

Sigma Xi Distinguished Lecturers 2023–2024

For the 86th year, Sigma Xi presents its panel of Distinguished Lecturers as an opportunity for chapters to host visits from outstanding individuals who are at the leading edge of science. These visitors communicate their insights and excitement on a broad range of topics.

The Distinguished Lecturers are available from July 1, 2024, to June 30, 2025. Each speaker has consented to a modest honorarium together with full payment of travel costs and subsistence.

Local chapters may apply for subsidies to support expenses related to hosting a Distinguished Lecturer. Applications must be submitted online by March 1, 2024, for funds to be available the next fiscal year.

Additional support for the program comes from the American Meteorological Society. Lecturer biographies,

contact information, and additional details can be found online at sigmaxi.org/lectureships or by sending an email to lectureships@sigmaxi.org.

Marc Imhoff, Chair
Committee on Lectureships

Chapter Subsidy Application Deadline:

March 1, 2024

sigmaxi.org/lectureships



Charles I. Abramson, Regents Professor, Oklahoma State University

A Study in Inspiration: The Story of the Neglected African American Scientist Charles Henry Turner (1867–1923) (P, G) • *Psychology Gone Astray: The Racist and Sexist Literature of Early Psychology* (P, G) • *The Unappreciated Role of Behaviorism in the Interpretation of Psychological Problems of Society in the Context of an Epidemiological Threat* (P, G)



David A. Bader, Distinguished Professor and Director of the Institute for Data Science, New Jersey Institute of Technology

Solving Global Grand Challenges with High Performance Data Analytics (P, G, S) • *Predictive Analysis from Massive Knowledge Graphs* (P, G, S) • *Interactive Data Science at Scale* (P, G, S)



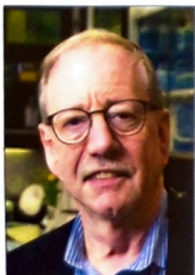
David Allison, Dean, Distinguished Professor, and Provost Professor, Indiana University School of Public Health–Bloomington

The Myriad Contributors to Obesity: Exploring the Roads Less Traveled (P) • *Errors in Scientific Research: Prevent, Detect, Admit, Correct* (G) • *Living Large: The Effects of Obesity, Body Fat, Food Intake, and Changes Therein on Aging and Longevity* (P)



Supriyo Bandyopadhyay, Commonwealth Professor of Electrical and Computer Engineering, Virginia Commonwealth University

Energy-Efficient Information Processing in Our Energy-Hungry World (P, G, S) • *Tiny Nanomagnets Can Compute with Minimal Energy Cost* (G, S) • *Straintronics: Information Processing and Unconventional Computing with Multiferoic Nanomagnets* (G, S)



Steven Austad, Distinguished Professor, Protective Life Endowed Chair in Healthy Aging Research, University of Alabama at Birmingham

The 150-Year-Old Human: How Soon? How Desirable? (P, G) • *Methuselah's Zoo: What Nature Can Teach Us about Living Longer, Healthier Lives* (P, G) • *Adam's Curse: Why Women Live Longer Than Men* (P, G)



Brad N. Barlow, Associate Professor of Astrophysics, Director of the Culp Planetarium, High Point University

Music of the Spheres: Pulsating Stars as Instruments in a Galactic Orchestra (P, G) • *Finding Type 1a Supernova Progenitors with NASA's TESS Spacecraft* (P, G, S) • *Determining the Influence of Substellar Objects on Stellar Evolution* (P, G, S)



Akhlesh Lakhtakia, Evan Pugh University Professor and Charles Godfrey Binder Professor of Engineering Science and Mechanics, The Pennsylvania State University

What Can Engineering Scientists Do to Combat the Climate Emergency? (P, G) • *Biologically Inspired Design for the Environment* (P, G) • *Optoelectronic Optimization of Thin-Film Solar Cells with Graded-Bandgap Semiconductor Layers* (G, S)



Dante Lauretta, Regents Professor of Planetary Science and Cosmochemistry, University of Arizona

Life in the Cosmos: The Search for Biology in the Universe (P) • *OSIRIS-REx: NASA's Sample Return Mission from Asteroid Bennu* (G) • *Journeys on the Asteroid Frontier: The Engineering Behind NASA's OSIRIS-REx Asteroid Sample Return Mission* (S)



June Pilcher, Alumni Distinguished Professor of Psychology, Clemson University

Science Behind Mindfulness Practices and Meta-Awareness (P, G, S) • *Lifestyle Matters: Impact of Sleep and Physical Activity* (P, G, S) • *Diving into Difficult Discourse* (P, G)



Steven L. Richardson, Professor Emeritus of Electrical and Computer Engineering, Howard University

Using Supercomputers to Design and Understand Novel Molecules and Materials (P) • *An Introduction to Quantum Computing* (G) • *Using Impurity-Vacancy Color Centers as Single Photon Emitters in Diamond* (S)



Anne Savage, Founder and Executive Director of Proyecto Titi, Co-founder of Fundación Proyecto Titi, Santa Catalina at Hacienda El Ceibal, Colombia

Proyecto Titi: Saving Colombia's Critically Endangered Cotton-top Tamarin (P, G) • *Teens, Tamarins, and Teamwork: Successful Efforts to Engage Communities in Conserving Cotton-top Tamarins in Colombia* (P, G) • *Cotton-top Tamarins: Studies in Captive Care Have Informed Conservation Actions* (P, G)



Karen C. Seto, Frederick C. Hixon Professor of Geography & Urbanization Science, Faculty Director, Hixon Center for Urban Ecology, Yale School of the Environment

Urbanization in the 21st century: problem or panacea for the environment? (P, G) • *How will urbanization change food systems?* (P, G) • *Are cities the solution to climate change?* (S) • *Revealing patterns of urbanization with remote sensing*



Michael S. Shur, Patricia W. and C. Sheldon Roberts Professor, Rensselaer Polytechnic Institute

Industrial Face of Nanotechnology (P, G, S) • *Beyond Sunlight: Smart Light Emitting Diode Lighting* (P, G, S) • *Ultraviolet Light Emitting Diodes Saving Lives* (P, G, S)



Ramteen Sioshansi, Professor, Department of Integrated Systems Engineering, Department of Electrical and Computer Engineering; Director, EmPOWERment National Science Foundation Research Traineeship Program, The Ohio State University

Technology Pathways to and Economic and Technical Challenges with Decarbonizing Electricity Systems (P, G, S) • *How Regulatory Choices Impact the Sustainability, Reliability, and Resilience of Energy Supply* (P, G, S)



Fred H. Smith, University Professor of Anthropology and Biological Sciences Emeritus, Illinois State University

Visiting the Ancestors: Archaic Africans, Neandertals, and the Beginnings of People Like Us (P, G, S) • *A Night Out with the Neandertals* (P, G) • *The Perplexing Case of the Vindija Neandertals* (G, S)



Karen Strier, Vilas Research Professor and Irven DeVore Professor of Anthropology, University of Wisconsin-Madison

Saving the World's Most Peaceful Primate (P, G) • *Primates and Conservation in a Rapidly Changing World* (P, G, S) • *Primate Behavioral Flexibility and the Limits of Resilience* (P, G, S)



Jeffrey Toney, Senior Vice President for Research, Kean University

The Undervalued Currency of Culture in Higher Education (P) • Science and Human Rights (G) • The Pandemic of Confusion (P)



Jut Wynne, Assistant Research Professor, Northern Arizona University

Addressing Knowledge Shortfalls in Subterranean Biology (P, G, S) • Evolutionary Dynamics of Subterranean-Adapted Fauna (P, G, S) • Science and Technology Requirements to Explore Caves Beyond Earth (P, G, S)



George Veni, Executive Director, National Cave and Karst Research Institute

The World Below: An Introduction to Caves and Karst (P, G) • Sinkholes: Where They Occur, How They Form, and How to Minimize Their Impacts (P, G, S) • The Sunless Seas of Karst Aquifers (P, G, S)



Enrico Zio, Professor, MINES ParisTech, PSL Research University, CRC, Sophia Antipolis, France, and Energy Department, Politecnico di Milano, Italy

Risk-Informed Decision-Making for Building a Society Resilient to Global Risks like the COVID-19 Pandemic (P, G, S) • The Future of Risk Assessment (S) • Machine Learning in Data-Driven Prognostics and Health Management (PHM) for Condition-Based and Predictive Maintenance (S)

P (Public), G (General), S (Specialized)

Details available at sigmaxi.org/lectureships

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Call for Nominations: Sigma Xi Elections

The following positions carry a three-year term beginning July 1, 2025–June 30, 2028

President

Nominations for the President-elect are due by March 1, 2024

Board of Directors

- Area Groups, Industries, State & Federal Labs
- Comprehensive Colleges & Universities
- North Central Region
- Southwest Region

Associate Directors

- Canadian/International Constituency
- Baccalaureate Colleges Constituency
- Mid-Atlantic Region
- Northeast Region

Committee on Nominations:

Three-year term beginning immediately following the 2024 elections.

- Membership-at-Large Constituency
- Research and Doctoral Universities Constituency
- Northwest Region
- Southeast Region

Nominations for the positions listed above are due by June 30, 2024.

Please visit sigmaxi.org/elections24 to view a list of duties and responsibilities for each position. Self-nominations are welcomed and will be considered. The elections will take place immediately following the Sigma Xi Annual Conference in November 2024.

Please email your nominations to executiveoffice@sigmaxi.org.