

## **Speaker Bios**

### **Vikram S. Adve**

Vikram Adve is the Donald B. Gillies Professor of Computer Science at the University of Illinois at Urbana-Champaign and a Professor in Electrical and Computer Engineering. He is a Co-founder and Co-Director of the Center for Digital Agriculture and leads [AIFARMS](#), a \$20M National Artificial Intelligence Research Institute funded by NIFA and NSF. Adve's research interests lie in developing and using compiler techniques to improve the performance, programmability and reliability of computer systems. Adve and his Ph.D. student, Chris Lattner, co-designed the LLVM Compiler Infrastructure, which enables a novel approach to “lifelong compilation” of programs in a wide range of general-purpose programming languages, and for which Adve, Lattner and Evan Cheng received the Association for Computing Machinery (ACM) Software System Award in 2012. Adve has won a ten-year-retrospective Most Influential Paper award at CGO 2004, and distinguished paper awards at several conferences including PLDI 2005, SOSP 2007 and ICSE 2011. He has served as the Associate Editor for the ACM Transactions on Programming Languages and Systems, and co-chaired the Program Committees for ASPLOS 2010, VEE 2008, and LCPC 2007. Adve is a Fellow of the ACM and in 2015 became a University Scholar at the University of Illinois. He served as Interim Head of the Computer Science Department from 2017 to 2019.

### **Tom Andriola**

Tom Andriola is the Vice Chancellor for Information, Technology and Data at the University of California, at Irvine (UCI) and UC Health. He is responsible for ensuring the effective and strategic use of data and technology across all aspects of the UCI enterprise. He works closely with the campus, faculty and healthcare leaders to explore opportunities to drive innovation and entrepreneurship and to enhance the missions of teaching, research, patient care and public service.

Andriola has a broad array of experiences as a business and technology leader serving both the public and private sectors as well as running organizations globally. Prior to joining UCI, he served as Vice President and Chief Information Officer (CIO) for the University of California System working with campus and healthcare leaders to expand the use of technology strategically and realize operational synergies. Among his accomplishments, he created the organizational platform to support the collaboration of 8,000 IT professionals across the University, launched a nationally-recognized IT Leadership Academy, and played a leading role in developing UC Health's big data strategy, which led to the creation of the UC-wide clinical data warehouse representing 16 million patients.

Prior to his university service, Andriola was a business leader in the healthcare industry. He was responsible for building software businesses to serve hospitals and healthcare providers, bringing experience in developing solutions across the globe. Andriola spent the earlier years of his career as a leader for multi-billion dollar enterprises in the capacity of a global CIO and business transformation officer with organizations such as Royal Philips, Marconi PLC, Sapient and Price

Waterhouse Coopers. He has a wealth of leadership experience having managed thousands of employees, lived abroad and run organizations on four continents.

Throughout his career Andriola has been a champion of change inside organizations as well as a leader for disruptive innovation in the marketplace. Today, he stays active in the Higher Education and Healthcare industries through associations and boards to champion the idea of progress, potential and equity utilizing technology and data. He is the Chairperson for CENIC (advancing research & bridging the digital divide in California) and a Board member for OCHIN (dedicated to addressing healthcare equity nationally). Andriola holds a bachelor's degree from George Washington University and a master's degree from the University of South Florida, and he has completed the Stanford Executive MBA program.

### **Gregory C. Bernard**

Dr. Gregory C. Bernard is Assistant Professor of Plant Sciences in the Department of Agriculture and Environmental Sciences at Tuskegee University, and an alumnus of North Carolina A&T State University, North Carolina State University, and Tuskegee University. Bernard's research focuses on 1) Deciphering the genetic and molecular basis of host-pathogen interactions; 2) Understanding how plants respond to magnetic fields; 3) Developing “green-engineered” bio-pesticides through nano-biotechnology; 4) Sweet potato metabolomics and phenotypic analysis, and 5) Integrating autonomous tools and AI-assisted crop phenotyping into precision farming for small-scale farming systems.

### **Kathryn J. Boor**

Kathryn J. Boor, PhD, is the Dean of the Graduate School and Vice Provost for Graduate Education at Cornell University. Previously, she was the Ronald P. Lynch Dean of the College of Agriculture and Life Sciences at Cornell University. Her research focuses on identifying biological factors that affect transmission of bacteria in food systems. Dr. Boor is a Fellow of the American Academy of Microbiology, the International Academy of Food Science and Technology, the Institute of Food Technologists, the American Association for the Advancement of Science, and the American Dairy Science Association. She was named a 2018 Woman of Distinction by the New York State Senate. She earned an MS in food science from the University of Wisconsin and a PhD in microbiology from the University of California, Davis. She serves on the Board of Directors for Seneca Foods Corporation, International Flavors and Fragrance, the United States-Israel Binational Agricultural Research and Development Fund, the Foundation for Food and Agriculture Research, the Science Board for the US Food and Drug Administration, and the New York State Southern Tier Regional Economic Development Council. She served on the National Academy of Sciences Committee on Review of the Use of Scientific Criteria and Performance Standards for Safe Food.

### **Olga U. Bolden-Tiller**

Olga U. Bolden-Tiller is a Professor, Dean and Research Director for the College of Agriculture, Natural Resources & Related Sciences at Tuskegee University. She has served as the Director for the National Science Foundation (NSF) funded Integrative Biosciences Research Experiences for

Undergraduates program and directed several summer pre-college programs. She currently serves as the State Coordinator for the Alabama Youth Institute. She teaches animal science courses and maintains a research program on elucidating the molecular mechanisms of gonadal function in rodents and ruminants. Her programs are funded by the US Department of Agriculture (USDA), NSF, Howard Hughes Medical Institute, and the state of Alabama. She serves as leader in many professional societies, including the Minorities in Agriculture Natural Resources and Related Sciences, the American Society of Animal Sciences, the National Goat Consortium and the Society for the Study of Reproduction. Dr. Bolden-Tiller has received several awards, including the College of Agriculture, Environmental and Natural Sciences' Faculty Performance Award for Service and Teaching, the Russell Brown Distinguished Scientist Award, and the Faculty Achievement Award. She is an 'Opportunities for Under Represented Scholars Fellow' and is an alumnus of the LEAD21 Program, the Fielding/Conclave Leadership Academy, and the Food Systems Leadership Institute Fellows Program. She holds a PhD in animal sciences from the University of Missouri- Columbia where she matriculated as an USDA National Needs Fellow.

### **Mason Earles**

Mason Earles is Assistant Professor, Assistant Agricultural Engineer, University of California, Davis (UC Davis). Before that, Dr. Earles worked as a Data Science Engineer at Apple where he created new deep learning and computer vision tools within hardware engineering. During his post-doctoral and doctoral work, he advanced new computational techniques for 3D image processing, quantification, and coupled biophysical modeling of plants. By combining these computational techniques with custom physiological and ecological instrumentation, he provided insight into organismal CO<sub>2</sub> diffusion and photosynthesis, H<sub>2</sub>O transport, and carbohydrate metabolism for species across the plant kingdom. As a faculty member in the Departments of Viticulture & Enology and Biological & Agricultural Engineering, Dr. Earles leads the Plant AI and Biophysics Lab, which aims to develop low-cost AI systems that generate novel insight into plant biology, ultimately leading to more precise and sustainable agricultural practice. A major emphasis in the lab is to build agricultural sensing and automation systems powered by deep learning algorithms that can precisely monitor and predict plant biophysical status, such as stress, productivity, and yield. Pushing AI systems beyond black-box prediction and toward interpretability of biological mechanism, his work also investigates basic plant biophysical mechanisms from molecular- to organismal-levels to understand their scalability and impact on agricultural systems.

### **Harold Schmitz**

Harold Schmitz is co-Founder and General Partner of March Capital US, LLC, and a Senior Scholar in the Graduate School of Management at the University of California, Davis. Previously, he served two terms as the Art and Carlyse Ciocca Visiting Professor of Entrepreneurship and Innovation in the Graduate School of Management at the University of California, Davis (UC Davis). He worked in Mars, Incorporated for 25 years, where he developed and executed the company's global strategy for advanced research and innovation at the intersection of food, agriculture, health, and sustainability via collaborations across sectors, including the land-grant universities and colleges. He is an advisor to the Novo Nordisk

Foundation's BioInnovation Institute in Denmark and to the Artificial Intelligence Institute for Next-Generation Food Systems located at UC Davis, co-funded by the US Department of Agriculture (USDA) and the National Science Foundation. He was recognized as Outstanding Alumnus of the Dale Bumpers College of Agriculture, Food, and Life Sciences at the University of Arkansas, and was elected a Life Member in the Council on Foreign Relations. He was a USDA National Needs Research Fellow during 1990 – 1993 at North Carolina State University, where he trained in the intersection of food, agriculture, and health and received his PhD in food science. He received his MS in food science from the University of Illinois.

### **Steven Thomson**

Steven Thomson is National Program Leader, USDA National Institute of Food and Agriculture. He supports research, education, and extension activities that focus on engineering processes that improve systems relevant to agriculture. Dr. Thomson has a background in the aerial application of crop protection materials; irrigation management; crop modeling; decision support systems; sensor systems and electronics; remote sensing; unmanned aerial systems; and general precision agricultural technologies. He has worked in research, extension, and instruction as a faculty member at Virginia Tech and as Research Lead Scientist with the USDA Agricultural Research Service. In his role at NIFA, he engages universities, other federal agencies, and industry to provide national leadership in Capacity and Competitive Grant programs.

### **Gabriel David Youtsey**

Gabriel (Gabe) Youtsey is the Chief Information Officer for University of California, Agriculture and Natural Resources (UC ANR). He provides leadership to UC ANR's information technology unit to support programmatic, educational, administrative and marketing-oriented projects. Collaborating with colleagues across disciplines and UC locations he implements technology to provide innovative enhancements to support UC ANR's mission and administration. Prior to joining UC ANR, he served as the Assistant Chief Information Officer at UC Davis, where he gained extensive experience working with UC Davis faculty, students and staff. He was instrumental in assessing and introducing new technologies, including cloud-based, mobile-friendly and modern tools and services. As a member of the UC Information Technology Leadership Council, consisting of the Chief Information Officers of all 10 campuses and UCOP, Mr. Youtsey led UC-wide initiatives and partnered with other campuses to introduce new service offerings. He has been active for many years in EDUCAUSE and Internet2, and speaks regularly on cloud computing, big data, collaboration technologies, the role of technology in academia and cyber-security. Before coming to the University of California, he was an information technology advisor at KPMG, where he led regional and national information technology and security advisory projects in food, agriculture, retail, banking, software and other sectors.