

### March 28

Mathematical Conversations ♦ *Hyperbolic Geometry and Quantum Invariants in Dimension 3* ♦ **Helen Wong**, Carleton College; von Neumann Fellow, School of Mathematics

Analysis Seminar ♦ *Polynomial Carleson Operators along the Paraboloid* ♦ **Lillian B. Pierce**, Duke University; von Neumann Fellow, School of Mathematics

### March 29

Working Group on Algebraic Number Theory

Locally Symmetric Spaces Seminar ♦ *Kirillov Theory and Its Applications* ♦ **Ju-Lee Kim**, Massachusetts Institute of Technology; Member, School of Mathematics

Joint IAS/Princeton University Number Theory Seminar ♦ *The Structure of Generic Tame Type Galois Deformation Rings* ♦ **Bao V. Le Hung**, Member, School of Mathematics

Library Book Event ♦ *Piero della Francesca (ca. 1410–92), Painter/Mathematician: A Gift*

### April 2

Princeton/IAS Symplectic Geometry Seminar ♦ *Generating the Fukaya Categories via Koszul Duality* ♦ **Yin Li**, University College London

Members' Seminar ♦ *On Expressiveness and Optimization in Deep Learning* ♦ **Nadav Cohen**, Member, School of Mathematics

### April 3

Locally Symmetric Spaces Seminar ♦ *Kirillov Theory and Its Applications (continued)* ♦ **Ju-Lee Kim**, Massachusetts Institute of Technology; Member, School of Mathematics

Joint IAS/Princeton University Number Theory Seminar ♦ *The Generalized Whittaker Function on Quaternionic Exceptional Groups* ♦ **Aaron Pollack**, Member, School of Mathematics

Marston Morse Lectures ♦ *Exceptional Holonomy and Related Geometric Structures: Basic Theory* ♦ **Simon Donaldson**, Stony Brook University, The State University of New York

### April 4

Marston Morse Lectures ♦ *Exceptional Holonomy and Related Geometric Structures: Examples and Moduli Theory* ♦ **Simon Donaldson**, Stony Brook University, The State University of New York

U.S. Income Tax Seminar for Members

### April 5

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *Arithmetic of Automorphic L-Functions* ♦ **Anantharam Raghuram**, Indian Institute of Science Education and Research; Member, School of Mathematics

Seminar on Theoretical Machine Learning ♦ *A Compressed Sensing View of Unsupervised Text Embeddings, Bag-of-n-Grams, and LSTMs* ♦ **Mikhail Khodak**, Princeton University

### April 6

Marston Morse Lectures ♦ *Exceptional Holonomy and Related Geometric Structures: Dimension Reduction and Boundary Value Problems* ♦ **Simon Donaldson**, Stony Brook University, The State University of New York

### April 7

Workshop on Topology: Identifying Order in Complex Systems ♦ *Topologies of the Zero Sets of Random Real Projective Hypersurfaces and of Monochromatic Waves* ♦ **Peter Sarnak**, Professor,

School of Mathematics ♦ *Topological Filters: A Toolbox for Processing Dynamic Signals* ♦ **Michael Robinson**, American University ♦ *Fitting Manifolds to Data* ♦ **Charlie Fefferman**, Princeton University ♦ *Studying Fluid Flows with Persistent Homology* ♦ **Rachel Levanger**, University of Pennsylvania ♦ *Protein Folding Characterization via Persistent Homology* ♦ **Marcio Gameiro**, Universidade de São Paulo

#### April 9

Princeton/IAS Symplectic Geometry Seminar ♦ *Fukaya Categories of Calabi–Yau Hypersurfaces* ♦ **Paul Seidel**, Massachusetts Institute of Technology; Member, School of Mathematics

Computer Science/Discrete Mathematics Seminar I ♦ *Large Deviations in Random Graphs* ♦ **Eyal Lubetzky**, New York University

Emerging Topics Working Group ♦ *Arnold Diffusion for “Complete” Families of Perturbations with Two or Three Independent Harmonics* ♦ **Amadeu Delshams**, Universitat Politècnica de Catalunya ♦ *Symplectic Geometry of Hyperbolic Cylinders and Their Homoclinic Intersections* ♦ **Jean-Pierre Marco**, Université Pierre et Marie Curie

Diophantine Analysis working group seminar ♦ *Steenrod Operations and Tate’s Conjecture on the Brauer Group of a Surface* ♦ **Tony Feng**, Stanford University

#### April 10

Emerging Topics Working Group ♦ *A General Shadowing Result for Normally Hyperbolic Invariant Manifolds and Its Application to Arnold Diffusion* ♦ **Tere Seara**, Universitat Politècnica de Catalunya ♦ *Some Geometric Mechanisms for Arnold Diffusion* ♦ **Rafael de la Llave**, Georgia Institute of Technology

Joint IAS/Princeton University Number Theory Seminar ♦ *Nonspherical Poincaré Series, Cusp Forms, and L-Functions for  $GL(3)$*  ♦ **Jack Buttcane**, University at Buffalo, The State University of New York

Computer Science/Discrete Mathematics Seminar II ♦ *Explicit Binary Tree Codes with Polylogarithmic Size Alphabet* ♦ **Gil Cohen**, Princeton University; Visitor, School of Mathematics

#### April 11

Emerging Topics Working Group ♦ *Diffusion along Chains of Normally Hyperbolic Cylinders* ♦ **Marian Gidea**, Yeshiva University ♦ *Arnold Diffusion and Mather Theory* ♦ **Ke Zhang**, University of Toronto

Mathematical Conversations ♦ *Ordinary Points Mod  $p$  of Hyperbolic 3-Manifolds* ♦ **Mark Goresky**, Visitor, School of Mathematics

#### April 12

Working Group on Algebraic Number Theory

Emerging Topics Working Group ♦ *Growth of Sobolev Norms for the Cubic NLS near 1D Quasiperiodic Solutions* ♦ **Marcel Guardia**, Universitat Politècnica de Catalunya ♦ *The Way Weak  $K.A.M.$  Pseudographs of Symplectic Twist Maps Fill the Annulus* ♦ **Marie-Claude Arnaud**, Université d’Avignon

Joint IAS/Princeton University Number Theory Seminar ♦ *S-Operators via the Categorical Trace* ♦ **Xinwen Zhu**, California Institute of Technology

Seminar on Theoretical Machine Learning ♦ *Stability and Generalization in Adaptive Data Analysis* ♦ **Vitaly Feldman**, Google Brain

#### April 16

Princeton/IAS Symplectic Geometry Seminar ♦ *The Wrapped Fukaya Category of a Weinstein Manifold Is Generated by the Lagrangian Cocore Disks* ♦ **Georgios Dimitroglou Rizell**, Uppsala University

Computer Science/Discrete Mathematics Seminar I ♦ *Sums of Squares over  $k$ -Subset Hypercubes* ♦ **Annie Raymond**, University of Massachusetts

#### April 17

Joint IAS/Princeton University Number Theory Seminar ♦ *A New Northcott Property for Faltings Height* ♦ **Lucia Mocz**, Princeton University

Computer Science/Discrete Mathematics Seminar II ♦ *A Simple Proof of a Reverse Minkowski Inequality* ♦ **Noah Stephens-Davidowitz**, Visitor, School of Mathematics

#### April 19

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *Mod  $p$  Points on Shimura Varieties with Parahoric Level Structure* ♦ **Rong Zhou**, Member, School of Mathematics

Seminar on Theoretical Machine Learning ♦ *Online Improper Learning with an Approximation Oracle* ♦ **Zhiyuan Li**, Princeton University

#### April 23

Princeton/IAS Symplectic Geometry Seminar ♦ *Mirror Spaces from Formal Deformation of Lagrangians and Their Gluing* ♦ **Hansol Hong**, Harvard University

#### April 24

Joint IAS/Princeton University Number Theory Seminar ♦ *Algorithms for the Topology of Arithmetic Groups and Hecke Actions II* ♦ **Michael Lipnowski**, Member, School of Mathematics

#### April 26

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *Ax–Schanuel Results for Shimura Varieties* ♦ **Jonathan Pila**, University of Oxford

Seminar on Theoretical Machine Learning ♦ *Entire Regularization Path for Maximum Entropy Models* ♦ **Yoram Singer**, Princeton University

#### April 30

Princeton/IAS Symplectic Geometry Seminar ♦ *Birational Calabi–Yau Manifolds Have the Same Small Quantum Products* ♦ **Mark McLean**, Stony Brook University, The State University of New York

#### May 1

Joint IAS/Princeton University Number Theory Seminar ♦ *A Converse to a Theorem of Gross–Zagier, Kolyvagin, and Rubin II* ♦ **Ashay Burungale**, Université Paris 13; Member, School of Mathematics

#### May 3

Working Group on Algebraic Number Theory

Joint IAS/Princeton University Number Theory Seminar ♦ *A  $p$ -adically Entire Function with Integral Values on  $\mathbb{Q}_p$  and  $p$ -adic Fourier Expansions* ♦ **Francesco Baldassarri**, Università degli Studi di Padova

#### May 7

Special Seminar ♦ *Benjamini–Schramm Convergence and Eigenfunctions on Riemannian Manifolds* ♦ **Miklos Abert**, Alfréd Rényi Institute of Mathematics, Hungarian Academy of Sciences, Budapest

#### May 8

Locally Symmetric Spaces Seminar ♦ *Eigenfunctions and Random Waves on Locally Symmetric Spaces in the Benjamini–Schramm Limit* ♦ **Nicolas Bergeron**, Université Pierre et Marie Curie

Joint IAS/Princeton University Number Theory Seminar ♦ *Towards Counting Rational Points on Genus  $g$  Curves* ♦ **Ziyang Gao**, Princeton University; Member, School of Mathematics

#### May 10

Working Group on Algebraic Number Theory

Special Probability Seminar ♦ *Percolation of Sign Clusters for the Gaussian Free Field I* ♦ **Pierre-François Rodriguez**, University of California, Los Angeles

Joint IAS/Princeton University Number Theory Seminar ♦ *Goldfeld’s Conjecture and Congruences between Heegner Points* ♦ **Chao Li**, Columbia University

May 11

Special Probability Seminar ♦ *Percolation of Sign Clusters for the Gaussian Free Field II* ♦ **Pierre-François Rodriguez**, University of California, Los Angeles

May 15

Special Mathematics Physics Seminar ♦ *An Introduction to Liouville Theory* ♦ **Antti Kupiainen**, University of Helsinki

May 17

Joint IAS/Princeton University Number Theory Seminar ♦ *A New  $p$ -adic Maass–Shimura Operator and Supersingular Rankin–Selberg  $p$ -adic  $L$ -functions* ♦ **Daniel Kriz**, Princeton University

May 19

2018 Program for Women and Mathematics

May 20

2018 Program for Women and Mathematics

Institute Film Series in partnership with Women and Mathematics

May 21

2018 Program for Women and Mathematics ♦ *Mathematics in Cryptography* ♦ **Toni Bluher**, National Security Agency ♦ *Beginner Review Session* ♦ *Mathematics in Post-Quantum Cryptography* ♦ **Kristin Lauter**, Microsoft Research ♦ *Advanced Review Session* ♦ *Research Seminars* ♦ *NTRU Lattice-Based Algorithms: History and Modern Developments* ♦ **Jill Pipher**, Brown University

May 22

2018 Program for Women and Mathematics ♦ *Mathematics in Cryptography* ♦ **Toni Bluher**, National Security Agency ♦ *Beginner Review Session* ♦ *Mathematics in Post-Quantum Cryptography* ♦ **Kristin Lauter**, Microsoft Research ♦ *Advanced Review Session* ♦ *Research Seminars/Ambassador Review* ♦ *Ambassador Program Introduction* ♦ *Women in Science Seminar: Career Panel*

May 23

Special Seminar ♦ *Approximate Spectral Theory in Heterogeneous Media, Asymptotic Ballistic Transport, and Beyond?* ♦ **Antoine Gloria**, Laboratoire Jacques-Louis Lions, Université Paris 1 Panthéon-Sorbonne

May 24

Joint IAS/Princeton University Number Theory Seminar ♦ *Burgess Bounds for Short Character Sums in New Settings* ♦ **Lillian B. Pierce**, Duke University; von Neumann Fellow, School of Mathematics

2018 Program for Women and Mathematics ♦ *Mathematics in Cryptography* ♦ **Toni Bluher**, National Security Agency ♦ *Beginner Review Session* ♦ *Mathematics in Post-Quantum*

*Cryptography* ♦ **Kristin Lauter**, Microsoft Research ♦ *Advanced Review Session* ♦ *Women in Science Seminar Ambassador Program Results*

May 25

2018 Program for Women and Mathematics ♦ *Mathematics in Cryptography* ♦ **Toni Bluher**, National Security Agency ♦ *Mathematics of Post-Quantum Cryptography* ♦ **Kristin Lauter**, Microsoft Research ♦ *Research Seminars*

June 4

Optimization, Complexity, and Invariant Theory ♦ *Motivations, Connections, and Scope of the Workshop* ♦ **Avi Wigderson**, Herbert H. Maass Professor, School of Mathematics ♦ *A Gentle Introduction to Group Representation Theory* ♦ **Peter Buergisser**, Technische Universität Berlin ♦ *An Introduction to Invariant Theory* ♦ **Harm Derksen**, University of Michigan

June 5

Optimization, Complexity, and Invariant Theory ♦ *Tensors: Rank, Entropy, and Entanglement* ♦ **Matthias Christandl**, University of Copenhagen ♦ *Introduction to Geometric Invariant Theory I: Noncommutative Duality* ♦ **Ankit Garg**, Microsoft Research New England ♦ *Introduction to Geometric Invariant Theory II: Moment Polytopes* ♦ **Michael Walter**, University of Amsterdam ♦ *Alternate Minimization Algorithms for Scaling Problems and Their Analysis* ♦ **Rafael Oliveira**, University of Toronto

June 6

Optimization, Complexity, and Invariant Theory ♦ *An Algebraic Algorithm for Noncommutative Rank over Any Field* ♦ **K. V. Subrahmanyam**, Chennai Mathematical Institute ♦ *Some PIT Problems in the Light of the Noncommutative Rank Algorithm* ♦ **Gábor Ivanyos**, Institute of Computer Science and Control, Hungarian Academy of Sciences, Budapest ♦ *Algorithmic Invariant Theory* ♦ **Visu Makam**, University of Michigan ♦ *Geometric Complexity Theory (GCT): Algorithmic Challenges in Invariant Theory* ♦ **Ketan D. Mulmuley**, The University of Chicago

June 7

Optimization, Complexity, and Invariant Theory ♦ *The Dynamics of Regularized Flows on Convex Bodies* ♦ **James Lee**, University of Washington ♦ *An Introduction to Geodesic Convexity* ♦ **Nisheeth Vishnoi**, École Polytechnique Fédérale de Lausanne ♦ *Operator Scaling via Geodesically Convex Optimization, Invariant Theory and Polynomial Identity Testing* ♦ **Yuanzhi Li**, Princeton University ♦ *Solution to the Paulsen Problem (via Operator Scaling)* ♦ **Lap Chi Lau**, University of Waterloo

June 8

Optimization, Complexity, and Invariant Theory ♦ *Combinatorial Methods for PIT (and Ranks of Matrix Spaces)* ♦ **Roy Meshulam**,

Technion–Israel Institute of Technology ♦ *Capacities, Hyperbolicity, Submodularity, and All the Jazz ...* ♦ **Leonid Gurvits**, The City College of New York

July 11

Conference for African–American Researchers in the Mathematical Sciences

July 12

Conference for African–American Researchers in the Mathematical Sciences

## School of Natural Sciences

### ASTROPHYSICS ACTIVITIES

September 11

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Organizational Meeting* ♦ **Matias Zaldarriaga**, Professor, School of Natural Sciences; **David Spergel**, Princeton University and Center for Computational Astrophysics, Flatiron Institute; and **Jo Dunkley**, Princeton University

September 14

Astrophysics Informal Seminar ♦ *Convection Affects Magnetic Turbulence in White Dwarf Accretion Disks* ♦ **Matthew Coleman**, Member, School of Natural Sciences

September 19

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *Circumgalactic Precipitation* ♦ **Mark Voit**, Michigan State University

September 21

Astrophysics Informal Seminar ♦ *Magnetic Fields in the Interstellar Medium* ♦ **Susan E. Clark**, Member, School of Natural Sciences

September 26

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *Rejuvenation of Stars, Metal Enrichment, and Implants of Gravitational Wave Generators in AGN Disks: Analogue of Planetary Systems Around Massive Black Holes* ♦ **Doug Lin**, Lick Observatory; Member, School of Natural Sciences

September 28

Astrophysics Informal Seminar ♦ *Binary Mergers in Nonspherical Nuclear Star Clusters* ♦ **Cristobal Petrovich**, Canadian Institute for Theoretical Astrophysics

October 3

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *Exoplanet Demographics versus Host Star Mass: Clues to Formation from Direct Imaging* ♦ **Michael Meyer**, University of Michigan



### October 5

Astrophysics Informal Seminar ♦ *The First Detection of Warm Ionized Disk Around the Galactic Center Black Hole SgrA* ♦ **Elena Murchikova**, California Institute of Technology

Astrophysics Informal Seminar ♦ *Zooming in on Planet-Forming Zones of Disks Around Young Stars* ♦ **Ewine van Dishoeck**, Leiden Observatory and Max-Planck-Institut für Extraterrestrische Physik

### October 9

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Integrated Approach to Cosmology* ♦ **Andrina Nicola**, Eidgenössische Technische Hochschule Zürich ♦ *Cosmology Results from the Dark Energy Survey Year 1* ♦ **Elisabeth Krause**, Kavli Institute for Particle Astrophysics and Cosmology and SLAC National Accelerator Laboratory

### October 10

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *Dynamics of Strongly Magnetic Neutron Stars* ♦ **Yuri Levin**, Columbia University and Center for Computational Astrophysics, Flatiron Institute

### October 12

Astrophysics Informal Seminar ♦ *Distances to Gaia Stars* ♦ **Lauren Anderson**, Center for Computational Astrophysics, Flatiron Institute

### October 17

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *Numerical Simulations of Black Hole Accretion* ♦ **Ramesh Narayan**, Harvard-Smithsonian Center for Astrophysics

### October 19

Astrophysics Informal Seminar ♦ *Tidal Disruption Events: Accretion Flows Doing What They Shouldn't* ♦ **Julian Krolik**, Johns Hopkins University

### October 23

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Equivalence Principle in Scalar-Tensor Theories* ♦ **Lasma Alberte**, Scuola Internazionale Superiore di Studi Avanzati, Trieste

### October 24

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *The New Jupiter: Results from the Juno Mission* ♦ **Scott Bolton**, Southwest Research Institute

### October 26

Astrophysics Informal Seminar ♦ *On the Origin of the Magic Scale of Galaxies* ♦ **Avishai Dekel**, Racah Institute of Physics, The Hebrew University of Jerusalem, and Center for Computational Astrophysics, Flatiron Institute

### October 30

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Exploring Neutrino Masses and Relativistic Effects with Large-Scale Structures* ♦ **Elena Giusarma**, Carnegie Mellon University

### November 2

Astrophysics Informal Seminar ♦ *Convection in Cool Stars, as Revealed through Stellar Brightness and Radial Velocity Variations* ♦ **Fabienne Bastien**, The Pennsylvania State University

### November 3

Astrophysics Informal Seminar ♦ *Kepler's Multiple Planet Systems* ♦ **Jack Lissauer**, Space Science and Astrobiology at Ames, National Aeronautics and Space Administration (NASA)

### November 7

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *What Can We Learn from Cosmic Structure?* ♦ **Benjamin Wandelt**, Sorbonne Université and Center for Computational Astrophysics, Flatiron Institute

### November 9

Astrophysics Informal Seminar ♦ *On Detection of FRBs and Pulsars in Relativistic Binary Systems* ♦ **Barak Zackay**, Member, School of Natural Sciences

### November 13

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Separate Universe Simulations with Massive Neutrinos* ♦ **Chi-Ting Chiang**, Stony Brook University, The State University of New York

### November 14

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *Accessing Cosmic Dawn via the Hydrogen Epoch of Reionization Array* ♦ **Adrian Liu**, University of California, Berkeley

### November 17

Astrophysics Informal Seminar ♦ *The Ejection Resonance: A Resurrection in Three Movements* ♦ **Jihad Touma**, American University of Beirut; Member, School of Natural Sciences

### November 21

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *Exploring the Galactic Halo with Gaia* ♦ **Vasily Belokurov**, University of Cambridge

### November 27

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Beyond CMB Cosmic Variance Limits on Reionization with the Polarized SZ Effect* ♦ **Joel Myers**, Canadian Institute for Theoretical Astrophysics

Astrophysics Informal Seminar ♦ *The Troubled Puberty of the Solar System* ♦ **Simon Portegies Zwart**, Leiden Observatory

### November 28

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *Growing Black Holes in Growing Galaxies* ♦ **Marta Volonteri**, Institut d'Astrophysique de Paris

### November 29–December 1

Stellar Dynamics in Galactic Nuclei Workshop ♦ *Review—Our Galactic Center: A Unique Laboratory for the Physics and Astrophysics of Black Holes* ♦ **Andrea Ghez**, University of California, Los Angeles ♦ *An Update on Monitoring Stellar Orbits in the Galactic Center* ♦ **Stefen Gillessen**, Max-Planck-Institut für Extraterrestrische Physik ♦ *Investigating the Relativistic Motion of the Stars near the Supermassive Black Hole in the Galactic Center* ♦ **Andreas Eckart**, Universität zu Köln ♦ *Dynamics in the Galactic Center—the Effect of Binaries* ♦ **Re'em Sari**, Racah Institute of Physics, The Hebrew University of Jerusalem ♦ *Tidal Disruption Events from Eccentric Nuclear Disks* ♦ **Ann-Marie Madigan**, University of Colorado ♦ *Tidal Capture Runaway and the Formation of Seed Massive Black Holes* ♦ **Jeremiah Ostriker**, Princeton University ♦ *Tidal Disruption Event Rates: Diagnostics of Stellar Dynamics Inside the Sphere of Influence* ♦ **Nicholas Stone**, Columbia University ♦ *Review—Gravitational Wave Sources in Galactic Nuclei* ♦ **Bence Kocsis**, Eötvös Loránd University ♦ *Black Hole Mergers in Nuclear Star Clusters* ♦ **Fabio Antonini**, University of Surrey ♦ *Seed Binary Black Hole Production and Coalescence in Disks Around AGNs* ♦ **Doug Lin**, Lick Observatory; Member, School of Natural Sciences ♦ *Binary Dynamics within Galactic Nuclei* ♦ **Smadar Naoz**, University of California, Los Angeles ♦ *On the Rate of Black Hole Binary Mergers in Galactic Nuclei Due to Dynamical Hardening* ♦ **Nathan Leigh**, American Museum of Natural History ♦ *The Gravitational Capture of Compact Objects by Kerr Supermassive Black Holes* ♦ **Pau Amaro-Seoane**, Institut d'Estudis Espacials de Catalunya ♦ *Stellar Winds near Massive Black Holes: The Case of the S-Stars* ♦ **Nora Lützgendorf**, European Space Agency and Space Telescope Science Institute, NASA, Baltimore ♦ *Kinetic Theory of Stellar Systems* ♦ **Pierre-Henri Chavanis**, Laboratoire de Physique Théorique et Hautes Energies, Universités Paris VI–VII ♦ *Review—Kinetic Theory in Galactic Centers* ♦ **Christophe Pichon**, Institut d'Astrophysique de Paris ♦ *Modelling the Eccentric Disk of M31* ♦ **John**

**Magorrian**, University of Oxford ♦ *Review—Whither Resonant Relaxation?* ♦ **Jihad Touma**, American University of Beirut; Member, School of Natural Sciences ♦ *Equilibrium and Stability of Differentially Rotating Stellar Systems* ♦ **Anna Lisa Varri**, The University of Edinburgh ♦ *Radial Orbit and Loss Cone Instabilities in Spherical Systems* ♦ **Evgeny Polyachenko**, Russian Academy of Sciences, Moscow ♦ *Review—Supermassive BHs Mergers* ♦ **Marta Volonteri**, Institut d’Astrophysique de Paris ♦ *Dynamical Friction and the Evolution of Supermassive Black Hole Binaries: The Final Hundred-Parsec Problem* ♦ **Fani Dosopoulou**, Northwestern University ♦ *Implications of the Eccentric Kozai-Lidov Mechanism for Stars Surrounding Supermassive Black Hole Binaries* ♦ **Gongjie Li**, Harvard-Smithsonian Center for Astrophysics ♦ *Dynamics of Massive Black Hole Triplets: Promising Sources for LISA and Pulsar Timing* ♦ **Alberto Sesana**, University of Birmingham ♦ *Observational Constraints on the Formation and Evolution of the Milky Nuclear Star Cluster* ♦ **Tuan Do**, University of California, Los Angeles ♦ *GRAVITY in the Galactic Center* ♦ **Frank Eisenhauer**, Max-Planck-Institut für Extraterrestrische Physik ♦ *The Stellar Cusp Around the Milky Way’s Central Black Hole* ♦ **Rainer Schödel**, Instituto de Astrofísica de Andalucía ♦ *Galaxy Collision Simulations with Central Post-Newtonian Supermassive Binary Black Holes* ♦ **Peter Berczik**, Main Astronomical Observatory, National Academy of Sciences of Ukraine ♦ *Direct Million-Body Simulation of the Galactic Center* ♦ **Taras Panamarev**, Fesenkov Astrophysical Institute, Kazakhstan ♦ *Ergodicity in Chaotic Self-gravitating Systems* ♦ **Simon Portegies Zwart**, Leiden Observatory ♦ *Hierarchical Triple Systems: Effects of Higher Multipoles and General Relativity* ♦ **Clifford Will**, University of Florida ♦ *Hypervelocity Stars in the GAIA Era* ♦ **Elena Maria Rossi**, Leiden Observatory ♦ *Secular Dynamics and Systematic Eccentricity Changes of Inspiral IMBHs* ♦ **Yuri Levin**, Columbia University and Center for Computational Astrophysics, Flatiron Institute ♦ *The Ecology of the Galactic Center* ♦ **Melvyn Davies**, Lund Observatory

#### December 5

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *Hearing and Seeing GW170817* ♦ **Daniel Holz**, The University of Chicago

#### December 7

Astrophysics Informal Seminar ♦ *The New Phase Space Complexity of Old Globular Clusters* ♦ **Anna Lisa Varri**, The University of Edinburgh

#### December 11

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Reducing Noise in N-Body Simulations with Massive Neutrinos* ♦ **Arka Banerjee**, Kavli Institute for Particle Astrophysics and Cosmology ♦ *Galaxy Evolution*

*within Clusters—Hints from Velocity Distributions* ♦ **Susmita Adhikari**, Kavli Institute for Particle Astrophysics and Cosmology

#### December 12

Institute for Advanced Study/Princeton University Joint Astrophysics Colloquium ♦ *Fast Radio Bursts* ♦ **Victoria Kaspi**, McGill University

#### December 14

Astrophysics Informal Seminar ♦ *New Frontiers in Cosmology* ♦ **Cora Dvorkin**, Harvard University

#### January 4

Astrophysics Informal Seminar ♦ *How Habitable Are “Habitable” Planets?* ♦ **Manasvi Lingam**, Institute for Theory and Computation, Harvard-Smithsonian Center for Astrophysics

#### January 16

Astrophysics Informal Seminar ♦ *White Dwarf–Neutron Star Mergers: From Peculiar Supernovae to Pulsar Planets* ♦ **Ben Tal Margalit**, Columbia University

#### January 22

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Unveiling Dark Structures with Acumate Weak Lensing* ♦ **Ricardo Herbonnet**, Stony Brook University, The State University of New York

#### January 25

Astrophysics Informal Seminar ♦ *New Information in Ancient Photons: Novel Approaches to CMB Foregrounds and Secondary Anisotropies* ♦ **James Colin Hill**, Center for Computational Astrophysics, Flatiron Institute; Member, School of Natural Sciences

#### February 5

Astrophysics Informal Seminar ♦ *The Full Transient Sky at <17 mag* ♦ **Subo Dong**, The Kavli Institute for Astronomy and Astrophysics at Peking University

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Counts in Cells: Large-Scale Structure in the Semiclassical Approximation* ♦ **Mikhail Ivanov**, École Polytechnique Fédérale de Lausanne

#### February 8

Astrophysics Informal Seminar ♦ *A Galactic-Scale Gravitational Wave Detector* ♦ **Maura McLaughlin**, West Virginia University

#### February 16

Astrophysics Informal Seminar ♦ *Neutron Star Mergers and ULTRASAT* ♦ **Eli Waxman**, Weizmann Institute of Science

#### February 22

Astrophysics Informal Seminar ♦ *MOSFiT: Working Together to Understand Energetic Transients* ♦ **James Guillochon**, Institute for Theory and Computation, Harvard-Smithsonian Center for Astrophysics

#### February 26

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Unveiling Cosmic Voids in Large-Scale Structure Surveys: The Impact of Tracer Bias on Voids* ♦ **Giorgia Pollina**, Ludwig-Maximilians-Universität München

#### March 1

Astrophysics Informal Seminar ♦ *Celestial Fluid Mechanics: New Perspectives on the Hydrodynamics of Astrophysical Disks* ♦ **Gordon Ogilvie**, University of Cambridge

#### March 8

Astrophysics Informal Seminar ♦ *Frankenstein Peers at the Milky Way Galaxy* ♦ **Wyn Evans**, Institute of Astronomy, University of Cambridge

#### March 12

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Chiral Gravitational Waves and Baryon Superfluid Dark Matter* ♦ **Evan McDonough**, Brown University

#### March 15

Astrophysics Informal Seminar ♦ *Constraining Planetary Histories with New Architectures: Resonant Chains and Circumbinary Orbits* ♦ **Daniel Fabrycky**, The University of Chicago

#### March 16

Astrophysics Informal Seminar ♦ *The Complex Circumgalactic Medium* ♦ **Hsiao-Wen Chen**, The University of Chicago

#### March 19

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Cross-correlating Galaxy Surveys with CMB Lensing* ♦ **Eric Baxter**, University of Pennsylvania

#### March 22

Astrophysics Informal Seminar ♦ *The New Era of Galactic Archaeology* ♦ **Yuan-Sen Ting**, Member, Institute for Advanced Study

#### April 2

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Can Early Dark Energy Explain EDGES?* ♦ **James Colin Hill**, Center for Computational Astrophysics, Flatiron Institute; Member, School of Natural Sciences

April 5

Astrophysics Informal Seminar ♦ *NICER Early Operations and Initial Results* ♦ **Keith Gendreau**, National Aeronautics and Space Administration (NASA)

April 11

Astrophysics Informal Seminar ♦ *The Curious Case of Lyman-alpha Emitting Galaxies* ♦ **Zheng Zheng**, University of Utah

April 12

Astrophysics Informal Seminar ♦ *Astrophysical Probes of Dark Matter: The Road Ahead* ♦ **Francis-Yan Cyr-Racine**, Harvard University

April 16

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *Does Planck 2015 Polarization Favor High Redshift Reionization?* ♦ **Chen He Heinrich**, California Institute of Technology

April 19

Astrophysics Informal Seminar ♦ *Simulations of Disks, Jets, and Other Black Hole–Powered Transients* ♦ **Alexander Tchekhovskoy**, Northwestern University

April 26

Astrophysics Informal Seminar ♦ *The Origin of Heavy Elements* ♦ **Jonas Lippuner**, Los Alamos National Laboratory

April 30

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *New Approaches to Nonlinear Density Field Evolution and Triaxial Collapse* ♦ **Zachary Slepian**, University of California, Berkeley

May 3

Astrophysics Informal Seminar ♦ *The Kinematics of Inflation, Preheating, and Heating: A Playground for Kolmogorov-Sinai and Shannon Entropies* ♦ **J. Richard Bond**, Canadian Institute for Theoretical Astrophysics; Member, School of Natural Sciences

May 10

Astrophysics Informal Seminar ♦ *The Epoch of Reionization: What Can We Learn About It?* ♦ **Alexander A. Kurov**, Member, School of Natural Sciences

May 14

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *CHIME: The Canadian Hydrogen Intensity Mapping Experiment* ♦ **Kendrick Smith**, Perimeter Institute for Theoretical Physics

May 17

Astrophysics Informal Seminar ♦ *The Physics of AGN-Driven Galactic Winds* ♦ **Claude-André Faucher-Giguère**, Northwestern University

May 24

Astrophysics Informal Seminar ♦ *Dynamics of Eccentric Disks* ♦ **Ryan Miranda**, Member, School of Natural Sciences

June 4

Princeton University/Institute for Advanced Study Early Universe/Cosmology Lunch Discussion ♦ *General Discussion* ♦ **Matias Zaldarriaga**, Professor, School of Natural Sciences; **David Spergel**, Princeton University and Center for Computational Astrophysics, Flatiron Institute; and **Jo Dunkley**, Princeton University

June 7

Astrophysics Informal Seminar ♦ *Exploring the Diversity of Exoplanets through Their Birth Environments in Star Clusters* ♦ **Maxwell Xu Cia**, Leiden Observatory

## HIGH ENERGY THEORY ACTIVITIES

September 4

High Energy Theory Seminar ♦ *Asymptotic Symmetries in Effective Field Theories* ♦ **Prahar Mitra**, Member, School of Natural Sciences

September 18

High Energy Theory Seminar ♦ *The Quantum Null Energy Condition from Causality* ♦ **Thomas Faulkner**, University of Illinois at Urbana-Champaign

September 22

High Energy Theory Seminar ♦ *Correlation Functions in  $N=4$  SYM from Integrability* ♦ **Shota Komatsu**, Member, School of Natural Sciences

September 27

Physics Group Meeting ♦ *Markovian Property of Vacuum State and the a-theorem* ♦ **Horacio Casini**, Centro Atómico Bariloche, Argentina; Visitor, School of Natural Sciences

October 2

High Energy Theory Seminar ♦ *Twofold Symmetries and Simplification of the Gravity Action* ♦ **Grant Remmen**, University of California, Berkeley

October 5

Special High Energy Theory Seminar ♦ *Constraints on Particle Physics and Inflation from Quantum Gravity Conjectures* ♦ **Irene Valenzuela**, Max-Planck-Institut für Physik

October 9

High Energy Theory Seminar ♦ *Causality and the Length Operator* ♦ **Thomas Hartman**, Cornell University

October 10

Informal Physics Discussion ♦ *Lorentz Covariant Theories with Causality Violation* ♦ **Harvey Reall**, University of Cambridge

Special High Energy Theory Seminar ♦ *Indices, Localization, Rational Invariants, and H-Saddles* ♦ **Piljin Yi**, Korea Institute for Advanced Study

October 11

Physics Group Meeting ♦ *Delineating the Swampland via the Weak Gravity Conjecture* ♦ **Thomas Rudelius**, Member, School of Natural Sciences

October 20

High Energy Theory Seminar ♦ *Broken Symmetry Effects on Hydrodynamic Transport* ♦ **Anna Karlsson**, Member, School of Natural Sciences

October 25

Physics Group Meeting ♦ *Boundary State Black Holes: Escapability and Reconstruction of the Interior* ♦ **Ahmed Almheiri**, Member, School of Natural Sciences

October 30

High Energy Theory Seminar ♦ *What Does the Revolution in Artificial Intelligence Mean for Physics?* ♦ **Kyle Cranmer**, New York University

November 8

Physics Group Meeting ♦ *Singularities and the Amplituhedron* ♦ **Marcus Spradlin**, Brown University; Member, School of Natural Sciences

November 13

High Energy Theory Seminar ♦ *Quantum Closed Superstring Field Theory and the Weil-Petersson Symplectic Geometry* ♦ **Roji Pius**, Perimeter Institute for Theoretical Physics

November 27

High Energy Theory Seminar ♦ *Information Loss and Bulk Reconstruction in  $AdS_3/CFT_2$*  ♦ **Andrew Liam Fitzpatrick**, Boston University

December 5–6

Quantum Information and Black Holes Workshop ♦ *Near-Coherent Scrambling* ♦ **Alexei Kitaev**, California Institute of Technology ♦ *Non-perturbative Bulk Reconstruction* ♦ **Daniel Jafferis**, Harvard University ♦ *QM=GR?* ♦ **Leonard Susskind**, Stanford University ♦ *Trying to Tame Two Times* ♦ **Steve Shenker**, Stanford University ♦ *Modular Flow as a Disentangler* ♦ **Xiaoliang Qi**, Stanford University; Junior Visiting Professor, School of Natural Sciences ♦ *Solving SYK* ♦ **Vladimir Rosenhaus**, Kavli Institute for Theoretical Physics, University of California, Santa Barbara ♦ *The SYK Model at Low Energies* ♦ **Guy Gur-Ari**, Member, School of Natural Sciences ♦ *Quantum Error Correction and the Black Hole Interior* ♦ **Ahmed Almheiri**, Member, School of Natural Sciences ♦ *A Comment on the Regge/Chaos Limit and a Comment on BHs with Long Interiors* ♦ **Douglas Stanford**, Long-term Member, School of Natural Sciences ♦ *Discussion on Black Hole Entropy* ♦ **Aron Wall**,



Stanford Institute for Theoretical Physics ♦  
*Discussion on the Status of the Black Hole  
Information Paradox*

#### December 11

High Energy Theory Seminar ♦ *Constraints on  
Interacting Massive High Spins* ♦ **Kurt  
Hinterbichler**, Case Western Reserve  
University

#### January 12

High Energy Theory Seminar ♦ *Genomic  
Prediction of Complex Traits* ♦ **Steve Hsu**,  
Michigan State University

#### February 5

High Energy Theory Seminar ♦ *CFT Data at  
Large Charge from EFT* ♦ **Riccardo Rattazzi**,  
École Polytechnique Fédérale de Lausanne

#### February 7

Physics Group Meeting ♦ *Modular Berry  
Connection* ♦ **Bartłomiej Stanislaw Czech**,  
Stanford University; Member, School of Natural  
Sciences

#### February 23

High Energy Theory Seminar ♦ *Splittability and  
Noether's Theorem in Quantum Field Theory* ♦  
**Daniel Harlow**, Massachusetts Institute of  
Technology

#### February 28

Physics Group Meeting ♦ *A Tactical Retreat from  
the BH Information Problem* ♦ **Douglas  
Stanford**, Long-term Member, School of  
Natural Sciences

#### March 5

High Energy Theory Seminar ♦ *Going with the  
Flow: A Solution to the Sign Problem* ♦ **Gökçe  
Kemal Basar**, University of Illinois at Chicago

#### March 6

Informal High Energy Theory Seminar ♦ *A  
Positive Sum Rule for the  $c$  Anomaly in 4D CFT* ♦  
**Markus Luty**, University of California, Davis

#### March 9

High Energy Theory Seminar ♦ *Beyond  
Symmetry: Topological Defect Lines and RG Flows  
in Two Dimensions* ♦ **Shu-Heng Shao**,  
Member, School of Natural Sciences

#### March 16

High Energy Theory Seminar ♦ *Axions Confront  
High Temperature QCD* ♦ **Michael Dine**,  
University of California, Santa Cruz; Member,  
School of Natural Sciences

#### March 19

High Energy Theory Seminar ♦ *Tensor Networks  
as Geometry* ♦ **Guifre Vidal**, Perimeter Institute  
for Theoretical Physics

#### March 23

High Energy Theory Seminar ♦ *A Few Uses for  
Theoretical Physics in Machine Learning* ♦ **Dan  
Roberts**, Facebook AI Research

#### April 2

High Energy Theory Seminar ♦ *6d Theories on  
Circle and Curves* ♦ **Cumrun Vafa**, Harvard  
University

#### April 6

High Energy Theory Seminar ♦ *Topological Terms  
in Yang-Mills Theory with Time-Reversal  
Symmetry* ♦ **Pavel Putrov**, Member, School of  
Natural Sciences

#### April 11

Physics Group Meeting ♦ *Group Meeting on  
Moving the Holographic Boundary into the Bulk* ♦  
**Juan Maldacena**, Carl P. Feinberg Professor,  
School of Natural Sciences; and **Herman  
Verlinde**, Princeton University

#### April 12

Informal High Energy Theory Seminar ♦  
*Wavefunctions for a One-Dimensional Black Hole* ♦  
**S. Josephine Suh**, California Institute of  
Technology

#### April 16

High Energy Theory Seminar ♦ *FZZ Duality  
and the Black Hole Horizon* ♦ **Nissan Itzhaki**,  
Tel Aviv University

#### April 20

High Energy Theory Seminar ♦ *Simplicity in  
AdS Perturbative Dynamics* ♦ **Ellis Ye Yuan**,  
Member, School of Natural Sciences

#### April 25

Physics Group Meeting ♦ *Discussion on  
Entanglement Entropy in Gauge Theories* ♦  
**Jennifer Lin**, Member, School of Natural  
Sciences

#### April 27

High Energy Theory Seminar ♦ *Good and Bad  
Analogies of Physics in Deep Learning* ♦ **Guy Gur-  
Ari**, Member, School of Natural Sciences

#### April 30

High Energy Theory Seminar ♦ *Probing Binary  
Black Hole Environments in Hierarchical Triple  
Systems* ♦ **Lisa Randall**, Harvard University

#### May 7

High Energy Theory Seminar ♦ *Chiral Algebras  
and Twisted Gauge Theories* ♦ **Davide Gaiotto**,  
Perimeter Institute for Theoretical Physics

#### May 8

Informal High Energy Theory Seminar ♦ *On  
Melonic Matrix Models and SYK-like Black Holes* ♦  
**Frank Ferrari**, Université Libre de Bruxelles

#### May 18

High Energy Theory Seminar ♦ *Conformal  
Fishnet Theory* ♦ **Vladimir Kazakov**, École  
Normale Supérieure, Paris

#### May 31

Informal High Energy Theory Seminar ♦  
*Scattering Amplitudes from Intersection Theory* ♦  
**Sebastian Mizera**, Perimeter Institute for  
Theoretical Physics

#### June 4

High Energy Theory Seminar ♦ *The Future of  
High Energy Physics and China's Role* ♦ **Yifang  
Wang**, Institute of High Energy Physics,  
Chinese Academy of Sciences

#### June 14

High Energy Theory Seminar ♦ *S-Matrix  
Bootstrap (and Theories without Particle  
Production)* ♦ **Pedro Vieira**, Perimeter Institute  
for Theoretical Physics

#### July 16–27

Prospects in Theoretical Physics 2018: From  
Qubits to Spacetime ♦ *Organizers and lecturers:*  
**Ahmed Almheiri**, Member, School of Natural  
Sciences; **Atish Dabholkar**, The Abdus Salam  
International Centre for Theoretical Physics,  
Trieste; **Thomas Faulkner**, University of  
Illinois at Urbana–Champaign; **Daniel Harlow**,  
Massachusetts Institute of Technology; **Matthew Headrick**, Brandeis University; **Juan Maldacena**, Carl P. Feinberg Professor,  
School of Natural Sciences; **Douglas  
Stanford**, Long-term Member, School of  
Natural Sciences; **Leonard Susskind**, Stanford  
University; **Aron Wall**, Stanford Institute for  
Theoretical Physics; and **Edward Witten**,  
Charles Simonyi Professor, School of Natural  
Sciences

## THE SIMONS CENTER FOR SYSTEMS BIOLOGY ACTIVITIES

#### September 13

The Simons Center for Systems Biology  
Informal Talks on Abstract/Conceptual/  
Quantitative Aspects of Biology ♦ *Adaptability in  
Living Systems* ♦ **Tiberiu Tesileanu**

#### October 2

Convergence 2.0 Meeting ♦ *Linking New  
Platforms for the Assessment of Anti-tumor T-Cell  
Immunity with Clinical Outcomes of  
Immunotherapy* ♦ **Drew Pardoll**, The Sidney  
Kimmel Comprehensive Cancer Center, Johns  
Hopkins University School of Medicine ♦  
*Correlating Immunological Health to Cancer  
Susceptibility* ♦ **Mark Davis**, Stanford  
University ♦ *Computational Deconstruction of  
Neantigen-TCR Degeneracy for Cancer  
Immunotherapy* ♦ **Benjamin D. Greenbaum**,  
Icahn School of Medicine at Mount Sinai ♦  
*Connecting Immune Health and Tumor Biology in  
Gynecologic Cancers* ♦ **E. John Wherry**,  
University of Pennsylvania ♦ *Responders and*

*Non-responders to Endometrial Cancers with Mismatch Repair* ♦ **Alessandro Santin**, Yale University ♦ *Single-Cell Functional Multi-omics to Characterize and Monitor CAR-T Therapy* ♦ **Rong Fan**, Yale University ♦ *Integrating Experimental and Computational Pipelines to Develop Biomarkers of Tumor Cell Resistance to NK Cells* ♦ **Constantine Mitsiades**, Dana-Farber Cancer Institute

#### October 10

The Simons Center for Systems Biology Seminar ♦ *Learning to Read the Immune Repertoire* ♦ **Harlan Robins**, Fred Hutchinson Cancer Research Center

#### October 25

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *Bacterial Growth and Division* ♦ **Hanna Salman**, University of Pittsburgh

#### November 8

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *Immune Responses to Cancer* ♦ **Benjamin D. Greenbaum**, Icahn School of Medicine at Mount Sinai

#### November 15

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *Phase Separation in Living Cells* ♦ **Clifford Brangwynne**, Princeton University

#### December 5

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *The Construction of Confidence* ♦ **Mariano Sigman**, Universidad Torcuato Di Tella, Argentina ♦ *Non-equilibrium Thermodynamics of Open Chemical Reaction Networks* ♦ **Riccardo Rao**, Université du Luxembourg

#### December 7

The Simons Center for Systems Biology Seminar ♦ *The World of Words: Experimental Approaches to Infer How We Humans Construct a Space of Words to Organize Meanings, and Then How This Can Be Used to Investigate the Past and the Future of Consciousness* ♦ **Mariano Sigman**, Universidad Torcuato Di Tella, Argentina

#### December 13–14

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *Models of Immune Recognition and Antagonism* ♦ **Paul François**, McGill University

#### December 16–17

Joint Lab Meeting: Frequency of p53 Mutations in the Normal Population and the Possible Role of the Immune System in Influencing that

Frequency ♦ *Overview* ♦ **Arnold J. Levine**, Professor Emeritus, School of Natural Sciences ♦ *Role of the Immune System in Regulating p53 Mutations* ♦ **Benjamin D. Greenbaum**, Icahn School of Medicine at Mount Sinai ♦ *Frequency of Germline p53 Mutations in the Population* ♦ **Chang S. Chan**, Rutgers Cancer Institute of New Jersey ♦ *Phenotype of Inherited p53 Mutations—Experiences at Dana-Farber* ♦ **Junne Kamihara**, Dana-Farber Cancer Institute ♦ *Epidemiology of Li-Fraumeni Families and Pedigrees* ♦ **Pierre Hainaut**, Institute for Advanced Biosciences Inserm/CNRS/UGA

#### January 8

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *Statistical Description of Mixed Phase Space Systems (Chaotic and Regular)* ♦ **Or Alus**, Technion-Israel Institute of Technology

#### January 10

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *Adaptation Unifies Emergent Oscillations in Quorum-Sensing Populations and Revealing Evolutionary Constraints on Proteins through Sequence Analysis* ♦ **Shou-Wen Wang**, Princeton University

#### January 17

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *T-Cell Proliferation and Antigen Decay* ♦ **Andreas Meyer**, Princeton University

#### February 5

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *Dynamics of the Visual Cortex* ♦ **Lai-Sang Young**, Courant Institute of Mathematical Sciences, New York University

#### February 6

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *Fruit Fly Embryonic Development and Information Theory* ♦ **Lauren McGough**, Princeton University

#### February 14

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *Mechanical Properties of Transcription* ♦ **Stuart Sevier**, Rice University

#### February 28

The Simons Center for Systems Biology Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *How Population Adaptability Is Impacted by Heterogeneity Focusing on the Regulation of Cell Cycle Duration* ♦ **Nash Rochman**, Johns Hopkins University

#### April 19

Governor's Conference on Effective Partnering in Cancer Research: The Role of p53 in Li-Fraumeni Syndrome ♦ *Epigenetic Pathways in Cancer and in Cancer Immunotherapy* ♦ **Shelley L. Berger**, University of Pennsylvania ♦ *Tumorigenesis and Penetrance in Li-Fraumeni Syndrome* ♦ **Chang S. Chan**, Rutgers Cancer Institute of New Jersey ♦ *p53-Driven Acute Promyelocytic Leukemia Cure by Retinoic Acid and Arsenic* ♦ **Hugues de Thé**, Collège de France ♦ *Lifetime Control of p53 Function: Walking the Ridge Trail between Degenerative Diseases and Cancer* ♦ **Pierre Hainaut**, Institute for Advanced Biosciences Inserm/CNRS/UGA ♦ *Early Detection and Prevention of Cancer in Li-Fraumeni Syndrome: A Multi-pronged Approach* ♦ **David Malkin**, The Hospital for Sick Children ♦ *The Hypomorphic Brazilian Mutant TP53-R337H and Variable Tumor Susceptibility: Identification of a Potential Genetic Modifier* ♦ **Gerard P. Zambetti**, St. Jude Children's Research Hospital

#### April 23

Joshua Lederberg–John von Neumann Symposium ♦ *Emergent Dynamics from Network Connectivity: A Minimal Model* ♦ **Carina Curto**, The Pennsylvania State University ♦ *The Physics of Cooperative Transport by Ants* ♦ **Ofer Feinerman**, Weizmann Institute of Science ♦ *A Language of Geometry for Human Acquisition of Spatial Sequences* ♦ **Santiago Figueira**, Universidad de Buenos Aires ♦ *Learning Protein Constitutive Motifs from Sequence Data* ♦ **Rémi Monasson**, École Normale Supérieure, Paris ♦ *Computations in Human Sensorimotor Control* ♦ **Daniel Wolpert**, University of Cambridge

#### April 24–25

Language of Thought Hypothesis Workshop ♦ *The Language of Thought: Six Suggestions* ♦ **Joshua Tenenbaum**, Massachusetts Institute of Technology ♦ *Childhood, Conceptual Change, and the Language of Thought* ♦ **Alison Gopnik**, University of California, Berkeley ♦ *What Deep Learning Is and Is Not Teaching Us about The Language of Thought* ♦ **Gary Marcus**, New York University ♦ *Probing the Flexibility of the Language of Thought* ♦ **Santiago Figueira**, Universidad de Buenos Aires ♦ *From Core Cognition to New Systems of Knowledge* ♦ **Elizabeth Spelke**, Harvard University ♦ *What Lies Below the Language of Thought* ♦ **Steven Piantadosi**, University of Rochester ♦ *Generalizing from Variable Linguistic Input* ♦ **Naomi Feldman**, University of Maryland ♦ *Nature versus Nurture in AI* ♦ **Matthew Botvinick**, Google DeepMind, London

#### May 22–23

Rita Allen Foundation Scholars Meeting ♦ *Thirsty for Blood: Genetic Approaches to Understanding Mosquito Behavior* ♦ **Leslie Vosshall**, The Rockefeller University ♦ *Pregnancy-Induced Epigenetic Reprogramming and Immune Modulation in Breast Cancer Prevention* ♦ **Camila dos Santos**, Cold Spring Harbor

Laboratory ♦ *Extracellular Matrix-Mediated Plasticity in Neuropathic Pain* ♦ **Arkady Khoutorsky**, McGill University ♦ *On the Causes of Childhood Cancer* ♦ **Alex Kentsis**, Memorial Sloan Kettering Cancer Center ♦ *A CRISPR Screen Identifies a New Cell Intrinsic Antiviral Mechanism* ♦ **John Schoggins**, University of Texas Southwestern Medical Center ♦ *Cell Signaling Through Intracellular Protein Glycosylation* ♦ **Michael Boyce**, Duke University School of Medicine ♦ *Awakening Old Foes: TDP-43 Connects Transposons to Neurodegeneration* ♦ **Molly Hamell**, Cold Spring Harbor Laboratory ♦ *Algorithms for Predicting Responses to Cancer Immunotherapy and Long-Term Survival* ♦ **Arnold J. Levine**, Professor Emeritus, School of Natural Sciences ♦ *Prefrontal Circuit Mechanisms for Supporting Working Memory* ♦ **Conor Liston**, Feil Family Brain & Mind Research Institute, Weill Cornell Medicine ♦ *The Neural Circuits of Itch and Pain* ♦ **Sarah Ross**, University of Pittsburgh ♦ *BRCA DNA Replication Instability and Mitochondria* ♦ **Katharina Schlacher**, The University of Texas MD Anderson Cancer Center ♦ *Circular RNAs: Unexpected Outputs of Many Protein-Coding Genes* ♦ **Jeremy Wilusz**, Perelman School of Medicine, University of Pennsylvania ♦ *Regulation of Behavior by the Blood-Brain Barrier* ♦ **Richard Daneman**, University of California San Diego School of Medicine ♦ *The Regulation of Hematopoietic Stem Cells* ♦ **Lei Ding**, Columbia University ♦ *Molecular Adaptations to Extreme Temperatures in Ground Squirrels and Other Mammalian Extremophiles* ♦ **Elena Gracheva**, Yale University ♦ *Neural Substrates of Pain Unpleasantness* ♦ **Greg Scherrer**, Stanford University ♦ *Peripheral Mechanisms of Ischemic Myalgia* ♦ **Michael Jankowski**, Cincinnati Children's Hospital Medical Center ♦ *The Neurobiology of Hunger* ♦ **Zachary Knight**, University of California San Francisco School of Medicine ♦ *Anterior Cingulate Cortex in Pain Tolerance* ♦ **Steve Davidson**, University of Cincinnati College of Medicine ♦ *Neural Mechanisms Underlying Vocal Sensorimotor Transformations* ♦ **Michael Long**, New York University Langone Health ♦ *Gene Expression Regulation Through RNA Methylation* ♦ **Kate Meyer**, Duke University School of Medicine

#### May 30

Joint Lab Meeting: Cancer Immunotherapy

#### June 18

The Simons Center for Systems Biology  
Informal Talks on Abstract/Conceptual/Quantitative Aspects of Biology ♦ *Molecular Insights into Bacterial Signaling* ♦ **Felipe Trajtenberg Pareja**, Institut Pasteur de Montevideo

#### June 22

Joint Lab Meeting: Cancer Immunotherapy ♦ *Neoantigen Models for Tumor Evolution Due to Immune Editing, Kras Mutant Lung Cancer Cell Lines* ♦ **Hyejin Choi**, Memorial Sloan

Kettering Cancer Center ♦ *Mouse Models for Immunotherapy Response* ♦ **Mattieu Gigoux**, Memorial Sloan Kettering Cancer Center ♦ *p53 Fitness Models* ♦ **David Hoyos**, Icahn School of Medicine at Mount Sinai ♦ *Identifying T-Cell Expansion in Pancreatic Cancer Patients* ♦ **Alexander Solovyov**, Icahn School of Medicine at Mount Sinai ♦ *Unspecific Binding of T-Cell Receptors in Pancreatic Cancer Patients* ♦ **Vinod Balachandran**, Memorial Sloan Kettering Cancer Center

#### June 27–28

Convergence Scholars Meeting ♦ *Introduction to Immunotherapy* ♦ **Arnold J. Levine**, Professor Emeritus, School of Natural Sciences ♦ *Analysis of T-Cell Population of Pancreatic Cancer Survivors* ♦ **Alexander Solovyov**, Icahn School of Medicine at Mount Sinai ♦ *Reading the Immune System: Matching Antigens to T-Cell Receptor Sequences* ♦ **Miriam Gutschow**, Fred Hutchinson Cancer Research Center ♦ *Statistical Analysis of the T-Cell Spatial Distribution in the Tumor Microenvironment of Breast Cancer* ♦ **Julie Wortman**, University of California, Irvine ♦ *Transcriptional Landscape of Stroma Progression in the Breast Tumor Microenvironment* ♦ **Raditya Utama**, Cold Spring Harbor Laboratory ♦ *Spatiotemporal Genomic Analysis of AML and NSCLC* ♦ **Merzu Belete**, Rutgers Cancer Institute of New Jersey ♦ *The Genetic Architecture of Acute Myeloid Leukemia During Treatment* ♦ **Friederike Pastore**, Memorial Sloan Kettering Cancer Center ♦ *Clonal Dynamics in Cancer* ♦ **Junfei Zhao**, Columbia University ♦ *Inhibition of Cancer Repeat RNA Retroviral Mimicry Triggers Necroptotic Immunosurveillance* ♦ **Mihir Rajurkar**, Massachusetts General Hospital Cancer Center ♦ *Sequential Profiling of Acquired Resistance in EGFR Mutant Non-Small-Cell Lung Cancers* ♦ **Heidie Frisco-Cabanos**, Massachusetts General Hospital ♦ *Interferon Gamma Triggers Paradoxical Signal to Modulate Drug Response in EGFR Mutated NSCLC Cells* ♦ **Xiaoxiao Sun**, University of California, San Francisco ♦ *A Network Modeling Approach to Elucidate Drug Resistance Mechanisms and Predict Combinatorial Drug Treatments in Breast Cancer* ♦ **Jorge Zano**, The Pennsylvania State University ♦ *Mechanisms of Target Therapy Resistance in ER-Positive Breast Cancer* ♦ **Guotai Xu**, Memorial Sloan Kettering Cancer Center ♦ *FGF/FGFR As a Resistance Mechanism for Endocrine Therapy in ER+ Breast Cancer* ♦ **Pingping Mao**, Dana-Farber Cancer Institute

### School of Social Science

#### September 22–23

Workshop ♦ *Words and Worlds: A Lexicon for Dark Times* ♦ Organized by **Veena Das**, Johns Hopkins University; Trustee, Institute for Advanced Study; and **Didier Fassin**, James D. Wolfensohn Professor, School of Social Science

#### September 25

Social Science Seminar ♦ *Colonial Sociologists in the French and British Empires, 1930s–1960s: Between Scientific Dependency and Intellectual Autonomy* ♦ **George Steinmetz**, University of Michigan, Ann Arbor; Visiting Professor, School of Social Science

#### October 2

Social Science Seminar ♦ *Disunity in the Social Sciences: Dreadful or Fruitful?* ♦ **Jean-Louis Fabiani**, Central European University; Member, School of Social Science

#### October 4

The Social Sciences in a Changing World Seminar ♦ Discussion of readings around the theme “Positivism and Its Critics” ♦ Curated by **George Steinmetz**, University of Michigan, Ann Arbor; Visiting Professor, School of Social Science

#### October 9

Social Science Seminar ♦ *Fiercely Nationalistic or European Cosmopolitan? Max Weber on World Politics* ♦ **Álvaro Morcillo-Laiz**, Centro de Investigación y Docencia Económicas, Mexico City; Member, School of Social Science

#### October 16

Social Science Seminar ♦ *Khomeini's Theory of Islamic State and the Making of the Iranian Revolution* ♦ **Mehdi Shadmehr**, University of Calgary; Member, School of Social Science

#### October 18

The Social Sciences in a Changing World Seminar ♦ Discussion of readings around the theme “Intellectual History and the Sociology of the Intellectuals” ♦ Curated by **Jean-Louis Fabiani**, Central European University; Member, School of Social Science; **Nicolas Guilhot**, CNRS, Center for International Research in the Humanities and Social Science; Member, School of Social Science; and **Tomaž Mastnak**, Research Centre of the Slovenian Academy of Sciences and Arts; Visitor, School of Social Science

From the Banned Countries Film Series ♦ *Last Men in Aleppo*, directed by Firas Fayyad ♦ Post-screening discussion led by **Kevin Martin**, Indiana University; Member, School of Historical Studies

#### October 23

Social Science Seminar ♦ *Provincializing Global History and Decolonizing Theory: Guinea Sam Nightingale and Magic Marx in Civil War Missouri* ♦ **Andrew Zimmerman**, The George Washington University; Member, School of Social Science

#### October 30

Social Science Seminar ♦ *When the Subaltern Speaks* ♦ **Peter D. Thomas**, Brunel University; Member, School of Social Science



### November 1

Colloquium: A Research Seminar + Discussion of paper presented by **Johan Heilbron**, Centre Européen de Sociologie et de Science Politique, Université Paris 1

### November 6

Social Science Seminar + *The Kruger National Park and the Conservation of Science* + **Jacob S. T. Dlamini**, Princeton University; Member, School of Social Science

Seminar + *History of the School of Social Science* + Chaired by **Didier Fassin**, James D. Wolfensohn Professor, School of Social Science

### November 8

The Social Sciences in a Changing World Seminar + Discussion of readings around the theme “Decolonizing the Social Sciences” + Curated by **Miriam Kingsberg Kadia**, University of Colorado, Boulder; Member, School of Social Science; **Peter D. Thomas**, Brunel University, Member, School of Social Science; and **Andrew Zimmerman**, The George Washington University; Member, School of Social Science

From the Banned Countries Film Series + *Taxi*, directed by Jafar Pahani + Post-screening discussion led by **Firoozeh Kashani-Sabet**, University of Pennsylvania

### November 13

Social Science Seminar + *Making Sense of Globalizing Social Science* + **Johan Heilbron**, Centre Européen de Sociologie et de Science Politique, Université Paris 1; Member, School of Social Science

### November 15

Colloquium: A Research Seminar + Discussion of paper presented by **Álvaro Morcillo-Laiz**, Centro de Investigación y Docencia Económicas, Mexico City; Member, School of Social Science

### November 20

Social Science Seminar + *Virtually Radical: Speech, Surveillance, and Silence in (Indian) Kashmir* + **Chitrlekha Dhamija**, Jawaharlal Nehru University; Member, School of Social Science

### November 27

Social Science Seminar + *The Horrific History of Comparisons Between Animals and the Cognitively Disabled (and How to Move Beyond It)* + **Alice Crary**, The New School for Social Research; Member, School of Social Science

### November 30

Guest Seminar + *The Black Woman's Womb. Capitalism, Race, Feminism* + **Françoise Vergès**, Collège d'études mondiales + Organized by **Sara Farris**, Goldsmiths, University of London; Visitor, School of Social Science

### December 4

Social Science Seminar + *From Cohabitation to Disposability: Dogs of Istanbul* + **Ayten Alkan**, Member, School of Social Science

### December 6

Joint School of Social Science/School of Natural Sciences Seminar + *Presentation on Neuroscience and the Social Sciences* + **Mariano Sigman**, Integrative Neuroscience Laboratory, University of Buenos Aires

### December 11

Social Science Seminar + *The Japanese Student Movement of 1968, Epistemological Revolution, and the End of the Field Generation* + **Miriam Kingsberg Kadia**, University of Colorado, Boulder; Member, School of Social Science

### December 12

Colloquium: A Research Seminar + Discussion of paper presented by **George Steinmetz**, University of Michigan, Ann Arbor; Visiting Professor, School of Social Science

### December 13

The Social Sciences in a Changing World Seminar + Discussion of readings around the theme “Socialist and Post-Socialist Social Sciences” + Curated by **Agata Zysiak**, University of Łódź, Poland; Member, School of Social Science, **Johanna K. Bockman**, George Mason University; Visitor, School of Social Science, and **Vladimir Kulić**, Florida Atlantic University; Member, School of Historical Studies

From the Banned Countries Film Series + *Karama Has No Walls* and *The Mulberry House*, directed by Sara Ishaq + Post-screening discussion led by **Steven Caton**, Harvard University

### January 22

Social Science Seminar + *Make Yourselves Gods: Secularism, Sex, and the Radiant Body of Early Mormonism* + **Peter Coviello**, University of Illinois at Chicago; Member, School of Social Science

### January 29

Social Science Seminar + *The Religion Machine; or, a Particular History of the Brain* + **John Lardas Modern**, Franklin & Marshall College; Member, School of Social Science

### February 5

Social Science Seminar + *A Field of European Social Science?* + **Kristoffer Kropp**, Roskilde University; Member, School of Social Science

### February 7

The Social Sciences in a Changing World Seminar + Discussion of readings around the theme “Funding and the Social Sciences” + Curated by **Bregje van Eekelen**, Erasmus University Rotterdam; Member, School of Social Science; **Kristoffer Kropp**, Roskilde

University, Member, School of Social Science; and **Álvaro Morcillo-Laiz**, Centro de Investigación y Docencia Económicas, Mexico City; Member, School of Social Science

### February 12

Social Science Seminar + *University for Working Classes: Rise and Fall of Socialist Modernization in Postwar Poland* + **Agata Zysiak**, University of Łódź, Poland; Member, School of Social Science

### February 14

Colloquium: A Research Seminar + Discussion of paper presented by **Miriam Kingsberg Kadia**, University of Colorado, Boulder; Member, School of Social Science

### February 21

The Social Sciences in a Changing World Seminar + Discussion of contributions for a collective volume

From the Banned Countries Film Series + *Stronger Than Bullets*, directed by Matthew Millan + Post-screening discussion led by the director, **Matthew Millan**

### February 26

Social Science Seminar + *Together, Apart: Suspected Lives in West Bank Refugee Camps and Israeli Cities* + **Silvia Pasquetti**, Newcastle University; Member, School of Social Science

### February 28

Colloquium: A Research Seminar + Discussion of paper presented by **Carel E. Smith**, Universiteit Leiden; Visitor, School of Social Science

### March 5

Social Science Seminar + *Switching Scientific Paradigms for a Political Revolution: Bourdieu during the Algerian Liberation War* + **Amín Pérez**, École des Hautes Études en Sciences Sociales, Paris; Member, School of Social Science

### March 7

The Social Sciences in a Changing World Seminar + *The Prehistory and History of Modernization Theory between the 1920s and the 1960s* + **Wolfgang Knöbl**, Hamburger Institut für Sozialforschung

### March 12

Social Science Seminar + *The European Common Market: “A New Frontier” for US Business Elites or an “Economic Frankenstein”?* + **Janick Marina Schaufelbuehl**, Université de Lausanne; Member, School of Social Science

### March 14

Colloquium: A Research Seminar + Discussion of paper presented by **Kristoffer Kropp**, Roskilde University; Member, School of Social Science

### March 19

Social Science Seminar ♦ *The Political Economy of Natural Resources and Petro-Authoritarianism* ♦ **Gubad Ibadoghlu**, The Economic Research Center of Azerbaijan; Visitor, School of Social Science

### March 26

Social Science Seminar ♦ *Culture as Process: Notes toward a Theory* ♦ **Paul DiMaggio**, New York University; Member, School of Social Science

### March 28

Colloquium: A Research Seminar ♦ Discussion of paper presented by **Chitralekha Dhamija**, Jawaharlal Nehru University; Member, School of Social Science

### April 2

Social Science Seminar ♦ *Chimpanzee Culture Wars* ♦ **Nicolas Langlitz**, The New School for Social Research; Member, School of Social Science

### April 4

The Social Sciences in a Changing World Seminar ♦ Discussion of readings around the theme “Economics and the Other Social Sciences” ♦ Curated by **Paul DiMaggio**, New York University; Member, School of Social Science; **Johan Heilbron**, Centre Européen de Sociologie et de Science Politique, Université Paris 1; Member, School of Social Science; and **Johanna K. Bockman**, George Mason University; Visitor, School of Social Science

### April 5

From the Banned Countries Film Series ♦ *Stolen Seas*, directed by Thymaya Payne ♦ Post-screening discussion led by **Lee Cassanelli**, University of Pennsylvania

### April 9

Social Science Seminar ♦ *Contemplating Spectacular Black Death Across Generations: Lynching, Lethal Police Violence, and the Black Female Body* ♦ **Shatema Threadcraft**, Dartmouth College; Member, School of Social Science

### April 12

Bourdieu Course ♦ Curated by **Álvaro Morcillo-Laiz**, Centro de Investigación y Docencia Económicas, Mexico City; Member, School of Social Science

### April 16

Social Science Seminar ♦ *Rights of Place: A Spanish American view of Property and Territory* ♦ **Paulina Ochoa Espejo**, Haverford College; Member, School of Social Science

### April 18

Guest Seminar ♦ *The Humanities at the Turn of the Millennium: A Historical Comparative Sociology of Current Research Practices in the Humanities* ♦ **Lasse Gøhler Johansson**, Aalborg Universitet, Copenhagen

The Social Sciences in a Changing World Seminar ♦ Discussion of readings around the theme “Philosophy” ♦ Curated by **Alice Crary**, The New School for Social Research; Member, School of Social Science; **Chitralekha Dhamija**, Jawaharlal Nehru University; Member, School of Social Science; **Jean-Louis Fabiani**, Central European University, Member, School of Social Science; and **Carel E. Smith**, Universiteit Leiden; Visitor, School of Social Science

### April 23

Social Science Seminar ♦ *Disciplining Creativity: A Cultural History of Unstructured Thought* ♦ **Bregje van Eekelen**, Erasmus University Rotterdam; Member, School of Social Science

### April 30

Social Science Seminar ♦ *The Economy of the Mysteries: Administering Sacramental Wealth in the Age of Lights* ♦ **Charly Coleman**, Columbia University; Member, School of Social Science

### May 2

Informal Colloquium ♦ *Bourdieu and the Sociology of (Social) Sciences* ♦ Curated by **George Steinmetz**, University of Michigan, Ann Arbor; Visiting Professor, School of Social Science; **Johan Heilbron**, Centre Européen de Sociologie et de Science Politique, Université Paris 1; Member, School of Social Science; and **Kristoffer Kropp**, Roskilde University; Member, School of Social Science

### May 3

Guest Seminar ♦ *Meaning and Metaphor: How to Receive Thoughts from an Elsewhere* ♦ **Veena Das**, Johns Hopkins University; Trustee, Institute for Advanced Study

### May 7

Social Science Seminar ♦ *The Politics of Decision: The Modern Social Sciences from Decisionism to Rational Choice* ♦ **Nicolas Guilhot**, CNRS, Center for International Research in the Humanities and Social Science; Member, School of Social Science

### May 9

Workshop ♦ *Network Correspondence Analysis* ♦ **Ramina Sotoudeh**, Princeton University

From the Banned Countries Film Series ♦ *We Come as Friends*, directed by Hubert Sauper ♦ Post-screening discussion led by **Alden H. Young**, Drexel University

### May 14

Social Science Seminar ♦ *Equality in French Politics: An Unfinished Business* ♦ **Anne-Claire Defossez**, Visitor, School of Social Science

### May 16

The Social Sciences in a Changing World Seminar ♦ Discussion of contributions for a collective volume

### June 17–30

Summer Program in Social Science ♦ Organized by **Didier Fassin**, James D. Wolfensohn Professor, School of Social Science

## Director’s Office Events

### September 15

Friends Lunch with a Member ♦ *Black Holes and the Butterfly Effect* ♦ **Douglas Stanford**, Long-term Member, School of Natural Sciences

### September 25

Member Welcome Reception

### October 6

Friends Breakfast with a Member ♦ *The Collective Computation of Life* ♦ **Olaf Witkowski**, Earth-Life Science Institute, Tokyo Institute of Technology; Visitor, Program in Interdisciplinary Studies

### October 7

Member Family Barbeque

### October 8

Gathering in Remembrance of Vladimir Voevodsky

### October 11

Friends Talk ♦ *The Pattern Makers: Season 2* ♦ **David Lang**, Artist-in-Residence

### October 13

Friends Talk ♦ *Salvaging the Rational Heritage of Islam: The Zaydi Manuscript Tradition Project* ♦ **Sabine Schmidtke**, Professor, School of Historical Studies

### October 18

Friends Lunch with a Member ♦ *The Dark Side of the Earth in the Sixteenth Century* ♦ **Alexander Nagel**, New York University; Member, School of Historical Studies

### October 20

Edward T. Cone Concert Series and Talk ♦ **Stephen Drury**

### October 21

Edward T. Cone Concert Series ♦ **Stephen Drury**

### October 25

Princeton Symphony Orchestra Concert ♦ **LARK Quartet**

### October 27

Theoretical Machine Learning Lecture Series ♦ *Machines: How Do They Learn and Where Are They Headed?* ♦ **Sanjeev Arora**, Princeton University; Visiting Professor, School of Mathematics; **Richard Zemel**, University of Toronto; Visitor, School of Mathematics; and **Robbert Dijkgraaf**, Director and Leon Levy Professor

### November 3

AMIAS Public Lecture ♦ *A Refuge for Scholars: Contemporary Challenges in Historical Perspective* ♦ **Joan Scott**, Professor Emerita, School of Social Science; **Thomas Dodman**, Boston College; **Ian Jauslin**, Member, School of Mathematics; **Ayşe Parla**, Sabanci University; Visitor, School of Social Science; and **Robbert Dijkgraaf**, Director and Leon Levy Professor

### November 10

Friends Lunch with a Member ♦ *The (Ancient) Hippocratic Oath in Context: Death, Physicians, and Suicide* ♦ **Hartwin Brandt**, Otto-Friedrich-Universität Bamberg; Member, School of Historical Studies

Edward T. Cone Concert Series and Talk ♦ **The Crossing**

### November 11

Edward T. Cone Concert Series ♦ **The Crossing**

### November 15

Theoretical Machine Learning Lecture Series ♦ *Deep Learning and Cognition* ♦ **Christopher Manning**, Stanford University

### November 17

Friends Talk ♦ *A Square Meal* ♦ **Jane Ziegelman**, author; **Andrew Coe**, author

### December 1

Friends Talk ♦ *Art, Music, and Politics in the Book of Revelation* ♦ **Elaine Pagels**, Princeton University

### December 3

Princeton Symphony Orchestra Concert ♦ **The Exponential Ensemble**

### December 7

S. T. Lee Public Lecture ♦ *The Visual Culture of Iranian Tiveler Shiism in the Qajar Period* ♦ **Ulrich Marzolph**, Georg-August-Universität Göttingen

### December 12

Theoretical Machine Learning Lecture Series ♦ *How Could Machines Learn as Efficiently as Animals and Humans?* ♦ **Yann LeCun**, Facebook AI Research Labs

### December 21

Institute Community Holiday Party

### January 12

Edward T. Cone Concert Series and Talk ♦ **Vicky Chow**

### January 13

Edward T. Cone Concert Series ♦ **Vicky Chow**

### January 24

Friends Dessert with a Member ♦ *Dust, Distortions, and Shadows in the Universe's Oldest Light* ♦ **James Colin Hill**, Columbia University; Member, School of Natural Sciences

### January 26

Friends Talk ♦ *Impeachment: The Constitutional Remedy of Last Resort* ♦ **Alan Baron**, Former Special Impeachment Counsel for the U.S. House of Representatives

### February 9

Friends Talk ♦ *The Virtues of Violence: Amphitheaters, Gladiators, and the Roman System of Values* ♦ **Kathleen Coleman**, Harvard University; Member, School of Historical Studies

### February 16

Artist Salon ♦ *Radical Cello* ♦ **Maya Beiser**, cellist

### February 23

Friends Lunch with a Member ♦ *What is Wrong with Border Walls?* ♦ **Paulina Ochoa Espejo**, Haverford College; Member, School of Social Science

### February 24

Midwinter Party for Faculty, Members, and Staff

### March 4

Princeton Symphony Orchestra Concert ♦ **Aureole Trio**

### March 9

Edward T. Cone Concert Series and Talk ♦ **Ensemble Signal**

### March 10

Edward T. Cone Concert Series ♦ **Ensemble Signal**

### March 14

Groundbreaking Ceremony for Rubenstein Commons

### March 16

Friends Talk ♦ *How and Why We Write the History of the Social Sciences* ♦ **George Steinmetz**, University of Michigan, Ann Arbor; Visiting Professor, School of Social Science

### March 20

Reception for Robert Langlands in Honor of His Abel Prize

### April 6

Friends Lunch with a Member ♦ *Liquid Crystals and the Heilmann–Lieb Conjecture* ♦ **Ian Jauslin**, Member, School of Mathematics

### April 13

Public Lecture ♦ *Celebrating Freeman Dyson's Maker of Patterns* ♦ **Freeman Dyson**, Professor Emeritus, School of Natural Sciences; and **Robbert Dijkgraaf**, Director and Leon Levy Professor

### April 15

Princeton Symphony Orchestra Concert ♦ **Patterson/Sutton Duo**

### April 20

Friends Talk ♦ *Before Menus, Cookbooks, and Writing: Reconstructing Cuisines from the Archaeological Record* ♦ **Katherine Moore**, University of Pennsylvania

### April 26

Ideas 2017–18 ♦ *Topology and Physics* ♦ **Clay Cordova**, Long-term Member, School of Natural Sciences; **Edward Witten**, Charles Simonyi Professor, School of Natural Sciences ♦ *Spectacular Black Death* ♦ **Shatema Threadcraft**, Dartmouth College; Member, School of Social Science; **Didier Fassin**, James D. Wolfensohn Professor, School of Social Science ♦ *Liquid Crystals: Order upon Disorder* ♦ **Ian Jauslin**, Member, School of Mathematics; **Thomas Spencer**, Professor Emeritus, School of Mathematics ♦ *A Child Prodigy in Ancient Rome* ♦ **Kathleen Coleman**, Harvard University; Member, School of Historical Studies; **Angelos Chaniotis**, Professor, School of Historical Studies ♦ *Panel Discussion: Challenges and Opportunities* ♦ **Robbert Dijkgraaf**, Director and Leon Levy Professor; **Nicola Di Cosmo**, Luce Foundation Professor in East Asian Studies, School of Historical Studies; **Johan Heilbron**, Centre Européen de Sociologie et de Science Politique, Université Paris 1; Member, School of Social Science; **June Huh**, Visiting Professor, School of Mathematics; **Scott Tremaine**, Richard Black Professor, School of Natural Sciences

### April 27

Reception for Didier Fassin in Honor of His NOMIS Distinguished Scientist Award

### May 4

Public Lecture ♦ *The Cool Alter-Ego of a Black Hole* ♦ **Juan Maldacena**, Carl P. Feinberg Professor, School of Natural Sciences; **Douglas Stanford**, Long-term Member, School of Natural Sciences; and **Robbert Dijkgraaf**, Director and Leon Levy Professor

### May 16

Friends Talk ♦ *Excavating at the Birthplace of Zeus* ♦ **David Gilman Romano**, The University of Arizona; Member, School of Historical Studies

### June 6

Friends Lunch with a Member ♦ *The Revival of Psychedelic Research* ♦ **Nicolas Langlitz**, The New School for Social Research; Member, School of Social Science

### June 7

Friends Annual Meeting and Picnic

### June 8

Staff Picnic