



## NSF DAY SPEAKERS

Thursday, Feb. 22, 2018



NSF Day at Tennessee State University, Nashville, TN



### **Fahmida Chowdhury**

Office of International Science and Engineering (OISE)

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**Fahmida N. Chowdhury** is a Program Director in the Office of International Science and Engineering (OISE) at NSF. Prior to joining NSF in 2008, she was a Professor of Electrical and Computer Engineering at the University of Louisiana, Lafayette, USA, where she held the W. Hansen Hall and Mary O. Hall Endowed Chair in Computer Engineering. Her research interests include complex systems modeling and analysis, non-traditional applications of dynamic systems theory, and detection of abnormal conditions (faults) in dynamic systems. She has deep interest in international science, technology and educational collaborations, and science/engineering diplomacy.



### **Chris Fritsen**

Geosciences (GEO)

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**Christian Fritsen** currently serves as the Program Director for the Antarctic Organisms and Ecosystems Program in the Office of Polar Programs. Christian earned his Bachelor's degree from Montana State University in 1990 and his PhD in the biological sciences with an emphasis in systems ecology and oceanography from the University of Southern California in 1996. As a rotating Program Officer, he maintains his position as a Professor in the Division of Earth and Ecosystem Sciences at the Desert Research Institute. His interest in ecology and oceanography dates from his childhood when he spent time fly fishing the rivers of Montana and reading about the far away oceans of the world and their inhabitants in books, such as Shark Stories.



### **Barry Johnson**

Engineering (ENG)

Industrial Innovation and Partnerships (IIP)

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**Barry W. Johnson** is Director of NSF's Division of Industrial Innovation and Partnerships. Prior to joining NSF, he was the L. A. Lacy Professor and Senior Associate Dean in the School of Engineering and Applied Science at the University of Virginia (UVA). In 1998, he was a founder of Privaris, Inc., a biometrics security company, and served as Chairman and CEO while on leave from UVA. He started his career as a research engineer for Harris Corporation. He is a Fellow of the IEEE and a Fellow of the National Academy of Inventors. He holds a Ph.D. in electrical engineering.



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### Rebecca Kruse

Office of Integrative Activities (OIA)

Integrative Activities

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**Rebecca Kruse** is a Program Director in the Evaluation & Assessment Capability (EAC) section of the Office of Integrative Activities (OIA). She supports the design, enactment, and oversight of evaluative studies that provide evidence for program and policy decision-making across NSF. Previously she served the Innovative Technology Experiences for Students and Teachers (ITEST), Discovery Research PreK-12 (DRK-12), STEM+Computing Partnerships (STEM+C), and Promoting Research & Innovation in Methodologies for Evaluation (PRIME) programs as a Program Director in the Education & Human Resources (EHR) Directorate. Rebecca managed NSF's participation in the interagency Albert Einstein Distinguished Educator Fellowship Program from 2015-2017.



### Kathy McCloud

Mathematical and Physical Sciences

Division of Physics (PHY)

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**Kathy McCloud** received her BS from the College of William and Mary in 1988 and her PhD from the University of Pittsburgh in 1995 in condensed matter physics. After one year of a postdoc position in Pittsburgh, she moved to Louisiana to become a faculty member in Physics at Xavier University of Louisiana, where she remained for ten years and became Chair of the Physics Department in 2003. At NSF, Dr. McCloud is the Program Officer in the Integrative Activities in Physics program within the Physics Division in the Mathematical and Physical Sciences (MPS) Directorate. She also serves as one of the Executive Secretaries for the National Science Board Committee on awards and Facilities, and is the MPS coordinator for the Major Research Instrumentation program.



### Christina Payne

Office of Integrative Activities (OIA)

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**Christina Payne** is an associate program director supporting the Engineering Biology and Health Cluster programs in CBET. Christy is a computational biophysicist, although her experience also includes oil and gas process engineering. Her research focuses on understanding molecular-level protein-carbohydrate interactions and manipulation of glycoside hydrolase structure/function for industrial applications, the latter of which was the basis of her NSF CAREER award. Prior to arriving at NSF, Christy was an assistant professor of chemical engineering at the University of Kentucky and a staff scientist at the National Renewable Energy Laboratory. Christy holds a Ph.D. in chemical engineering from Vanderbilt University.



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### **Sandra Richardson**

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**Sandra Richardson** is a permanent program director in the Division of Undergraduate Education in EHR and the program lead for the NSF Robert Noyce Teacher Scholarship Program. Richardson manages a portfolio of funded grants in several NSF programs, including the Noyce, Improving Undergraduate STEM Education (IUSE), Transforming Undergraduate Education in STEM (TUES), and Course, Curriculum, and Laboratory Improvement (CCLI) programs. Her research publications and scholarly interests are framed in mathematics education efforts, including developing effective tools for mathematics curricula, advancing pedagogical content knowledge of mathematics teachers, studying minority and underrepresented students' mathematical thinking at all levels of school mathematics, and mathematics teacher education. Richardson earned a M.S. and Ph.D. in Mathematics Education from Purdue University and a B.S. in Mathematics from Dillard University. Prior to joining NSF, she led education and research initiatives as a mathematics university faculty member.



### **John Schade**

Biological Sciences  
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**John Schade** is a biogeochemist whose research includes greenhouse gas production in agricultural and arctic streams, the impacts of changing snow depth on prairie soils, and the influence of intensification of the water cycle on methane production by wetlands. He also integrates undergraduate training and environmental research through his work on the Polaris Project. Dr. Schade is serving as a Program Officer in the Division of Environmental Biology at NSF, and as a Distinguished Visiting Scientist at the Woods Hole Research Center. He earned his B.S. from the University of Michigan and Ph.D. from Arizona State University.



### **Kurt Thoroughman**

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**Kurt Thoroughman** is on assignment from the Department of Biomedical Engineering at Washington University in St. Louis. There he founded research reverse engineering the human brain, using robotics, virtual reality, psychology, biomechanics and bioelectrics, and computation. His research team discovered ways that learning itself can be shaped by recent experience. This work has its roots in neuroscience but has impact across scientific disciplines and clinical practice. Dr. Thoroughman has also built, led, and researched to improve higher education. He co-founded the Cognitive, Computational, and Systems Neuroscience pathway and served as its IGERT PI. He directed undergraduate studies for the department and for the School of Engineering. He currently researches and develops interventions toward holistic learning and diversity.



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### **Ann Von Lehmen**

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Division of Computer and Network Systems

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**Ann Von Lehmen** has been a CISE CNS Program Director for about 1 year. Her expertise and interests include the novel networking technologies, systems and applications that support and fuel the exponential growth of the Internet. This includes IP and optical networks, SDN, network/compute resource optimization, and the application of analytics and machine learning to network research. She came to NSF from the telecommunications industry, where she was a researcher and department head with Telcordia Technologies Applied Research. She holds a B.S. in Physics and Mathematics from Northern Kentucky University, and a Ph. D. in Applied Physics from Cornell University. She is a Fellow of both the IEEE and the Optical Society of America.



### **Holly Brown**

Office of Legislative and Public Affairs (OLPA)  
External Affairs

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**Holly Brown** is a Public Affairs Specialist with the External Affairs team in OLPA. She has been connected to NSF funded research and education since she was very young. Competing in an NSF funded science competition in middle and high school, she then pursued degrees in Physics and Political Science as an undergraduate at Florida State University. While an undergraduate, she participated in the NSF's REU program at Michigan State University's National Superconducting Cyclotron Laboratory. Following her undergraduate career, she attended Georgia Tech where she earned her Master's degree in Science and Technology Policy while also working as a graduate research assistant through the ADVANCE initiative at Georgia Tech. She is currently lead for Vizzies Challenge at NSF, and has worked on several large NSF initiatives, including NSF's presence at the USA Science and Engineering Festival, New York Comic Con, and DC's Awesome Con.