

# Organizing Committee

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## **Sossina Haile (Committee Co-Chair)**

Professor of Materials Science and Engineering  
Northwestern University  
Evanston, Illinois  
United States



Sossina M. Haile is the Walter P. Murphy Professor of Materials Science and Engineering at Northwestern University, a position she assumed in 2015 after serving 18 years on the faculty at the California Institute of Technology. She earned her PhD in Materials Science and Engineering from the Massachusetts Institute of Technology in 1992. Sossina Haile's research broadly encompasses materials, especially oxides, for sustainable electrochemical energy technologies. She has established a new class of fuel cells with record performance for clean and efficient electricity generation, demonstrated electrochemical cells for hydrogen production from electricity for long-term energy storage, and created new thermochemical approaches for harnessing sunlight to meet rising energy demands. She has published approximately 200 articles and holds 14 patents on these and other topics. Amongst her many awards, in 2008 Sossina Haile received an American Competitiveness and Innovation Fellowship from the U.S. National Science Foundation in recognition of "her timely and transformative research in the energy field and her dedication to inclusive mentoring, education and outreach across many levels." In 2008 she was also named by Newsweek Magazine as one of 12 people to watch. She is a fellow of the Materials Research Society, the American Ceramics Society, and the African Academy of Sciences, and a corresponding Fellow of the Ethiopian Academy of Sciences. Sossina Haile also leads the Joint Undertaking for an African Materials Institute (JUAMI), which holds two-week, live-in advanced study workshops, featuring tutorials on cutting-edge energy materials topics, hands-on experiments and learning activities, and research seminars by top materials scientists.

## **Philip Antwi-Agyei (Committee Co-Chair)**

Environmental Scientist  
Kwame Nkrumah University of Science and Technology  
Kumasi, Ghana  
Twitter: @pantwiagyei



Prof. Philip Antwi-Agyei is an interdisciplinary environmental scientist at the Kwame Nkrumah University of Science and Technology, Kumasi, Ghana. Philip obtained his PhD from the University of Leeds, United Kingdom. His research involves developing innovative multi-scale methodologies for assessing vulnerability and adaptations to climate change (especially in the form of drought sensitivity) for dry land farming systems. Specifically, his work uses spatial databases, ecological studies and field-based

participatory approaches aimed at broadening understanding of how climate change and variability affect food security and rural livelihoods. Philip was a Lead Author for the Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5 °C. Prof. Antwi-Agyei is a recipient of several prestigious international grants including the Climate Impacts Research Capacity and Leadership Enhancement Fellowship (CIRCLE) (2015–2016) funded by the UK's Department for International Development and the African Academy of Sciences, the Science for Weather Information and Forecasting Techniques (African SWIFT) (2016–2022) funded by the Global Challenge Research Fund (GCRF). Philip has also won grants under the Climate Research for Development (CR4D) (2019–2021), an initiative of the African Climate Policy Centre in partnership with the United Kingdom's Department for International Development (DfID) and implemented by the African Academy of Sciences. Currently, Philip is a Fellow under the prestigious Future Leaders–African Independent Research (FLAIR) (2020–2022) funded by the Royal Society, London. He has published extensively in reputable peer reviewed international journals.

### **Mercy Y. Akinyi**

Research Veterinarian  
Institute of Primate Research  
Nairobi, Kenya



Dr. Akinyi is a veterinarian trained at the University of Nairobi, Kenya and holds a Master of Science degree in Medical Physiology from the same university. She graduated with a PhD in Biology from Duke University, USA in 2017 and currently works as a research veterinarian at the Institute of Primate Research (IPR). She has over 15 years' research experience as a primate veterinarian for both natural and captive primate populations. Her research interest centers around surveillance of circulating pathogens, including zoonotic pathogens, in wild populations of non-human primates at the human-wildlife interface. She also conducts zoonoses outreach programs to sensitize communities located at the human-wildlife interface on zoonoses and their risk factors. In March 2020 when COVID-19 first struck Kenya, Mercy was called upon to serve as the deputy head of the IPR COVID testing and research centre that was set up to support the government efforts in surveillance of the on-going pandemic. Her overall role was to supervise and train staff on molecular diagnosis of COVID-19. Over the years, Mercy has been awarded research grants by multiple funding agencies including; 1) the Government of Kenya, National Council Of Science And Technology, Science, Technology And Innovations (ST&I) Grant, 2) The Developing Excellence in Leadership and Genetics Training for Malaria Elimination in sub-Saharan Africa (DELGEME), The International Veterinary and Vaccinology Network, UK, and most recently the Organization for Women in Science for Developing (OWSD) countries amongst others. Mercy's training history as a veterinarian and a biologist, and her technical experience provides an opportunity for her to make significant contributions to the scientific arena and to serve as a role model for other African women in STEM fields.

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### **Tanya Berger-Wolf**

Professor  
Ohio State University  
Columbus, Ohio  
United States



Dr. Tanya Berger-Wolf is a Professor of Computer Science Engineering, Electrical and Computer Engineering, and Evolution, Ecology, and Organismal Biology at the Ohio State University, where she is also the Director of the Translational Data Analytics Institute. Recently she has been awarded US National Science Foundation \$15M grant to establish a new Harnessing Data Revolution Institute, founding a new field of study: Imageomics. As a computational ecologist, her research is at the unique intersection of computer science, wildlife biology, and social sciences. She creates computational solutions to address questions such as how environmental factors affect the behavior of social animals (humans included). Berger-Wolf is also a director and co-founder of the conservation software non-profit Wild Me, home of the Wildbook project, which brings together computer vision, crowdsourcing, and conservation. Wildbook has been recently chosen by UNSECO as one of the top AI 100 projects worldwide supporting the UN Sustainable Development Goals. Berger-Wolf has given hundreds of talks about her work, including at TED/TEDx, UN/UNESCO AI for the Planet, and SXSW EDU.

Prior to coming to OSU in January 2020, Berger-Wolf was at the University of Illinois at Chicago. Berger-Wolf holds a PhD in Computer Science from the University of Illinois at Urbana-Champaign. She has received numerous awards for her research and mentoring, including University of Illinois Scholar, UIC Distinguished Researcher of the Year, US National Science Foundation CAREER, Association for Women in Science Chicago Innovator, and the UIC Mentor of the Year.

### **Mary-Jane Bopape**

Senior Manager: Research  
South African Weather Service  
Pretoria, Gauteng  
South Africa



Mary-Jane Bopape is a Senior Manager: Research at the South African Weather Service. She oversees research in nowcasting, numerical weather prediction, seasonal forecasting, climate change projections, climate sensitive sectors applications, air quality modelling and global atmosphere watch. Dr Bopape has a C2 (established researcher) NRF rating. She holds a PhD degree in meteorology with a focus on cloud microphysics modelling obtained from the University of Pretoria. Mary-Jane also worked as a Postdoctoral Research Fellow focused on modelling the greyzone boundary layer at the University of

Reading. She also worked at the Council for Scientific and Industrial Research (CSIR) where she focused on climate change studies. She is currently leading activities on a weather and climate project to implement the Southern African Development Community (SADC) Cyber-Infrastructure Framework. She co-supervises postgraduate students at the Universities of Venda, Witwatersrand and North West. She is one of twenty one 2019 Climate Research for Development (CR4D) fellowship grantees and a 2021 AIMS Women Fellow in Climate Change Science. She was recognised by the President of South Africa as a pathfinder in 9 August 2019 speech on women's day. She is a co-recipient of the 2008 World Meteorological Organization (WMO) award for young researchers, and a recipient of the 2013 Council for Scientific and Industrial Research (CSIR) Natural Resources and the Environment (NRE) most promising young researcher award. She served as the co-President of the South African Society for Atmospheric Sciences (SASAS) during the 2018-2020 term. She was listed as one of the most influential Africans of 2021 by the New African magazine, and one of the 2020-2021 most distinguished change makers - Women in Africa by Humanitarian Awards Global.

### **Samuel Chigome**

Senior Researcher

Botswana Institute for Technology Research, and Innovation

Gaborone, Botswana



Samuel Chigome is a senior researcher in the Nanomaterials Division of the Botswana Institute for Technology Research, and Innovation (BITRI). Samuel is the President of the African Materials Research Society (AMRS), member of the International Advisory Board of the State Key Laboratory for Modification of Chemical Fibers and Polymer Materials (SKLFPM) at Donghua University, member of the Editorial Advisory Board of ACS Nano, member of the Advisory Board of the US-Africa Initiative in Electronic Structure, Editorial Board Member of Discover Materials and co-convenor in the Condensed Matter and Materials Physics Working Group of the African Strategy for Fundamental and Applied Physics.

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### **James Hassell**

Epidemiologist and Wildlife Veterinarian  
Smithsonian Global Health Program  
Washington, District of Columbia  
United States



Dr. James Hassell is an epidemiologist and wildlife veterinarian with the Smithsonian's Global Health Program, and adjunct faculty at Yale School of Public Health. His research interests focus on disease transmission between wildlife, livestock and humans in natural and urban settings in Africa, with a particular focus on how transfer of pathogens between species is determined by changes that are occurring to the ecosystems they inhabit. Such evidence is crucial to mitigate risk at the interface between human and animal health on a rapidly changing planet. With partners in East Africa, he is currently working on projects that apply the One Health concept to evaluate health risks associated with the wild meat trade, study disease emergence in urban and rangeland settings, and develop animal health surveillance capacity in remote rural areas. As a conservationist, he also works to improve the health of endangered species and support African veterinarians through training programs in conservation medicine.

### **Yunyao Li**

Head of Machine Learning  
Apple Knowledge Platform  
Apple Inc.



Yunyao Li is the Head of Machine Learning, Apple Knowledge Platform, leading the R&D of next-generation machine learning technology and services to provide better knowledge products and services to teams across Apple. Until recently, she was a Distinguished Research Staff Member and Senior Research Manager at IBM Research - Almaden where she built and managed the Scalable Knowledge Intelligence department. She is known for her work in scalable NLP, enterprise search, and database usability. In these areas, she has published over 80 articles and a book. She has built systems, developed solutions, and delivered core technologies to over 20 IBM products under brands such as Watson, InfoSphere, and Cognos. She was a IBM Master Inventor, with over 50 patents filed/granted. Her technical contributions have been regularly recognized by prestigious awards within and outside of IBM. She is an ACM Distinguished Member and was a member of the inaugural New Voices program of the American National Academies. Yunyao obtained her PhD in Computer Science & Engineering and dual-degrees of MSE in Computer Science & Engineering and MS in Information from the University of Michigan. She went to college at Tsinghua University, Beijing, China, with dual-degrees of BE in Automation and BS in Economics.

**Vukosi Marivate**

ABSA UP Chair of Data Science  
University of Pretoria  
Pretoria, South Africa



Prof. Vukosi Marivate is the ABSA UP Chair of Data Science at the University of Pretoria. Vukosi works on developing Machine Learning/Artificial Intelligence methods to extract insights from data. A large part of his work over the last few years has been in the intersection of Machine Learning and Natural Language Processing. Vukosi's work in this area focuses on techniques to improve tools for and availability of data for local languages or low resource languages. Vukosi is a co-founder of Deep Learning Indaba (<https://deeplearningindaba.com/>). He currently serves as a chief investigator on the Masakhane NLP project (<https://www.masakhane.io/>) and on the steering committee of the Lacuna Fund (<https://lacunafund.org/>). As part of his vision for Data Science, Vukosi is interested in Data Science for Social Impact (<https://dsfsi.github.io/>), using local challenges as a springboard for research. In this area, Vukosi has worked on projects in science, energy, public safety and utilities. Vukosi is a co-founder of the Deep Learning Indaba, the largest Machine Learning/Artificial Intelligence workshop on the African continent, aiming to strengthen African Machine Learning.

**Eric Djomo Nana**

Senior Research Officer  
Agricultural Research Institute for Development  
Yaoundé, Cameroon



Dr. Eric Djomo Nana is a senior research officer and head of the Wildlife Research Unit at the Agricultural Research Institute for Development (IRAD) in Yaoundé, Cameroon. He obtained MScs in Parasitology in the University of Yaoundé 1 and in Environmental Impact Assessment in the University of Dschang in Cameroon. He then obtained a PhD in Ecology at Charles University in Prague in the Czech Republic. He is currently a postdoctoral researcher at the Interdisciplinary Centre for Conservation Science in the University of Oxford in the U.K. His current research is focused on the impact of wildlife trade on the sixth mass extinction and emerging infectious diseases. He is an affiliate of the African Academy of Sciences (AAS) and The World Academy of Sciences Sub-Saharan Africa Regional Partner (TWAS-SAREP). He has served as reviewer for academic journals such as the Biological Journal of Linnean Society and the African Journal of Ecology. He is a member of the review board of the National Geographic Society Early Career grants and the British Ecological Society Grants.



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### **Ekundayo Shittu**

Associate Professor of Engineering Management  
George Washington University  
Washington, District of Columbia  
United States



Ekundayo Shittu is currently an Associate Professor of Engineering Management and Systems Engineering at the George Washington University, Washington, DC. His research in the arena of technology management and the economics of renewable energy focuses on the interplay between public policy, competition and energy technology investments. He examines the strategic interaction between firms' technology stocks and the external environment through the lenses of optimization modeling under multiple uncertainties, transaction cost economics and resource-based view. His research has been supported by competitive grants from the National Science Foundation, Department of Energy, Alfred P. Sloan Foundation, Duke Energy Renewables, Toyota Mobility Foundation, etc. He was a Lead Author on Chapter 2, "Integrated Risk and Uncertainty Assessment of Climate Change Response Policies," of Working Group III to the 5th Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC). He reviews reports for the National Academies of Sciences, Engineering and Medicine. He is a member of the U.S. National Committee for the International Institute for Applied Systems Analysis (IIASA). He has received numerous teaching and research awards. He holds a BEng in Electrical Engineering from the University of Ilorin, Nigeria, an MS in Industrial Engineering from the American University in Cairo, Egypt, and a PhD in Industrial Engineering and Operations Research from the University of Massachusetts Amherst, U.S.

### **Luyi Sun**

Professor  
University of Connecticut  
Mansfield, Connecticut  
United States



Luyi Sun received his BS from South China University of Technology in 1998 and PhD from the University of Alabama (advisor: Prof. Joseph Thrasher) in 2004. After his postdoctoral training at Texas A&M University (supervisors: Profs. Hung-Jue Sue and Abraham Clearfield), he worked at TOTAL Petrochemicals USA, Inc. from 2006 to 2009. He was an Assistant Professor at Texas State University from 2009 to 2013. Dr. Sun joined the University of Connecticut as an associate professor in 2013 and was promoted to professor in 2018. His research focuses on the design and synthesis of nanostructured materials for various applications. He is a Fellow of the Society of Plastics Engineers (SPE), the Royal Society of Chemistry (RSC), and the National Academy of Inventors, and a member of the Connecticut Academy of Science and Engineering (CASE).