Sigma Xi
Distinguished Lecturers 2020–2021

For the ninth consecutive 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, 2020, to June 30, 2021. 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, 2020 for funds to be available the next fiscal year.

Additional support for the program comes from the American Meteorological Society and the National Cancer Institute. Lecturer biographies, contact information, and additional details can be found online under the Lectureship Program link at www.sigmaxi.org or by email to lectureships@sigmaxi.org.

Marc Imhoff, Chair
Committee on Lectureships

Application Deadline: March 1, 2020
https://www.sigmaxi.org/programs/lectureships

Andrew Fisher, Professor, Hydrogeology Earth and Planetary Sciences Department University of California at Santa Cruz Mapping, Modeling, Measuring and Monitoring Enhanced Groundwater Recharge with Stormwater (P, G, S) • Surfacewater experiments and models reveal complex patterns of coupled fluid-heat-solute transport through the ocean crust (P, G, S)

Agustin Fuentes, The Edmund P. Joyce C.S.C. Professor of Anthropology Chair of the Department of Anthropology University of Notre Dame Why We Believe: Evolution and the Human Way of Being (P, G) • The Creative Species: Imagination and Collaboration in Human Evolution (P, G) • What Race Is, and What It Is Not ... And Why It Matters (P, G, S)

Timothy Gay, Willa Cather Professor of Physics, University of Nebraska-Lincoln Why Isn’t God Ambidextrous? Chirality in Nature and the Role of Left-Handedness in Physics, Chemistry, and Biology (P, G, S) • Football Physics (P, G) • Foil! — It’s Physics and Fantasy (P, G) • One Atom Too Many: An Atomic Physicist’s Attempt To Learn About Simple Homonuclear Diatomic Molecules (S)

Sir Christopher S. LANGE, Professor of Radiation Oncology and Molecular & Cell Biology, Director of Radiation Research, SUNY Downstate Medical Center Stem Cells & Regeneration: A Quantitative Explanation of Organismal Survival (G, S) • Cancer Stem Cells: The Key to Individualization of Cancer Therapy (G, S) • Mammalian Chromosome Structure in Interphase (G, S)


Heather McKillop, Thomas & Lillian Landrum Alumni Professor, Louisiana State University Submerged Ancient Maya Salt Works, Belize (G, S) • Using 3D Technology in Underwater Maya Archaeology at the Popasnina Creek Salt Works, Belize (G, S) • Nesting: A New Look at Submerged Ancient Maya Coastal Sites (S) • Salt Production and the Ancient Maya Marketplace Economy (G, S) • Ancient Maya Coastline Trade and Sea Trade (G, S)

Laurie McNeil, Bernard Gipp Distinguished Professor, University of North Carolina at Chapel Hill OPV, OLED, OFET, Oh my! Photons, Electrons and Phonons in Organic Semiconductors (S) • Changing the Climate for Women in Science (G, S) • Good Vibrations: The Interplay of Music and Physics (P)

Natalie Munro, Professor, Department of Anthropology, University of Connecticut The Origins of Our Ritual Feasts: Lessons Learned from Archaeology (P, G, S) • The Emergence of Animal Domestication in the Near East (P, G, S) • From Foraging to Farming: The Transition to Agriculture in Southwest Asia (P, G, S)

Darrell Pepper, Professor of Mechanical Engineering, University of Nevada Las Vegas Finite Elements, Boundary Elements, and Meshless Methods (P, G, S) • Dealing with Hazardous Accidental Releases — Experiences at SRL (P, G, S) • Solar-powered UAVs (P, G, S)

David Pfennig, Professor, Department of Biology, The University of North Carolina at Chapel Hill Plasticity, Epigenetics, and Evolution (P, G, S) • Life Lifting the Evolution of Mimicry (P, G, S) • Polygenetic Plasticity and the Evolutionary Origins of Novel Traits (S)

June Pilcher, Alumni Distinguished Professor of Psychology, Clemson University Just Sleep Already! (P, G) • What Tricky Humans Do (P, G) • Applying Science outside of Science (S)

Luisa Rebull, Associate Research Scientist California Institute of Technology/IPAC More Than Your Eyes Can See: Infrared Light (P) • Getting Your Hands on Real Astronomy Data (P, G, S) • Stellar Rotation in Clusters with K2 (S)

Corina Ross, Associate Professor of Biology, Texas A&M University San Antonio The Search For the Fountain of Youth (P, G, S) • Early Development, Obesity and Aging: What We Can Learn from Monkeys (P, G, S) • Monkeys and Children and Science Oh My: An Attempt to Balance a Career in Science With Motherhood

Compton James Tucker III, Senior Biospheric Scientist, Laboratory for Hydroospheric and Biospheric Sciences, NASA Goddard Space Flight Center The Satellite Record of Climate: The late 1970s to Now (G, P) • Dinosaurs, Milankovitch Cycles, Early Earth Climate the Past 210 Million Years (G, P) • The Revolution in Food Security and Precise Agriculture: Satellites to Farms (G, P) • Satellite Control of Desert Locusts (G, P)

Danielle Wood, Assistant Professor and Director of Space Enabled Research Group Massachusetts Institute of Technology Technology from Space Enables Sustainable Development on Earth (P, G, S) • Desigining Complex Systems in Support of Sustainable Development using Systems Architecture (G, S) • Space Technology for the Development Leader (S)