

Institute of Advanced Studies





THE INSTITUTE OF ADVANCED STUDIES

Intercontinental Rigidity and Dynamics

Academia (ICA): Laws: Rig Singapore March 19-27 2019

Mentors		
	Penny Andrews New York Law School	Penelope Andrews joined NYLS in January 2019 as Visiting Distinguished Professor of Law and teaches comparative and international law courses. She also serves as Co-Director of NYLS's Racial Justice Project, focusing on international and South African issues. Professor Andrews was the 2018–19 Sabbatical Scholar at the Center for the Study of Law and Culture at Columbia Law School. She previously completed two terms as Dean: From 2016 to 2018 as the first Black dean at the University of Cape Town Faculty of Law, and from 2012 to 2015 as the first female dean of Albany Law School in New York. She was previously the Associate Dean for Academic Affairs at the City University of New York (CUNY) School of Law and Director of International Programs at Valparaiso Law School. Professor Andrews is active in international collaborative research and mentoring networks and is particularly committed to ensuring the relevance of law and society scholarship to academic communities in the global south and global north. She is an editor of the International Journal of Law in Context, the Human Rights and the Global Economy E-Journal, and the African Law E-Journal.
	Sir Partha Dasgupta U. Cambridge	Professor Sir Partha Dasgupta was named a Knight Bachelor in the Queen's 2002 Birthday Honours List for services to economics. He has the rare distinction of being a Fellow of both the British Academy and the Royal Society and a Foreign Associate of the US National Academy of Sciences. Sir Partha divides his time between New College of the Humanities and Cambridge, where he is the Frank Ramsey Professor Emeritus of Economics.
	Patrick Geary Princeton IAS	Patrick is Andrew W. Mellon Professor at Princeton, Patrick Geary's work extends over a vast range of topics in medieval history, both chronologically and conceptually—from religiosity and social memory to language, ethnicity, social structure, and political organization.



David Gross Nobel Laureate Kavli Institute

David Gross is the Chancellor's Chair Professor of Theoretical Physics and former Director of the Kavli Institute for Theoretical Physics at UCSB. He received his Ph.D. in 1966 at UC Berkeley and was previously Thomas Jones Professor of Mathematical Physics at Princeton University. He has been a central figure in particle physics and string theory. His discovery, with his student Frank Wilczek, of asymptotic freedom—the primary feature of non-Abelian gauge theories—led Gross and Wilczek to the formulation of Quantum Chromodynamics, the theory of the strong nuclear force. Asymptotic freedom is a phenomenon where the nuclear force weakens at short distances, which explains why experiments at very high energy can be understood as if nuclear particles are made of non-interacting quarks. The flip side of asymptotic freedom is that the force between quarks grows stronger as one tries to separate them. This is the reason why the nucleus of an atom can never be broken into its quark constituents. QCD completed the Standard Model, which details the three basic forces of particle physics--the electromagnetic force, the weak force, and the strong force. Gross was awarded the 2004 Nobel Prize in Physics, with Politzer and Wilczek, for this discovery.



Jean-Marie Lehn Nobel Laureate U Strasbourg

Jean-Marie Lehn is Professor at the University of Strasbourg Institute for Advanced Study (USIAS), Emeritus Professor at the University of Strasbourg, and Honorary Professor at the Collège de France in Paris. In 1968, he achieved the synthesis of cage-like molecules (cryptands) containing a cavity (crypt) into which another entity, molecule or ion of specific nature, can be lodged, forming a cryptate. This work expanded into the investigation of the chemical basis of "molecular recognition" (the way in which a receptor molecule recognises and selectively binds a substrate), which plays a fundamental role in biological processes. Over the years these studies led to the definition of a new field of chemistry, which he called "supramolecular chemistry". It deals with the complex entities formed by the association of two or more chemical species held together by intermolecular forces. In 1987, Jean Marie Lehn was awarded the Nobel Prize in



Atul Parikh UC Davis

Chemistry, together with Donald Cram and Charles J. Pedersen. Atul N. Parikh is a Professor of Biomedical Engineering and of Chemical Engineering & Materials Science at the University of California, Davis. In 2011, he assumed Visiting Professorship in the School of Materials Science and Engineering at Nanyang Technological University. His research interests include fundamental and applied research in areas spanning soft biomimetic matter and synthetic biology.



Ernst Rank
TU Munich

Professor Rank conducts research on numerical mechanics and building informatics. He is Director of the Institute for Advanced Study (IAS) of TUM Munich having been First Vice President of TUM from 2002-8, founding Director of the International Graduate School of Science and Engineering (IGSSE) (2006), Chairman of the University Council of TU Dortmund (2007) and Director of the TUM Graduate School from 2008-13.



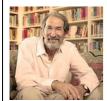
Bo Rothstein *U Gothenburg*

Bo Rothstein holds the August Röhss Chair in Political Science at University of Gothenburg in Sweden, where he is head of the Quality of Government (QoG) Institute. He completed his PhD at Lund University in 1986 and became assistant and associate professor at Uppsala University, where he served until 1995. He is the Scientific Coordinator for ANTICORRP – Anti-Corruption Policies Revisited – a five year research project started in 2012 funded by the European Union and consisting of 21 research groups in 16 EU countries. The project is, to date, the largest social science research project funded by the EU. He has been a visiting scholar at the Russell Sage Foundation, Collegium Budapest Institute for Advanced Study, Harvard University, University of Washington-Seattle, Cornell University, Stellenbosch Institute for Advanced Study, the Australian National University and Stanford University. He has served as adjunct professor at University of Bergen and University of Aalborg. His most recent books are The Quality of Government: Corruption, Inequality and Social Trust in International Perspective (University of Chicago Press 2011, also published in Chinese in 2012 by Xinhua Publishers) and the edited volume Good Government. The Relevance of Political Science (Edward Elgar 2012, together with Sören Holmberg).



Michel Spiro CNRS and CERN

Professor Spiro is Vice-President of the French Physical Society and President Designate of the International Union for Pure and Applied Physics, and was President of CERN council 2010-2013. Research in particle physics led him to participate in the discovery of intermediary W and Z bosons (UA1 experiment) and he was also involved in the study of particles from the cosmos, participating in the Gallex experiment detecting solar neutrinos and searching for dark matter (Eros) in the brown dwarf experiment.



Geoffrey WestSanta Fe
Institute

Professor West is a theoretical physicist whose primary interests have been in fundamental questions in physics, especially those concerning the elementary particles, their interactions and cosmological implications. West served as SFI President from July 2005 through July 2009. Prior to joining the Santa Fe Institute as a Distinguished Professor in 2003, he was the leader, and founder, of the high energy physics group at Los Alamos National Laboratory, where he is one of only approximately ten Senior Fellows.

His long-term fascination in general scaling phenomena

His long-term fascination in general scaling phenomena evolved into a highly productive collaboration on the origin of universal scaling laws that pervade biology from the molecular genomic scale up through mitochondria and cells to whole organisms and ecosystems. The work, provides a framework for quantitative understanding of problems ranging from fundamental issues in biology (such as cell size, growth, metabolic rate, DNA nucleotide substitution rates, and the structure and dynamics of ecosystems) to questions at the forefront of medical research (such as aging, sleep, and cancer). Among his current interests is the extension of these ideas to understand quantitatively the structure and dynamics of social organizations, such as cities and corporations, including the relationships between economies of scale, growth, innovation and wealth creation and their implications for long-term survivability and sustainability.



Ada Yonath Nobel Laureate Weizmann Institute

Professor Yonath is the director of the Helen and Milton A. Kimmelman Center for Biomolecular Structure and Assembly of the Weizmann Institute of Science. She is 2009 Nobel Laureate in Chemistry for her studies on the structure and function of the ribosome.

Organisers



Lars Brink

Chalmers
University of
Technology,
Gothenburg,
Sweden

Lars has worked at CERN, Caltech, the Institute for Advanced Study and other leading institutions while based at Chalmers University of Technology, Sweden. He chaired many international committees and led the European Network for the Superstring Theory for twelve years. Lars is a member of the Royal Swedish Academy of Sciences and the The Royal Society of Arts and Sciences in Gothenburg, was elected a member of the Nobel Committee for physics in 2001 and left it in 2013 as the chairman. Lars' research is in the search for the ultimate theory of the universe: a unifying theory for all the fundamental interactions, gravity, the strong and the weak interactions and the electromagnetic one. He is one of the founders of the so-called Superstring Theory in which the fundamental constituents of nature are one-dimensional objects, strings.



Kwek Leong Chuan National University of Singapore

Kwek is a principal investigator at the Center for Quantum Technologies, NUS and the former Deputy Director of the Institute of Advanced Studies at NTU. He is the Immediate Past President of the Institute of Physics, Singapore and a Council Member of the Association of Asia Pacific Physical Societies. He is also an elected Fellow of the American Association for the Advancement of Science (AAAS) and the Institute of Physics, UK (IOP). His research interests include quantum information science and biomedical physics.



Birmingham

Michael J Hannon

Director, Institute of Advanced Studies, University Mike Hannon holds the Chair of Chemical Biology at the University of Birmingham. He is the Director of the EPSRC Research and Training Centre in Physical Sciences for Health, and the Director of Birmingham's Institute of Advanced Studies. Mike is President of The Society of Biological Inorganic Chemistry (SBIC), the international learned society. Mike's research lies at the interface between chemistry and the life sciences and is focused on metal complexes in biology and medicine as both imaging agents and therapeutics. He has expertise in synthetic chemistry (organic, inorganic, supramolecular, nanoscale) and in applying biophysical methods to recognition of different DNA structures.



Phua Kok Khoo Founding Director Emeritus, Institute of Advanced Studies (IAS), NTU KK Phua is the Founding Director of the Institute of Advanced Studies at Nanyang Technological University (NTU), Adjunct Professor of Department of Physics at National University of Singapore (NUS) and Chairman and Editor-in-Chief of World Scientific Publishing Co Pte Ltd. He is the Founding President of the South East Asia Theoretical Physics Association (SEATPA) and one of the founding council members of the Association of Asia- Pacific Physical Society (AAPPS). He was elected as a Fellow of the American Physical Society (APS) for his contributions to research and education in physics in 2009 and was also awarded the IPS President's Award by the institute of Physics Singapore (IPS) Council, for his outstanding contributions to physics research and education in Singapore in 2006. His research interests include theoretical high energy physics, particle physics, and phenomenology in high energy collisions.



Eliezer Rabinovici

Hebrew
University of
Jerusalem,
Vice
President
CERN
Council

Eliezer Rabinovici is Professor of Physics, holding the Leon H. and Ada G. Miller Chair of Science at the Racah Institute of Physics, Hebrew University of Jerusalem, the Vice President of CERN Council, and co-founder of the SESAME project. He was awarded the Miller Visiting Professorship at UC Berkeley (2003) and a Simons Distinguished Visiting Scholar at KITP UCSB (2014). He was the chair of the Racah Institute of Physics and the director of the Israeli Institute for Advanced Studies (2005-2012). He is the current chair of the Israeli Committee for High Energy Physics, and serves on the Editorial Board of JHEP. His area of research is theoretical high-energy physics, in particular quantum field theory and string theory.

Visiting IAS Directors



Nargiza
Amirova
Nagoya
University &
World Scientific
publishing

Nargiza is an Associate Professor at the Institute for Advanced Research, Nagoya University, Japan. Her research interests include Family Law, Mediation in Family Dispute Resolution, and Alternative Dispute Resolution.

Ary Plonski University of São Paulo	Ary Plonski is Professor at University of São Paulo and Deputy Director of their IAS. He is also coordinator of the UBIAS network of University-based IASs. His background is in Production Engineering and his main area of interest is Management of Innovation. He was in charge of USP's office of tech transfer and was one of the creators of CIETEC, the largest on-campus incubator in Latin America.
Hiroko Takeda Nagoya University	Professor Takeda is a Professor in the Center for Asian Legal Exchange, and a Deputy Director of the Nagoya IAS, the Institute for Advanced Research. Her interests are in Governance/biopolitics, gender/family/reproduction and governance, critical gender analysis of political economy, politics of risk discourse, political discourse analysis.
Yukinori Kawae Nagoya University	Professor Kawae is an Archaeologist and Egyptologist and an Associate Professor at the Nagoya Institute for Advanced Research. He leads an interdisciplinary approach to archaeology that incorporates computer science, 3D data surveys, and other new technology – including drones - to help decode the mysteries of how and why the monuments were built, such as the Giza Pyramids.
Raouf Boucekkine Aix-Marseille University	Raouf is Director of the IMéRA, the Institute for Advanced Study of Aix-Marseille University France. He is a Professor of Economics and his research interests are in developmemental economics and growth. He was appointed as a Senior member of the Institut Universitaire de France in 2014. He has previously held academic posts in Université catholique de Louvain and Universidad Carlos III de Madrid.
ICA Fellows	
V V Binoy NIAS Bangalore	V V Binoy is an Assistant Professor at the National Institute of Advanced Studies (NIAS), Bangalore. His research focuses on cultural variation in human cognition (environmental decision-making and autobiographical memory) and the determinants of social decision making and coping style in fishes. Binoy is also involved in identifying effective strategies for communicating science and technology in a multicultural society. Binoy has been a recipient of the 'Cognitive Science Research Initiative Postdoctoral Fellowship' and 'Young Scientist' award from the Department of Science and Technology, Government of India.



Anupam Chattopadhyay NTU Singapore

Anupam Chattopadhyay is assistant Professor in SCSE, NTU and also holds an honorary adjunct appointment at SPMS, NTU. He heads a team of 20+ researchers, overseeing projects in the area of computer architectures, security, design automation and emerging technologies. Together with his doctoral students, Anupam proposed novel research directions like, domain-specific high-level synthesis for cryptography, high-level reliability estimation flows for embedded processors, generalisation of classic linear algebra kernels and multi-layered coarse-grained reconfigurable architecture.



Willem Hendrik Gravett University of Pretoria

Willem Hendrik Gravett is a senior lecturer in the Department of Procedural Law in the Faculty of Law at the University of Pretoria, where he teaches civil procedure, law of evidence and trial advocacy. His research interests lie at the intersection of social and cognitive psychology and the law. Specifically, he investigates the influence of cognitive biases, heuristics and implicit social cognition (implicit racial bias in particular) on judicial decision-making. He also explores the ways in which social science research might enhance trial lawyers' persuasiveness in the presentation of their clients' cases at every phase of the trial. Willem was admitted as an Advocate of the High Court of South Africa in August of 1997 and as a Member of the New York State Bar in November of 1998. Before returning to legal academia in 2013, he practiced law in New York for fifteen years.



Hanjo Hamann MPI Bonn

Hanjo Hamann is a senior research fellow at the Max Planck Institute for Research on Collective Goods in Bonn, and visiting lecturer (Lehrbeauftragter) at Mannheim University. He is a principal investigator of the CAL² Research Group on Computer-Assisted Legal Linguistics (www.cal2.eu) and an elected spokesperson of Junior Fellows at the Heidelberg Academy of Sciences and Humanities, as well as a Fellow at the Young ZiF (Center for Interdisciplinary Research, Bielefeld). His research interests include Contracts and Corporations, particularly from an Empirical Legal Studies perspective, thus exploring Legal Corpus Linguistics, Behavioral Economics, Networks and Complexity, and Legislative Theory.



Uli Heisserer DSM

Uli is a civil engineer by training who likes to cross borders. He first studied philosophy, switched after two years to civil engineering, and obtained his PhD on numerical methods (high order finite elements) to solve partial differential equations for nonlinear problems. During this time, he still liked to attend selected seminars in philosophy, mainly about social-ethics, bio-ethics, and philosophy of nature. Since 2007, at DSM's Materials Science Center, he is involved in understanding and improving polymeric high-performance fibers and composites (Dyneema®) that safe lives in light weight armor. Together with his colleague Harm van der Werff in 2013 Uli won the

Wai-Yip Ho Ed. U. Hong Kong	DSM Science award for 'Breakthrough modelling of Dyneema® armor performance' resulting in new fibers now successfully used in improved ballistic vests of many police departments globally. Furthermore, he is working on stiff and string lightweight composites that are necessary to reduce the CO2 emissions of future mobility. Wai-Yip Ho was the External Fellow at the Freiburg Institute for Advanced Studies (FRIAS) and Marie Curie Fellow of the European Union. He is currently the Associate Professor of Department of Social Sciences, The Education University of Hong Kong. Being a Christian sociologist in Islamic Studies, his research and teaching interests include China's Christian-Muslim relations, Arabia-China relations, new media and Islam, madrasah education in Chinese context.
Nkatha Kabira U Nairobi	Nkatha Kabira is a Lecturer at the University of Nairobi, School of Law and a postdoctoral Fellow at the Ife Institute for Advanced Studies, Ile Ife, Nigeria. She completed her doctoral degree at Harvard Law School in May 2015 and has since been working towards converting her doctoral thesis into a book titled, "The Law of Commissions: A Case Study of The Place of Commissions in Law and Governance in Kenya." The study is the culmination of work done over a period of 10 years in the areas of law and development, constitution making and implementation, legal and institutional reform, rule of law, regulation of the state and the administration of justice. She has professional and research experience in several areas ranging from law and language to democracy and governance and to gender and the law.
Isabel Kusche Aarhus University	Dr Isabel Kusche is Associate Professor and Marie Curie COFUND Junior Fellow at Aarhus Institute of Advanced Studies currently based at IASH Edinburgh. Her research interests are in Political sociology and Sociological theory: Political sociology: in particular political clientelism, political corruption, linkages between politicians and voters, policy advice and political consulting, consequences of digital media. Sociological theory: in particular communication theory, differentiation theory, orders of justification.
Irina Kuznetsova University of Birmingham	Irina is a Birmingham Fellow at the School of Geography, Earth and Environmental Sciences. Her research expertise includes migration, health, diversity, social policy and accessible cities. She led and participated in various applied and academic studies, founded the AHRC, European Commission, Open Society Institute, MacArthur Foundation, Russian Foundation for Humanities and others. Her projects are concerned with the social, legal, and increasingly the mental health impacts of displacement, be it through economic migration or internal displacement due to conflict. She explores the interplay between law and landscapes, in all its definitions, and how this impacts upon bodies.



Petra LiedlU Texas Austin &
TU Munich

Petra Liedl's current focus in teaching and research are sustainable transformation processes in an inter- and transdisciplinary environment. As faculty co-advisor of the NexusHaus, she was supporting the UT/TUM's entry for U.S. Department of Energy Solar Decathlon 2015 competition, where they won several awards. The goal was to design, develop and build a modular, prefabricated, affordable water and energy efficient accessory dwelling unit as a new housing product, ensuring the viability and compatibility of its integration into the existing infrastructure of the neighborhood. She has been developing user-friendly planning tools particularly for the conceptual stage of integrated planning projects in an international context. These tools allow architects and investors to follow the interaction between climate and building parameters and help them to evaluate their design with respect to comfort and energy in a fast and cost-effective way.



David MaimonGeorgia State
University

David Maimon is an Associate Professor in the department of Criminal Justice and Criminology at Georgia State University. He received his Ph.D. in Sociology from the Ohio State University in 2009. David's research interests include cyberenabled and cyber-dependent crimes and experimental research methods. In 2015 he was awarded the "2015 Young Scholar Award" from the "White-Collar Crime Research Consortium of the National White-Collar Crime Center" for his cybercrime research. His current research focuses on computer hacking and the progression of system trespassing events, online deception and fraud, computer networks vulnerabilities to cyber attacks (see www.cybernudge.com), smartphone users vulnerabilities to cybercrime (see www.pocket-security.org), and decisionmaking process in cyber space. He is also conducting research on the ransomware economy, intellectual property and the digital divide.



Yoh MatsuoNagoya
University

Professor Matsuo's research field belongs to philosophy of "law". Philosophy of law consists of three questions: (1) What is law? (2) What law should be? (What is justice?) (3) How we approach to law and justice. By asking these questions, legal philosophy tries to find out what is the order of human society. Yoh's special interest is in comparison between legal regulations and other ones like social (or moral) norms, architectures, markets, and so on.



Katrien Pype *KU Leuven and U. Birmingham*

Katrien Pype is an anthropologist, who has been carrying out ethnographic research in Kinshasa since 2003. She obtained her PhD in social and cultural anthropology at the University of Leuven (2008), with a dissertation on the production of (evangelizing) television serials in Kinshasa. She then moved to Birmingham, where she worked on a postdoctoral project that explored the nexus between media, memory and politics in Kinshasa during the festivities for 50 years of political independence in the DRC. A second postdoctoral project, on elderly's participation in Kinshasa's media world, was carried

out at MIT (2011-2013) and KU Leuven (2013). As from mid-2013, Katrien is a part-time fellow at the Department of African Studies and Anthropology (DASA) at the University of Birmingham and assistant professor at the Institute for Anthropological Research in Africa (IARA) at KU Leuven. She currently runs a team project on technology & the city. In 2009, Katrien co-created the CongoResearchNetwork (CRN). This platform brings together scholars from the humanities and social sciences studying Congo's lifeworlds in the DRC and its diasporas.



Tom Schonberg Tel Aviv University

Tom Schonberg is a senior lecturer (assistant professor) in the department of Neurobiology and the Sagol School of Neuroscience at Tel Aviv University. The research in his laboratory is focused on the neural basis of behavior change. The lab studies the process of value construction, generalization, how values can be perturbed and how these processes are manifested in the human brain. The lab studies the multiple components of these processes by designing novel behavioral paradigms and applying converging research methodologies to analyze them. These include structural and functional MRI, eye tracking and computational decision-making models, all used together with the common goal of studying neural plasticity underlying behavior.



Michal Smolkin Hebrew University of Jerusalem

Michal is Senior Lecturer (a.k.a. Assistant Professor) at Hebrew University of Jerusalem. Michal's current research rests on quantum field theory, quantum information and quantum gravity. While the ideas of quantum physics were successfully probed both experimentally and theoretically, gravity remains somewhat mysterious from all perspectives. Recent experimental breakthrough in General Relativity together with theoretical challenges underlying any attempt to unify gravity and quantum mechanics into a whole, amplify scientific eagerness to find a solution to the long standing conundrum of co-existence of quanta and gravity.



Carla Aparecida Arena Ventura University of São Paulo

Carla is Associate Professor at the Department of Psychiatric Nursing and Human Sciences from the University of São Paulo at Ribeirão Preto College of Nursing, teaching undergraduate and graduate courses on Human Rights and the Right to Health, Health and Development, Global Health, International Mental Health and Bioethics and Nursing Legislation. She coordinates an interdisciplinary Research Group on Global Health, Law and Development (GEPESADES), leading a team of undergraduate, Master, Doctoral and Post Doctoral students. She develops research on human rights, mental health and drugs; stigma and human rights; health law; international health and development; human rights education, social participation and control.



Al Wilson *University of Birmingham*

Al is Reader and Head of Philosophy at Birmingham. He works in the emerging subfield of Metaphysics of Science, a branch of philosophy that takes advantage of contemporary scientific discoveries to help answer ancient questions about the underlying nature of reality. From January 2018, he will be Principal Investigator on a major project on explanation in physics, FraMEPhys, which will explore how physics helps us to understand the world in ways that go beyond the familiar model of causal explanation, and will cast light on some of the deepest puzzles of physics including the role of spacetime in explaining the motion of matter, the behaviour of 'time-travelling' systems in the presence of closed timelike curves, and the mysterious connections between entangled quantum systems.