Speaker and Moderator Biographical Sketches

KRISTEN KURLAND is a Teaching Professor of Architecture, Information Systems, and Public Policy at Carnegie Mellon University's Heinz College of Information Systems and Public Policy and School of Architecture. She is also the president of a local consulting firm that has implemented computer technology programs in numerous organizations. She is a Past President of CMU's Andrew Carnegie Society and recently served as a Trustee of Carnegie Mellon University. Ms. Kurland's research focuses on interdisciplinary collaborations in health, the built environment, geospatial analysis, and 3D data visualization. Projects focus on addressing equity, health, urban design, economic development, sustainability, big data, and smart cities issues. She actively collaborates with healthcare, non-profit, and industry organizations in Pittsburgh and worldwide. Ms. Kurland is the co-author of a series of best-selling GIS workbooks that are used by universities, colleges, and self-learners. Her accomplishments were the focus of chapter in a recent book by Esri Press highlighting twenty-two global women of influence in GIS. She is the recipient of numerous awards, including the 2020 Carlow University Women of Spirit award; the 2012 Esri Health Communications Award; and the 2004 Esri Special Achievement in GIS Award. Ms. Kurland received a B.A. in architectural studies from the University of Pittsburgh.

Dawn Wright (NAS, NAE) is the chief scientist of the Environmental Systems Research Institute (aka Esri), a world-leading geographic information system (GIS) software and data science company. She was appointed to this post in October 2011 after 17 years as a professor of geography and oceanography at Oregon State University (OrSt). As Esri Chief Scientist, Dr. Wright reports directly to the Esri CEO with a mandate to strengthen the scientific foundation for Esri software and services, while representing the company to the international scientific community. She maintains an affiliated faculty appointment as Professor of Geography and Oceanography in the College of Earth, Ocean, and Atmospheric Sciences at OrSt. Dr. Wright's research interests include geospatial data science; seafloor mapping, coastal/ocean informatics, and science communication. She has authored or co-authored more than 180 articles and 13 books on marine geographic information systems, hydrothermal activity and tectonics of mid-ocean ridges, and coastal/ocean informatics. Dr. Wright has participated in over 20 oceanographic research expeditions worldwide, including 10 legs of the Ocean Drilling Program, three dives in the deep submergence vehicle Alvin and twice in the Pisces V. Her recent advisory board service, includes the Science Advisory the NOAA Science Advisory Board, the Ocean Studies Board of the National Academies of Sciences, Engineering, and Medicine, the Board of COMPASS Science Communication Inc., the Ocean Discovery XPRIZE, and many journal editorial boards. She is a a member of the National Academy of Sciences and the American Academy of Arts & Sciences and a fellow of the American Association for the Advancement of Science, the Geological Society of America, the California Academy of Sciences, and Stanford University's Leopold Leadership Program (now known as the Earth Leadership Program), as well as a former Oregon Professor of the Year. She holds an Individual Interdisciplinary Ph.D. in physical geography and marine geology from UC-Santa Barbara, an M.S. in oceanography from Texas A&M, and a B.S. cum laude in geology from Wheaton College (Illinois).

Trisalyn Nelson is the Jack and Laura Dangermond Endowed Chair of Geography at UC Santa Barbara and is currently serving as Department Chair. Dr. Nelson and her team develop and apply spatial and spatial-temporal analyses to address applied questions in a wide range of fields from ecology to health.

She has studied mountain pine beetle infestations, grizzly bears, and environmental change. Currently, her research focuses on active transportation, and the use of big data and analytics to better plan cities.

Renée Sieber is an associate professor at McGill University in Montreal. She has 20+ years experience conducting research at the intersection of civic empowerment and computational technologies. She also conducts research on natural language processing and computer vision feature detection. She is best known for her research and practice on public participation in GIS. She currently researches public participation in GeoAI. She has advised on the design of two AI risk assessment tools. She co-hosts the AI in Canadian Municipalities Community of Practice, entering its 3rd year. She serves on the IEEE working group on government procurement of AI. She is a fellow of the American Association of Geographers and she was awarded a lifetime achievement award for GIScience from the Canadian Association of Geographers.

Shaowen Wang is Professor and Head of the Department of Geography and Geographic Information Science; and Affiliate Professor of the Department of Computer Science, Department of Urban and Regional Planning, and School of Information Sciences at the University of Illinois Urbana-Champaign (UIUC). He is a Faculty Fellow of the Office of the Vice Chancellor for Research and Innovation at UIUC. He has served as Founding Director of the CyberGIS Center for Advanced Digital and Spatial Studies at UIUC since 2013. He served as Associate Director of the National Center for Supercomputing Applications for CyberGIS from 2010 to 2017. His research interests include geographic information science and systems (GIS), advanced cyberinfrastructure and cyberGIS, complex social and environmental problems, computational and data sciences, geospatial science and technology, high-performance and distributed computing, and spatial analysis and modeling.

Hendrik Hamann is the IBM Chief Scientist and Global Strategy leader for Climate and Sustainability at the IBM T.J. Watson Research Center. Dr. Hamann has been leading the Physical Analytics program in IBM, which explores the intersection of big Internet of Things data, physical modeling, data analytics, machine-learning, and artificial intelligence. Since 2015 his focus has been as a Distinguished Researcher on developing advanced geospatial capabilities and technologies, for example, in precision agriculture and adjacent spaces and in applying advanced artificial intelligence and machine learning to a geospatial data at scale. Dr. Hamann is an IBM Master Inventor and holds more than 140 patents. His NASEM committee service is related to technology strategies and development. Dr. Hamann was awarded the 2016 AIP Prize for Industrial Applications of Physics. He is a fellow of the American Physical Society (APS) and a member of the New York Academy of Sciences. He earned his Ph.D. with summa cum laude from the University of Göttingen, Germany.

Yiqun Xie is an Assistant Professor in GIS at the University of Maryland. He received his PhD in Computer Science at the University of Minnesota. His research addresses challenges facing AI for spatial data, including heterogeneity, sparse training data, and locational bias. His work has received multiple best paper awards from flagship conferences, including IEEE International Conference on Data Mining, SIAM International Conference on Data Mining, ACM SIGSPATIAL, and SSTD. His work was also highlighted by the Great Innovative Ideas at the Computing Community Consortium, Computing Research Association. His research is funded by the NSF, NASA, Google, etc.

Xiaoxiang Zhu is currently the Chair Professor for Data Science in Earth Observation at the Technical University of Munich (TUM), Germany. Xiaoxiang's research focuses on artificial intelligence and data

science in Earth observation. She develops innovative signal processing and machine learning methods, and big data analytics solutions to extract highly accurate large-scale geo-information from big Earth observation data. Her team aims at tackling societal grand challenges, e.g. Global Urbanization, UN's SDGs and Climate Change, thus, works on solutions that can scale up for global applications.

Song Gao is an Associate Professor in Geographic Information Science at the University of Wisconsin-Madison, where he leads the Geospatial Data Science Lab. He holds a Ph.D. degree in Geography from the University of California, Santa Barbara. His main research interests include GeoAI and Human Mobility. He is the author of over 100 peer-reviewed research articles, published in prominent journals such as PNAS, IJGIS, and Annals of AAG. He is the PI of multiple research grants from the National Science Foundation, Wisconsin Alumni Research Foundation and industry partners. Dr. Gao currently serves as the Associate Editor of IJGIS, the Vice Chair of the AAG Specialty Group in GIS, the Communications Director of UCGIS, and the Chair of CPGIS Board. He is the recipient of the Waldo Tobler Young Researcher Award in GIScience, UCGIS Early/Mid-Career Research Award, AAG Spatial Analysis & Modeling Emerging Scholar Award, and among the Web of Science Top 1% Highly Cited Researchers list of 2022.

Bo Zhao, an Associate Professor at the University of Washington, Seattle's Department of Geography, earned his Ph.D. at The Ohio State University in 2015. His research adopts a humanistic lens toward emerging geospatial technology, focusing on enhancing its fairness, reliability, and accessibility. In his recent work on deepfake geography and location spoofing, Dr. Zhao urges GIScientists to address the risks and biases in GeoAI within the 'post-truth' era. Moreover, he proposed a research agenda termed "Humanistic GIS", which underscores the importance of integrating personal experiences into GIS, thereby fostering an ethics of care in designing and utilizing GIS applications.

Oceana Francis is a Professor in the Department of Civil and Environmental Engineering and Sea Grant Program at the University of Hawai'i at Mānoa (UHM). Her research focuses on building the resilience of urban communities and infrastructure systems from hydrodynamic hazards, circulation and transport in nearshore regions and oceans, wave hydrodynamics, sea-level rise, and the effects of sea ice on oceanic processes. She is a licensed civil engineer in both Alaska and Hawaii. Some of her awards include the Hi Chang Chai Excellence in Teaching Award (2022) from the UHM College of Engineering, the National Center for Science and Civic Engagement's Inaugural Award (2015) for Exemplary Multi-Institutional and Regional Collaborations in the Service of Citizen Science, and the Young Engineer of the Year Award (2010) from the Fairbanks Chapter of the Alaska Society of Professional Engineers. Some of her professional service currently includes serving as editor for American Meteorological Society's Journal of Atmospheric and Oceanic Technology, faculty advisor for the American Society of Civil Engineers (ASCE) student chapter, and founder and president of the Society of Native Hawaiian Engineers (SNHE). She has organized multiple expeditions in Alaska and Hawaii with the goal of studying local sea wave (SW) conditions. She has made significant contributions to science and engineering for the State of Hawaii, which includes development of the Coastal Road Erosion Susceptibility Index (CRESI), the Ocean Hazards Database (OHD) and the Coastal Vulnerability Index GIS modeling of the Hawaiian Islands. She has also made significant contributions in Alaska towards the understanding of the wave climate and sea ice rheology. Dr. Francis received a B.S. in physics and astronomy from the University of Nebraska Lincoln, a B.S. and M.S. in civil engineering from the University of Alaska Anchorage, and a Ph.D. in atmospheric sciences from the University of Alaska Fairbanks.

Manil Maskey is a Senior Research Scientist with NASA. He leads the Advanced Concepts team, within the IMPACT team at Marshall Space Flight Center and Science Mission Directorate's Artificial Intelligence initiative at NASA HQ. His research interests include computer vision, visualization, knowledge discovery, cloud computing, and data analytics. Dr. Maskey's career spans over 23 years in academia, industry, and government. Dr. Maskey is an adjunct faculty at the University of Alabama in Huntsville, a senior member of Institute of Electrical and Electronics Engineers (IEEE), chair of the IEEE Geoscience and Remote Sensing Society (GRSS) Earth Science Informatics Technical Committee.

Catherine D'Ignazio is an Associate Professor of Urban Science and Planning in the Department of Urban Studies and Planning at MIT. She is also Director of the Data + Feminism Lab which uses data and computational methods to work towards gender and racial equity, particularly as they relate to space and place. D'Ignazio is a scholar, artist/designer and hacker mama who focuses on feminist technology, data literacy and civic engagement. She has run reproductive justice hackathons, designed global news recommendation systems, created talking and tweeting water quality sculptures, and led walking data visualizations to envision the future of sea level rise. With Rahul Bhargava, she built the platform Databasic.io, a suite of tools and activities to introduce newcomers to data science. Her book from MIT Press, Data Feminism, co-authored with Lauren Klein, charts a course for more ethical and empowering data science practices. Her research at the intersection of technology, design & social justice has been published in the Journal of Peer Production, the Journal of Community Informatics, and the proceedings of Human Factors in Computing Systems (ACM SIGCHI). Her art and design projects have won awards from the Tanne Foundation, Turbulence.org and the Knight Foundation and exhibited at the Venice Biennial and the ICA Boston.

Andrew Turner is the Director and CTO of Esri R&D in Washington, DC, developing new technology for open data, civic technology, and geospatial web collaboration. Andrew's work focuses on cross-domain collaboration and democratizing data-driven decisions by creating open tools for cartography and analysis. He wrote Introduction to Neogeography based on my experiences and vision for a collaborative world improved with open data sharing. His teams are developing new technologies for government and citizen collaboration to build communities. This includes the global ArcGIS Hub for open access to authoritative data, as well as open-source and interactive tools and applications to build and share insights and solutions. He is an active member in many organizations developing and supporting open standards such as the OpenStreetMap, Open Geospatial Consortium, Open Web Foundation, OSGeo, and World Wide Web Consortium. Andrew is also the co-founder of CrisisCommons, a global community of volunteers leveraging technology to assist in building solutions for disaster response, recovery and rebuilding.

Aaron Burciaga is a renowned data scientist, AI engineer, author and advisor. As a seasoned technology and business leader in both startup and enterprise settings, he has focused his career on delivering efficiency and value through automation, data science, machine learning, Artificial Intelligence, blockchain, quantum computing, and emerging concepts and innovative technologies. Aaron's roles have included Senior Director Analytics & Artificial Intelligence at ECS Technology, Global Operation Director Analytics & Artificial Intelligence at HCL Technologies, Vice President Data Science & AI at Booz Allen Hamilton, and Global Analytics Platform Lead at Accenture. Aaron was a Marine Corps officer and Iraq war veteran and was the head operations research analyst and director of an operations analysis activity at the Pentagon, supporting the Marine Corps Headquarters. Aaron is a Forbes contributor, frequently invited keynote and speaker, and Certified Analytics Professional (CAP). Aaron received his M.S. Operations Research from the Naval Postgraduate School and his B.S. from the US Naval Academy.