

Addressing Inaccurate and Misleading Information about Biological Threats through Scientific Collaboration and Communication in Southeast Asia

Committee

Dietram A. Scheufele

Co-Chair

Dietram A. Scheufele is the Taylor-Bascom Chair in Science Communication and Vilas Distinguished Achievement Professor at the University of Wisconsin-Madison and in the Morgridge Institute for Research, and a Distinguished Research Fellow at the University of Pennsylvania's Annenberg Public Policy Center. Scheufele's work examines the social effects of emerging science and technology. He is an elected member of the German National Academy of Science and Engineering, and a lifetime associate of the U.S. National Research Council. Scheufele is also an elected fellow of the American Association for the Advancement of Science, the International Communication Association, and the Wisconsin Academy of Sciences, Arts & Letters. Scheufele currently co-chairs the National Academy of Sciences, Engineering, and Medicine's Standing Committee on Advancing Science Communication, and serves on NASEM's Division of Behavioral and Social Sciences and Education (DBASSE) Advisory Committee, the Board on Health Sciences Policy, and the Division on Earth and Life Studies (DELS) Advisory Committee. Since 2012, he has co-organized four NASEM Colloquia on the Science of Science Communication. He earned a Ph.D. in Mass Communications (1999) with a Ph.D. minor in Political Science from the University of Wisconsin-Madison.

Abhi Veerakumarasivam

Co-Chair

Professor Abhi Veerakumarasivam, Dean of the School of Medical and Life Sciences at Sunway University is a University of Cambridge-trained geneticist, educator and science communicator. His research in genetics involves the elucidation of components of the regulatory pathways that drive tumour recurrence and invasion as well as dissecting Asian genetic variations that confer differences in disease-risk and response to therapy. In 2016, he became the first Asian to be crowned as the Best Science Communicator at the International Famelab Finals at the Cheltenham Science Festival, UK. He is currently the Co-Chair of the ASEAN Young Scientists Network that represents top young scientists in the region who not only demonstrate academic excellence but also contribute towards nation-building through STEM promotion and advocacy. He also currently chairs the International Network for Government Science Advice Asia that aims to support the use of scientific evidence in informing policy at all levels of government. He also sits on various national and regional science and educational policy committees and has co-authored various policy papers and reports. He also initiated and led Malaysia's first nationwide programme on Responsible Conduct of Research (inspired by US-NASEM's initiative in the region) to create awareness and educate the Malaysian scientific community on the importance of research integrity.

David B. Allison

Member

David B. Allison, Ph.D., is Dean, Distinguished Professor, and Provost Professor at the Indiana University Bloomington School of Public Health. Prior, he was Distinguished Professor, Quetelet Endowed Professor, and Director of the NIH-funded Nutrition Obesity Research Center (NORC) at the University of Alabama at Birmingham. He completed his Ph.D. in Clinical and School Psychology at Hofstra University in 1990. He has been continuously funded by the NIH as a principal investigator for over 25 years and has authored over 600 scientific publications. Much of his research, teaching, and writing focuses on promoting rigor, reproducibility, and transparency, in scientific research and communication. He served on the NASEM Committee on Reproducibility & Replicability in Science, and subsequently testified before Congress on the report (see: <https://www.congress.gov/event/116th-congress/house-event/110203>). In 2012 he was elected to the National Academy of Medicine of the United States National Academies. His own research has ranged from laboratory model organism research to human clinical trials and epidemiology. He has received many awards, including the 2018 Harry V. Roberts Statistical Advocate of the Year Award from the American Statistical Association, the 2002 Lilly Scientific Achievement Award from The Obesity Society, the 2002 Andre Mayer Award from the International Association for the Study of Obesity, the 2009 TOPS research achievement award from The Obesity Society, and the National Science Foundation Administered 2006 Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM). In 2014, he was selected as the Atwater Lecturer by the USDA and the American Society for Nutrition. The W.O. Atwater Lectureship was established in 1968 to honor the memory of Wilbur Olin Atwater (1844-1907) and to recognize scientists who have made unique contributions toward improving the diet and nutrition of people around the world. He recently (2020) received \$15 million in philanthropic funding to serve as PI of Aegis, a nationally vital COVID-19 immunity study (see: <https://tinyurl.com/y9wvn7vv>). In 2020, he was awarded both the Don Owen Award from the American Statistical Association's San Antonio Chapter for excellence in research, statistical consultation, and service to the statistical community and the Pfizer Award from the American Society of Nutrition. Dr. Allison is known as a staunch advocate for rigor in research methods and the uncompromising unvarnished truthful communication of research findings.

Sonia Ben Ouagrham-Gormley

Member

Sonia Ben Ouagrham-Gormley is an Associate Professor in the Schar School of Policy and Government at George Mason University. She holds affiliations with GMU's Biodefense Program, Center for Global Studies, Center for Security and Policy Studies, Institute for Sustainable Earth, and the Department of History and Art History's Master of Arts in Interdisciplinary Studies (MAIS) program.

She received her PhD in Development Economics from the Ecoles des Hautes Etudes en Sciences Sociales (EHESS) in Paris; a graduate degree in Strategy and Defense Policy from the Ecoles des Hautes Etudes Internationales in Paris; a master's degree in Applied Foreign Languages (triple major in economics, law, and foreign languages—Russian, and English) from the University of Paris X-Nanterre, and a dual undergraduate degree in Applied Foreign Languages and English Literature from the University of Paris X-Nanterre. She is fluent in French, English, Russian, and spoken Arabic.

Prior to joining the GMU faculty in 2008, Professor Ben Ouagrham-Gormley was a Senior Research Associate with the Monterey Institute of International Studies' James Martin Center for nonproliferation Studies (CNS). While at CNS, she spent two years at the CNS Almaty office in Kazakhstan, where she studied and helped establish international scientific collaborative projects, notably in the field of biosurveillance, under programs funded by the US Department of Defense (Cooperative Threat Reduction Program) and Health Canada. She has expertise in the social construction of technical knowledge and knowledge transfer as they relate to emerging biotechnologies and bioweapons developments. Her current research focuses on using social science methodologies to analyze the social, ethical, and security implications of various biothreats and produce evidence-informed policy recommendations.

Lay Ching Chai

Member

Lay Ching Chai, Ph.D., is a Senior Lecturer at the Institute of Biological Sciences, Faculty of Science, University of Malaysia, Kuala Lumpur. She is the Chair of the Young Scientists Network- Academy of Sciences Malaysia. She is an active researcher with her research focus on improving the safety and security of food system in the region. Dr Chai has established numerous collaborative researches with the food industry and governmental agencies to achieve her scientific endeavor. She was appointed as the scientific advisor of International Life Science Institute Southeast Asia region for her active research and achievement in the food safety field. Dr Chai is also a strong advocate for research integrity and is one of the key players in pushing for responsible conduct of research in Malaysia and the region. She is one of the main-authors of the first Malaysian Module for Responsible Conduct of Research, which was published in 2018. In 2018, Dr Chai was awarded the L'Oreal-UNESCO for Woman in Science Malaysia award.

Jeanne Fair

Member

Jeanne Fair is a scientist in Biosecurity & Public Health Group at Los Alamos National Laboratory with a focus in epidemiology and animal disease ecology. In 2009, Fair was a lead analyst for the Department of Homeland Security's modeling of the H1N1 influenza pandemic our Nation's Critical Infrastructure. From 2013-2016 she was on assignment as a Science Program Manager with the Defense Threat Reduction Agency's Biological Threat Reduction Program working with Central Asia and the Middle East. Dr. Fair's research interest is to support biosurveillance and zoonotic infectious disease detection capabilities in wildlife, animals, and humans. Dr. Fair is also dedicated to cooperative biological engagement for strengthening capabilities for biosurveillance around the world. This includes building research collaborative networks and learning and sharing how to foster strong scientific collaborations and research partnerships. Dr. Fair received her Ph.D., from the University of Missouri – St. Louis in Biology and her M.S. in Wildlife Biology from Colorado State University

Le Thi Thu Hien

Member

Working at the Institute of Biotechnology (IBT), Vietnam Academy of Science and Technology (VAST) from 1995 to 2012, Hien has actively participated in and completed a number of professional training programs both in Vietnam and abroad, including Master of Science (Vietnam National University, University of Science, 1997-1998), PhD (IBT, VAST 1999-2003), internship (Cornell University, USA, 11/2000-10/2001; Mars Center for Cocoa Science, Brazil, 7-8/2011), postdoctoral (University of California, Davis, USA, 6/2008-7/2009). In 2011, she was promoted to senior researcher. Since 2012, Hien has been appointed as Deputy Director of the Institute of Genome Research. She has served as Associate Editor of the Vietnam Journal of Biotechnology since 2016. In 2019, Hien has been selected to be a member of the Ad Hoc Technical Expert Group on Synthetic Biology by the Secretariat of the Convention on Biological Diversity. Hien's research interest is the application of DNA technologies to study biodiversity and develop genetically modified organisms. She is also involved deeply in the development of Vietnamese national biosafety regulation and framework.

Pamela J. Hinds

Member

Pamela J. Hinds is Fortinet Founders Chair and Professor of Management Science & Engineering, Co-Director of the Center on Work, Technology, and Organization and on the Director's Council for the Hasso Plattner Institute of Design.. She studies the effect of technology on teams, collaboration, and innovation. Pamela has conducted extensive research on the dynamics of cross-boundary work teams, particularly those spanning national borders. She explores issues of culture, language, identity, conflict, and the role of site visits in promoting knowledge sharing and collaboration. She has published extensively on the relationship between national culture and work practices, particularly exploring how work practices or technologies created in one location are understood and employed at distant sites. Pamela also has a body of research on human-robot interaction in the work environment and the dynamics of human-robot teams. Most recently, Pamela has been looking at the changing nature of work in the face of emerging technologies, including the nature of coordination in open innovation, changes in work and organizing resulting from 3D-printing, and the work of data analysts. Her research has appeared in journals such as Organization Science, Research in Organizational Behavior, Academy of Management Journal, Academy of Management Annals, Academy of Management Discoveries, Human-Computer Interaction, Journal of Applied Psychology, Journal of Experimental Psychology: Applied, and Organizational Behavior and Human Decision Processes. Pamela is a Senior Editor of Organization Science. She is also co-editor with Sara Kiesler of the book Distributed Work (MIT Press). Pamela holds a Ph.D. in Organizational Science and Management from Carnegie Mellon University.

Shirley Ho

Member

Shirley S. Ho is Professor of Communication in the Wee Kim Wee School of Communication and Information at Nanyang Technological University (NTU), Singapore. She is concurrently Research Director for Arts, Humanities, Education and Social Sciences in the President's Office at NTU. She is an internationally renowned scholar in science communication, in which her research focuses on understanding how human values, media, and other advanced modes of communication shape public attitudes toward emerging science and technologies, particularly in Southeast Asia. Her recent studies investigated factors motivating scientists' public engagement and their roles in tackling misinformation about science. Prof Ho obtained her Bachelor of Communication Studies (1st Class Honors) at Nanyang Technological University in 2002, and her MA and PhD degrees in Communication from the University of Wisconsin-Madison in 2005 and 2008, respectively. A multiple award-winning researcher, Prof Ho has received numerous prestigious Best Published Article of the Year Awards and Top Faculty Paper Awards from professional associations such as the International Communication Association and the Association for Education in Journalism and Mass Communication (AEJMC). She is the 2018 recipient of the Hillier Krieghbaum Under-40 Award, conferred by AEJMC for outstanding achievements in research, teaching, and public service. She is the Editor-in-Chief of the journal Environmental Communication, a member of the AEJMC Elected Standing Committee on Research, and a board of director at the International Environmental Communication Association.

Giovanni Luca Ciampaglia

Member

Giovanni Luca Ciampaglia is an assistant professor at the Department of Computer Science and Engineering at the University of South Florida (USF). He is interested in all problems arising from the interplay between people and computing systems, in particular the integrity of information in cyberspace and the trustworthiness and reliability of social computing systems. At USF, he leads the Computational Sociodynamics Laboratory. Prior to joining USF he was at Indiana University as an assistant research scientist at the Indiana University Network Science Institute (IUNI), and before that as a postdoctoral fellow at the Center for Complex Networks and Systems Research, an analyst for the Wikimedia Foundation, and a research associate at the Professorship of Computational Social Science at the Swiss Federal Institute of Technology in Zurich. His work has been covered in major news outlets, including the Wall Street Journal, Wired, MIT Technology Review, NPR, and CBS News, to cite a few.

Rebecca Moritz

Member

Rebecca Moritz, MS, CBSP, SM(NRCM) Biosafety Director: Rebecca Moritz is a biosafety and biosecurity expert with a Bachelor of Science in Bacteriology and a Master of Science in Medical Microbiology and Immunology from the University of Wisconsin-Madison. She serves as the Biosafety Director at Colorado State University and is also the Responsible Official for the university's Select Agent Program. Previously she was the Responsible Official and media spokesperson for the University of Wisconsin-Madison Select Agent Program. She was part of the team that responded to all media and community inquiries and coordinated outreach efforts. In addition, she was chair of UW-Madison's Dual Use Research of Concern Subcommittee, served as the Institutional Contact for Dual Use Research, and was a lead member of the UW-Madison Biosecurity Task Force. She is a Certified Biosafety Professional with the American Biological Safety Association International (ABSA) and a former ABSA Councilor. Currently, Moritz is a member of multiple committees and co-chair of the Executive Steering Committee for ABSA International's 2021 Biosecurity Symposium. Additionally, she is a Specialist Microbiologist with the National Registry of Certified Microbiologists. Moritz has conducted research in both private sector and academic laboratories, including in high containment laboratories.

Wibool Piyawattanametha

Member

Dr. Piyawattanametha received a Ph.D. degree in Electrical Engineering from the University of California, Los Angeles, USA in 2004. From 2005 to 2009, he was with the Bio-X Program, Stanford University, Stanford, CA, USA as a senior scientist and later become a research associate in 2010. Currently, he is a professor at the Department of Biomedical Engineering and a Director of Advanced Imaging Research (AIR) Center, King Mongkut's Institute of Technology Ladkrabang, Bangkok, Thailand. He has authored or co-authored over 200 peer-reviewed publications, has contributed 7 book chapters and 5 patents. His h-index is 27. He gave over 70 keynote or invited talks at prestigious meetings around the world. He is currently serving a conference chair for the Society of Photo-Optical Instrumentation Engineers (SPIE) in MOEMS and Miniaturized Systems XVIII of The Photonics West Conference, California, USA. In 2010, he co-founded and served as an executive member of the Global Young Academy (GYA) based in Berlin, Germany. In 2011, he received the European Union Erasmus Mundus scholarship. In 2013, he was selected by the World Economic Forum, Geneva, Switzerland to be one of the 40 top scientists. In 2014, he was selected to receive the prestigious Fraunhofer-Bessel Research Award from the Alexander von Humboldt Foundation, Berlin, Germany. In 2015, he was awarded the Newton Fund Researcher Links from the British Council, the United Kingdom. In 2017, he was selected to be a fellow in Leaders in Innovation Fellowships (LIF) from The Royal Academy of Engineering, London, United Kingdom. He has been appointed as an Adjunct Professor, Institute for Quantitative Health Sciences & Engineering (IQ), Michigan State University, Michigan, USA since 2018. In 2021, he has been elected to be the Society of Photo-Optical Instrumentation Engineers (SPIE) Fellow Status.

Herawati Sudoyo

Member

Herawati is the Deputy for Fundamental Research of Eijkman Institute. She is also the head of Forensic DNA Laboratory and Principal Investigator at Genome Diversity and Diseases Laboratory. She specializes on mitochondria DNA as a powerful genetic markers for population studies. She has specific interests on fundamental information concerning the formation of functional mitochondrial in order to understand mitochondrial diseases and its diagnostic and therapeutic implications. Herawati also has big passion on studying the genetic diversity of Indonesian populations, particularly on its association with disease resistance and susceptibility as well as tracing human migration. Her research team is dubbed "Gene Hunter" and has been collecting samples from many places throughout the archipelago, including very remote areas. Using DNA markers, Herawati also played significant role in perpetrator identification of the 2004 Australian Embassy bombing case which subsequently led her to establish the Forensic DNA Laboratory in Eijkman Institute. She also initiates research on Indonesian wildlife forensics and population studies. Herawati is an active member of various local and international organization, consortium, and scientific panel on forensics DNA, biorisk and biosafety, human genetics, and molecular biology network. Herawati is an Honorary Associate Professor from Sydney Medical School, The University of Sydney, Australia.

Seema Yasmin

Member

Seema Yasmin is an Emmy Award-winning journalist, medical doctor, and author. Yasmin trained in medicine at the University of Cambridge and in journalism at the University of Toronto. She worked as a hospital doctor in the U.K.'s National Health Service before serving as an officer in the U.S. government's Epidemic Intelligence Service at the Centers for Disease Control and Prevention where she investigated disease outbreaks around the world and served as principal investigator for a number of epidemiologic studies. Yasmin is director of the Stanford Health Communication Initiative, clinical assistant professor in the Department of Medicine (division of primary care and population health) at Stanford University, and visiting assistant professor of health crisis management and communication at the Anderson School of Management at UCLA. She teaches advanced clinical communication skills to faculty and medical students, health and science journalism, and global health storytelling. Her research focuses on the spread of misinformation and disinformation about disease and the ways that false information can fuel epidemics and impact public health. Working at the intersection of epidemiology and communications, she is mapping health information equity across the U.S. to understand how access to information—now understood to be a determinant of health—influences health outcomes. Yasmin was selected for the John S. Knight Fellowship in Journalism Innovation at Stanford University in 2017 where she studied the spread of false news during epidemics. Previously, she was a science reporter at The Dallas Morning News, and professor of public health at the University of Texas at Dallas. Her writing on the spread of disease disinformation appears in The New York Times, WIRED, Scientific American, and other outlets.

Yasmin was a finalist for the Pulitzer Prize in breaking news in 2017 for her team's coverage of a mass shooting. Her unique combined expertise in epidemics, science communication, and journalism has been called upon by the Aspen Institute and the Skoll World Forum. She offered expert testimony to the Presidential Commission for the Study of Bioethical Issues during its investigation of the role of journalism during the 2014-2016 Ebola epidemic. Yasmin is the recipient of two writing awards from the Pulitzer Center on Crisis Reporting, as well as writing scholarships and artist residencies from the Mid Atlantic Arts Council, The Millay Colony for the Arts, and others. Her first book, *The Impatient Dr. Lange*, is the biography of a pioneering AIDS scientist who was killed on Malaysia Airlines flight MH17 when it was shot down over the Ukraine in 2014. She is the author of three other books including a popular science title about the spread of health misinformation and disinformation.