Organizing Committee

Abdelaziz Berrado (Committee Co-Chair)

Professor of Industrial Engineering
L'École Mohammadia d'Ingénieurs (EMI)
Mohammed V University in Rabat
Rabat, Morocco

Abdelaziz Berrado, is a Professor of Industrial Engineering in the EMI School of Engineering at Mohammed V University in Rabat. Prior to his current position, he was a faculty member of engineering at Al Akhawayn University in Ifrane. He holds a PhD in decision systems and industrial engineering from Arizona State University.

Dr. Berrado researches advanced analytical methods and frameworks for knowledge generation and decision support in organizations. He focuses on data analytics for addressing societal challenges and also for operations and supply chain modeling, planning, improvement and control with applications in healthcare, education and other industries. He has led several funded applied research projects with local and international impact and published research papers in renowned journals. In addition to academic work, he interacts closely with the industry. Previously, he was a senior engineer and data analytics lead at Intel. He is a fellow of IEOM society and a member of INFORMS and IEEE.

Leonard Pease (Committee Co-Chair)

Senior Engineer and Group Leader
Pacific Northwest National Laboratory (PNNL)
Richland, Washington
United States

Professor Pease, a senior engineer and group leader at the Pacific Northwest National Laboratory (PNNL), has held academic appointments in internal medicine, chemical engineering, and Asian studies. He earned a Ph.D. from Princeton University in chemical and materials engineering and completed a post-doctorate position at the National Institute of Standards and Technology (NIST) as a National Research Council post-doctoral research associate. At PNNL, he leads, manages, and advises high priority and high visibility research, development, and deployment efforts. He has earned several awards for technical excellence at PNNL and is currently advancing research initiatives in hybrid renewable energy systems, cleaning up produced water for alternative uses, and mineral extraction to support a green economy. His research has been sponsored by the NSF, NIH, DOE, and multiple private foundations. He founded, secured capital, and advanced product development for two high-tech startup companies based on pioneering medical technologies from his lab, specializing in applying chemical engineering knowledge to medical challenges. Dr. Pease has over 100 publications and intellectual property filings and has been recognized for both research and teaching excellence, including a Silver Medal from the U.S. Department of Commerce. He is an alumnus of the 2017 China-America Frontiers of Engineering Symposium and the 5th-8th Arab-American Frontiers of Engineering, Science and Medicine Symposia.

Slimane Bah

Professor, Computer Science Department
L'École Mohammadia d'Ingénieurs (EMI)
Mohammed V University in Rabat
Rabat, Morocco

Dr. Slimane Bah is a full professor at the computer science department of Mohammadia Engineering School (Ecole Mohammadia d'Ingenieurs) affiliated University Mohammed V in Rabat (Morocco). Previously, he served as adjunct professor at the department of computer science of the university of Moncton. He holds a Ph.D. in computer networks from the Electrical and Computer Engineering Department of Concordia University (Montreal - Canada). He also holds an M.Sc. in computer networks from university of Montreal (Université de Montréal) and an engineering degree in computer science - Networking, from l'Ecole Nationale Superieure d'Informatique et d'Analyse des Systems (ENSIAS - Morocco). His research interests include end-user services, self-organizing and challenging networks, services and protocols engineering and sensor-based systems. He is also a technical committee member for several international conferences and journals (SITA, NETYS, AFRICATEK, MEDCT, elseivier Journal...)

Tarik Benmarhnia

Associate Professor, Scripps Institution of Oceanography
University of California, San Diego
San Diego, California
United States

Tarik Benmarhnia is an environmental epidemiologist and climate scientist at the University of California San Diego's Scripps institution of Oceanography as an associate professor where he leads the climate change epidemiology lab. He was a postdoc at McGill University with the Institute for Health and Social Policy. He finished his PhD jointly from The University of Montreal and Paris Sud and finished two Master's degrees, one in Environmental Health Sciences Engineering from the French School of Higher Education in Public Health and another in Pharmacy and Ecotoxicology from Montpellier University in France. He completed his BA in Environmental Sciences from Montpellier University.

His research interests include the impact of extreme weather events on human health in the context of climate change and advancing the notion of vulnerability and its implications for public policy. He also develops methodological approaches in order to evaluate the health impacts and environmental justice implications of various policies. He conducts several projects in Latin America, Sub-Saharan Africa or South Asia focusing on various climate-sensitive issues such as vector-borne diseases, food security, access to vaccination or human mobility.

He published about 200 scientific papers and is ss an associate editor for journals including Environmental Health Perspectives and Plos Climate. He is also regularly featured in various publications such as Vice, CNN, New York Times, Wired, National Geographic and more.

Salome Bukachi

Associate Professor, Department of Anthropology, Gender, and African Studies
University of Nairobi
Nairobi, Kenya

Prof. Salome Bukachi holds a PhD in Anthropology of the University of Nairobi's Institute of Anthropology, Gender and African Studies, specializing in Medical Anthropology. Author of over 45 publications and supervisor of over 50 graduate students. She is one of the Members of Africa One Health Network Steering Committee, a Board member of the International Association of Ecology and Health, Member of the One Health High Level Expert Panel, Former Member of the Global Advisory Panel (GAP) for the REACH Programme – Improving Water Security for the Poor, Ad-hoc Committee member for the TDR and WaSH/WHO to support activities to control water-related infectious diseases with a special focus on vector-borne diseases. Salome has also served as Temporary Adviser to the WHO on Gender and intersectionality on infectious diseases of poverty, been a Member of the Working Group for the development of a guidance framework on testing and deploying the Sterile Insect Technique against mosquito-borne diseases under the IAEA/WHO/ UNICEF/UNDP/WORLD BANK/WHO Special Programme for Research & Training in Tropical Diseases (TDR). She is currently a member of the Anthropological Association of Kenya, American Anthropological Association, Society of Medical Anthropologists and the International Water Resource Association. She has won several research grants and fellowships from organisations/Institutions such as the Government of Kenya, EU, IDRC, BMGF, WHO/TDR, Universities of Oxford & Cambridge, Netherlands Fellowship Program. She is an alumni fellow (2021) in the inaugural Fellowship Programme in the Social Science in Humanitarian Action Platform and an alumni fellow (2019) of the African Oxford Initiative. Prof. Bukachi serves in the Editorial and Review boards of many PUBMED cited journals. Salome has mentored many African Anthropologists and has created a niche for herself in the emerging field of Anthropology of infectious diseases and nutritional anthropology.

Deji Coker

Executive Advisor
Booz Allen Hamilton
Washington, D.C.
United States

Dr. Ayodeji Coker is an Executive Advisor at Booz Allen Hamilton where he provides AI and Autonomy subject matter expertise, thought leadership, and strategic vision to the GDS NMC Account. Prior to this role he served as the Office of Naval Research (ONR) Portfolio Manager for Autonomy. As a Portfolio Manager he led ONR's corporate strategy in Autonomy; managed the corresponding investment portfolio; and provided focus on transition, operationalization, and fielding for autonomy and autonomous unmanned systems.

Dr. Coker has also served as a Science Director for Artificial Intelligence, Autonomy, and Unmanned Systems at the Office of Naval Research Global (ONRG) London office. In this capacity he built a program spanning Complex Adaptive Systems and Distributed and Collaborative Autonomy with particular emphasis in Swarm intelligence. His primary responsibilities were to scout and fund cutting-edge research and facilitate collaboration and partnership opportunities between scientists in Europe and U.S. Naval Science & Technology Research Enterprise and academic institutions. He was also responsible for coordinating ONRG S&T activities in Sweden, Italy, and Sub-Saharan Africa.

While in Europe, Dr. Coker also led a grand challenge initiative in partnership with the UK's Alan Turing Institute to develop 'AI Scientists': AI systems capable of making Nobel quality scientific discoveries highly autonomously at a level comparable, and possibly superior to the best human scientists by 2050. Prior to joining ONR and ONRG, Dr. Coker worked at the Naval Information Warfare Center Pacific (NIWC) (formerly Space and Naval Warfare Systems Center Pacific (SPAWAR)) as a Scientist, Project Manager, and Contract Officer Technical Representative (COTR) supporting DARPA's Defense Sciences Office. He also initiated and led various R&D projects centered on distributed and collaborative autonomy, and C2 data synchronization in environments characterized by Disconnected, Intermittent, and Low-Bandwidth (DIL) conditions.

Dr. Coker received his Bachelor of Science degree in Physics from the University at Albany, New York, his Master of Science degree in Electrical Engineering (optical communications) from Northwestern University, and his doctorate in Computer Engineering from Texas A&M University. His Doctoral work focused on the performance and reliability of Nano-electronic Memories.

Amal El Ghazaly

Assistant Professor, Department of Electrical and Computer Engineering
Cornell University
Ithaca, New York
United States

Amal El-Ghazaly is an assistant professor in the department of electrical and computer engineering at Cornell University. Her work combines magnetism and ferroelectricity to create tunable, versatile electronic systems for telecommunications, sensing and actuation. Since joining Cornell, she has been recognized with the NSF CAREER Award for research, the Michael Tien Sustained Excellence and Innovation in Engineering Education Award for teaching, and the Zellman Warhaft Faculty Commitment to Diversity Award as well as the Faculty Champion Award for Junior Faculty both for service. Prior to joining Cornell in 2019, she was a postdoctoral research fellow at the University of California Berkeley, where she was awarded the University of California President's Postdoctoral Fellowship in 2017. Her postdoctoral research explored new possibilities for ultrafast all-electrical switching of magnetic nanodots for faster and more energy-efficient computer memories. She earned a Ph.D. in electrical engineering from Stanford University, where she was funded by both NSF and NDSEG graduate research fellowships as well as the Stanford DARE fellowship until her graduation in 2016. Her Ph.D. research focused on radio frequency devices using magnetic and magnetoelectric thin-film composites for tunable wireless communications. She received her B.S. and M.S. degrees in electrical and computer engineering from Carnegie Mellon University in 2011. She has studied and interned not only in the US, but also abroad in Japan, Egypt, and Nigeria over the course of her undergraduate and graduate degrees. Throughout her career, she has been, and continues to be, deeply passionate about empowering minorities through higher education and stimulating technology development and science and engineering education across the world.

Omowunmi Mary Longe

Senior Lecturer, Department of Electrical and Electronic Engineering Science
Chair of Smart Power and Energy Systems Research Group
University of Johannesburg
Johannesburg, South Africa

Dr. Omowunmi Mary Longe is presently a Senior Lecturer in the department of Electrical and Electronic Engineering Science, University of Johannesburg, South Africa. She is also the Chair of Smart Power and Energy Systems Research Group in the department. She received her Doctor of Engineering (D.Eng) in 2017 from the University of Johannesburg in Electrical and Electronic Engineering Science. Her M.Eng and B.Eng degrees were obtained in Electrical and Electronics Engineering in 2011 and 2001 respectively from the Federal University of Technology, Akure, Ondo State, Nigeria.

She is a Senior Member of the Institute of Electrical and Electronics Engineers (SMIEEE), and Senior Member of the South African Institute of Electrical Engineers (SMSAIEE). She is the pioneering IEEE PES WiP Lead for South Africa and Southern Africa (2019-2021) and the pre-inaugural Vice-Chair of the Association of Professional Women Engineers of Nigeria, Ondo State chapter, Nigeria (2012). She is also a member of other notable professional organisations such as the Society of Women Engineers (SWE), Organization for Women in Science for the Developing World (OWSD), Nigeria Society of Engineers (NSE), and the Association of Professional Women Engineers of Nigeria (APWEN). Dr. O. M. Longe is also registered with the Engineering Council of South Africa (ECSA) and the Council for the Regulation of Engineering in Nigeria (COREN). She was the global Vice Chair of IEEE PES Women in Power executive committee (2022), member of IEEE PES Long Range Planning committee (2022), Chair, Education Committee, IEEE Smart Village – Africa Working Group (2022), and Secretary, Education Committee, IEEE Smart Village – Africa Working Group (2020-2021). She also founded the first IEEE Smart Village student branch in the world at the University of Johannesburg in May 2021. She is also a 2023/2024 mentor in the Global Women's Network for the Energy Transition (GWNET). She has served as co-chair and member of Technical Programme Committees for local and international IEEE conferences.

She has published more than forty papers in referred journals and conference proceedings. She is also a reviewer for ISI-listed journals and referred professional conferences. Her research interests include Renewable Energy Technologies, Microgrid designs, Electromobility, Mitigation of Energy Poverty, Demand Side Management, Distributed Energy Generation and Storage, Smart Energy Management, Gender and Energy Poverty Nexus, and Food-Energy-Water Nexus 4.0.

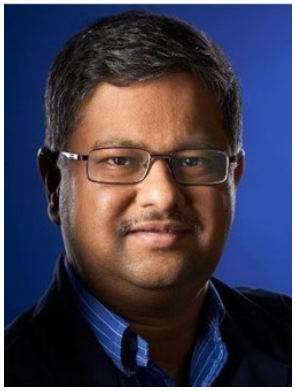
Emmanuel Margolin

Specialist Scientist
Afrigen Biologics (Pty) Ltd
Cape Town, South Africa

Emmanuel Margolin is a South African Virologist with broad interests in vaccinology and infectious diseases. He completed his PhD in Virology at the University of Cape Town (2018), before continuing his research as a postdoctoral fellow in the Viral Vaccine Development Group and Biopharming Research Unit. His main focus during this time was to re-engineer glycosylation and glycosylation-dependent folding pathways in plants to support low-cost production of glycoprotein-based vaccines. In addition to his postdoctoral research he was also employed as a staff scientist in the Viral Vaccine Development Group (University of Cape Town) where he worked as part of a team to develop novel heterologous prime-boost vaccines against HIV. During his tenure in academia he also spent time at the John Innes Centre (Norwhich, UK) and Oxford University (Oxford, UK) for training. He transitioned to industry in 2022 where he was employed by Nant South Africa to drive the conception and implementation of a proprietary vaccine project. He is currently employed by Afrigen Biologics, as a specialist scientist, where he works as part of the mRNA vaccine technology transfer hub. Outside of work he enjoys learning to play the electric guitar, going to gym and surfing when the weather allows.

Abhishek Roy

Senior Staff Scientist
National Renewable Energy Laboratory (NREL)
Washington, D.C.
United States

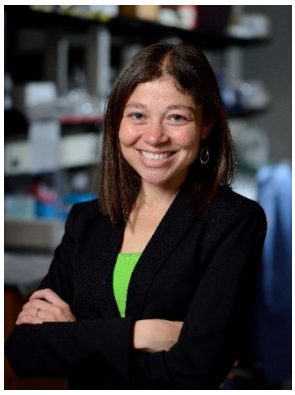


Dr. Abhishek Roy is a scientist, innovator & science policy advocator with deep expertise in applying polymer and separation science fundamentals to address society's critical and pressing sustainability-driven challenges. He had spent over 18 years in academic and industrial separation science research (Dow) in water purification, fuel cell membranes, petrochemical separations, and carbon capture. Currently he is a strategic hire at NREL to shape separation science program for industrial decarbonization, water purification and recovering critical minerals from unconventional sources. Before joining NREL, he was the technical lead for chemical decarbonization effort at Dow and drove several programs around carbon capture and chemical process separation. He is one of the co-inventor of next generation carbon molecular sieve membranes for reducing energy consumption of chemical separation processes.

He spent close to 10 years in water purification industry (Dow Water Process Solutions) where he contributed towards inventing and commercializing a significant portion of today’s commercial reverse osmosis membranes. He was awarded one of the highest recognitions from the Society of Chemical Industry's (Gordon E Moore Medal, 2016) and the presidential Dow sustainability innovator award for developing new generation of membranes that lowered the energy consumption of brackish water

desalination by 30 %. He is a co-inventor of more than 150 global patents and applications and has published 40 peer-reviewed articles, including a cover page in Science and a special feature in PNAS. He was recognized by the National Academy of Science, Medicine, and Engineering as one of the top 18 outstanding young professionals and inducted into the New Voices program (2018) to drive meaningful dialogues on how science, engineering, and medicine are shaping the global future. He is currently one of the Board of Directors for North American Membrane Society.

Jamie Spangler



Assistant Professor, Biomedical Engineering
Johns Hopkins University
Baltimore, Maryland
United States

Dr. Jamie Spangler earned a Bachelor of Science degree in Biomedical Engineering at Johns Hopkins University and went on to earn a Ph.D. in Biological Engineering at MIT. After completing a postdoctoral fellowship at Stanford University School of Medicine, Dr. Spangler launched her independent research group at Johns Hopkins University in July 2017, jointly between the departments of Biomedical Engineering and Chemical & Biomolecular Engineering. Her lab, located in the Translational Tissue Engineering Center at the School of Medicine, applies structural and mechanistic insights to re-engineer existing proteins and design new proteins that therapeutically modulate the immune response. In particular, her group is interested in engineering immune molecules such as cytokines, growth factors, and antibodies for targeted treatment of diseases such as cancer and autoimmune disorders.

Aisha Walcott

Senior Staff Research Scientist and Head of Google Research Kenya
Google
Nairobi, Kenya

Dr. Aisha Walcott is a Senior Staff Research Scientist and head of Google Research Kenya. She has over a decade of experience working in Africa and leading teams to develop innovative technologies that leverage AI and computing to address some of Africa’s most pressing challenges. Her current work focuses on challenges of Africa's food systems and exploring ways in which advances in AI tools can make an impact on food security through building resilience in food systems.

Prior to her time at Google, she was a Senior Technical Staff Member at IBM Research Africa, and led projects in developing AI tools for global health, water management and access, as well as transportation. Currently, she serves on the board for the African Institute for Mathematical Sciences (AIMS) doctoral research program in data science, and is a Workshops co-chair for the International Conference on

Learning and Representations 2023 (ICLR'23) - to be held in Rwanda May 2023. Dr. Walcott earned her PhD in the Electrical Engineering and Computer Science Department at MIT with a focus on robotics.