#### GLOBAL HEALTH ANNUAL SYMPOSIA

### INNOVATING FOR **A HEALTHY WORLD**



## TUESDAY, APRIL 22, 2025

9:30 A.M. - 12:30 P.M. CST

VIRTUAL SYMPOSIUM PARTNERS WITH



Baylor College of Medicine

## Agenda

| 9:30 AM - 9:40 AM<br>Welcome and Opening Remarks | Sharmila Anandasabapathy, MD, AGAF<br>VP and Senior Associate Dean, Global Programs at Baylor College of Medicine  |
|--|--|
| 9:40 AM - 10:10 AM<br>Keynote Address            | AI-Enabled Point-of-Care Ultrasound: The Stethoscope of the Future<br>Sachita Shah, MD<br>VP of Global Health and Lead for Women's Health at Butterfly Network, Professor of Emergency<br>Medicine, and Adjunct Professor of Global Health at the University of Washington   |
| 10:10 AM - 11:00 AM<br>Panel Session             | <ul> <li><b>3D Printing from Devices to Organs: All the Things We Can Do</b></li> <li><b>Daniel Rosen, MD</b> (Moderator)</li> <li>Professor of Pathology at The Michael E. DeBakey VA Medical Center and Baylor College of Medicine, Director of Global Pathology, and Co-Director of the Human and Tissue Acquisition in Pathology Core (HTAP)</li> <li><b>Ellen Roche, PhD</b></li> <li>Professor at the Institute for Medical Engineering and Science and the Department of Mechanical Engineering at the Massachusetts Institute of Technology</li> <li><b>Jared Howell, MS, CPO, LPO, FAAOP</b></li> <li>Director of the Center for Prosthetic and Orthotic Care and Clinical Innovation at Baylor College of Medicine, Head of the BCM-Ottobock Affiliation, and Director of Global Rehabilitation Innovation</li> <li><b>Kevin Vos, PhD</b></li> <li>Director of Pipeline Management at Bold Therapeutics</li> </ul> |
| 11:00 AM – 11:10 AM                              | Break  |
| 11:10 AM - 12:00 PM<br>Panel Session             | Al and Global Health: Ethics and Policy Implications<br>Jared Smith, PhD, MA (Moderator)<br>Clinical Ethics Fellow at Baylor St. Luke's Medical Center and the Center for Medical Ethics and<br>Health Policy at Baylor College of Medicine<br>David Pynadath, PhD<br>Executive Director for Research Initiatives, The Ken Kennedy Institute, Rice University<br>Joan LaRovere, MD, MSc, MBA<br>Interim Chief Medical Officer, Boston Children's Hospital, Assistant Professor of Pediatrics,<br>Harvard Medical School, and Co-Founder and President, Virtue Foundation<br>Kenneth R. Fleischmann, PhD<br>Professor in the School of Information at UT Austin, Founding Chair of Good Systems: Ethical Al<br>at UT Austin, Founding Director of Undergraduate Studies for the iSchool's B.A./B.S. in<br>Informatic, and Founding Editor-in-Chief of the ACM Journal on Responsible Computing.                               |
| 12:00 PM - 12:30 PM<br>Keynote Address           | Digital Innovations in Primary Healthcare<br>Smisha Agarwal, PhD, MBA, MPH, BDS<br>Director of the Center for Global Digital Health Innovation and Associate Professor in the<br>Department of International Health at the Johns Hopkins Bloomberg School of Public Health   |
| 12:30 PM   | Closing Remarks  |
|  |  |





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### **Keynote Speakers**

### AI-Enabled Point-of-Care Ultrasound: The Stethoscope of the Future

#### Sachita Sha<mark>h</mark> MD

VP of Global Health and Lead for Women's Health at Butterfly Network, Professor of Emergency Medicine, and Adjunct Professor of Global Health at the University of Washington

### Digital Innovations in Primary Healthcare

#### Smisha Agarwal PhD, MBA, MPH, BDS

Director of the Center for Global Digital Health Innovation and Associate Professor in the Department of International Health at the Johns Hopkins Bloomberg School of Public Health





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### **3D Printing from Devices to Organs:** All the Things We Can Do

This panel will explore the revolutionary impact of 3D printing in medicine, including customized medical devices and the potential for printing functional human organs. Key topics include customization, precision, and accessibility improvements in medical devices; bioprinting techniques and current applications in tissue engineering; and future prospects for printing human organs.



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### Al and Global Health: Ethics and Policy Implications

Artificial intelligence (AI) is transforming healthcare delivery through innovations in diagnostics, prediction, and personalized care—but it raises ethical concerns as well. This panel explores the ethical and policy challenges of using AI in global health, from algorithmic bias and health equity to the use of AI agents in care delivery. Panelists will discuss responsibility gaps, the role of humans in the loop, and the need for trust, transparency, and explainability in high-stakes healthcare decisions.



Jared Smith, PhD, MA

Clinical Ethics Fellow at Baylor St. Luke's Medical Center and The Center for Medical Ethics and Health Policy at Baylor College of Medicine

**David Pynadath, PhD** Executive Director for Research Initiatives, The Ken Kennedy Institute, Rice University

Panelist

Panelist



#### Joan LaRovere, MD, MSc, MBA

Interim Chief Medical Officer, Boston Children's Hospital, Assistant Professor of Pediatrics, Harvard Medical School, and Co-Founder and President, Virtue Foundation



#### Kenneth Fleischmann, PhD

Professor in the School of Information at UT Austin, Founding Chair of Good Systems: Ethical AI at UT Austin, Founding Director of Undergraduate Studies for the iSchool's B.A./B.S. in Informatic, and Founding Editor-in-Chief of the ACM Journal on Responsible Computing









Welcome and Opening Remarks



#### Sharmila Anandasabapathy, MD, AGAF

Sharmila Anandasabapathy, MD is a Professor of Medicine in Gastroenterology, Senior Associate Dean, and Vice President, Global Programs at Baylor College of Medicine. She oversees Baylor's international academic and research programs. She is also an Adjunct Professor of Bioengineering at Rice University, Houston.

Dr. Anandasabapathy holds a BA in English literature from Yale University, CT, and an MD with Distinction in Research (Molecular Biology) from the Albert Einstein College, NY. She trained at New York-Presbyterian Hospital-Weill Cornell Medical Center (Internal Medicine) and Mount Sinai (Gastroenterology).

Dr. Anandasabapathy's research focus involves the development and validation of novel technologies for the diagnosis and management of gastrointestinal cancer. She has a track record of continuous, uninterrupted NIH funding, holds multiple NIH grants, including a U54 and 3 R01s, and leads multiple international clinical trials focused on innovative technological approaches to addressing cancer and other diseases in low-resource global settings. These involve the development of remote medical technologies such as augmented/virtual reality-based platforms for surgical or endoscopic training, portable, battery-operated technologies for medical management in low-resource environments and the development of safet, ethical Al-assisted digital healthcare platforms for healthcare. These partnerships involve close collaborations with National Aeronautics and Space Administration (NASA), USAID, multiple US and international universities, NGOs, foreign governments, industry, and foundations. In addition to being recognized as a Castle Connolly Top Doctor and Super Doctor for over 10 years, she was a winner of the USAID Innovator and Grand Challenge Award.









Keynote



#### Sachita Shah, MD

Sachita Shah, MD is currently Vice President of Global Health and Lead for Women's Health at Butterfly Network, a revolutionary chip-based medical technology company. As a Professor of Emergency Medicine and Adjunct Professor of Global Health at University of Washington, the focus of her academic and research career over the past 20 years has been on the impact of innovative uses for point-of-care ultrasound in limited resource settings. She also serves as the Director of the Global Emergency Medicine and Rural Health Fellowship Program at University of Washington, and is an internationally known expert in the field of point-of-care ultrasound globally. She practices clinical emergency medicine at Harborview Medical Center in Seattle, and Alaska Native Medical Center in Anchorage.



#### Smisha Agarwal, PhD, MPH, MBA, BDS

Smisha Agarwal, PhD, MPH, MBA, BDS is the Director of the Center for Global Digital Health Innovation and Associate Professor in the Department of International Health at the Johns Hopkins University Bloomberg School of Public Health. She brings expertise in advancing primary health care through strengthening community health systems and leveraging innovative technological solutions including digital devices. Part of her research has focused on using predictive analytics and machine learning algorithms based on routine monitoring data to enhance our understanding of quality of care, create safety nets to care for high-risk populations, and improve effectiveness of reproductive health services. Over the last two decades, her research has been leveraged by normative agencies like World Health Organization (WHO) to develop guidelines on national digital transformation, donors to guide investments in primary health care, and governments to develop their national digital health strategies. She is the Editor-in-Chief of the Oxford Open Digital Health Journal.

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3D Printing from Devices to Organs: All the Things We Can Do



#### Daniel Gustavo Rosen, MD

Daniel Gustavo Rosen, MD originally from Argentina, is a Professor of Pathology at The Michael E. DeBakey VA Medical Center and Baylor College of Medicine in Houston, Texas. He serves as the Director of Global Pathology and Co-Director of the Human and Tissue Acquisition in Pathology Core (HTAP). He completed his medical education at the University of Buenos Aires in Argentina, and has extensive training in surgical pathology, translational cancer research, and medical education. Dr. Rosen is currently dedicated to advancing global health initiatives, focusing on the development and implementation of low-cost, innovative diagnostic tools, such as 3D-printed microscopes for telepathology, in low-resource settings. His work is focused on improving healthcare access and outcomes in underserved regions worldwide.



#### Ellen Roche, PhD

Ellen Roche, PhD is a Professor at the Institute for Medical Engineering and Science and the Department of Mechanical Engineering at the Massachusetts Institute of Technology. She directs the Therapeutic Technology Design and Development Lab. She completed her PhD at Harvard University School of Engineering and Applied Sciences. Her research focuses on applying innovative technologies to the development of cardiac devices. Her research includes development of novel devices to repair or augment cardiac function using disruptive approaches such as soft robotics, combination of mechanical actuation with delivery of cell therapy, and use of light activated biodegradable adhesives. Dr. Roche was employed in the medical device industry for over five years as a research and development engineer and employs her understanding of the medical device industry and the regulatory pathways to medical device commercialization in her academic research. She is an author on over 100 conference/journal papers. She is the recipient of multiple awards including the Fulbright International Science and Technology Award, the Wellcome Trust Seed Award in Science, a National Science Foundation CAREER Award, the NIH Trailblazer Award, the Charles H. Hood Award for Excellence in Child Health Research and the Harold E. Edgerton Award for Outstanding Faculty Achievement and the Presidential Early Career Award for Scientists and Engineers.









3D Printing from Devices to Organs: All the Things We Can Do



#### Jared Howell, MS, CPO, LPO, FAAOP

Jared Howell, MS, CPO, LPO, FAAOP is a Director of the Center for Prosthetic and Orthotic Care and Clinical Innovation, in the BCM H. Ben Taub Department of Physical Medicine and Rehabilitation, Head of the Baylor College of Medicine-Ottobock Affiliation, and Regional Clinical Manager for Ottobock Patient Care. Mr. Howell holds a dual faculty appointment in the School of Health Professions where he previously served as the Director of the Master of Science Program for Prosthetics and Orthotics. He is a Scholar in the Center for Health Policy and Medical Ethics and Serves as the Inaugural Program Director of Baylor Global Programs in Rehabilitation and Innovation. He is passionate about global health and restoring mobility and movement to the most vulnerable populations.



#### Kevin Vos, PhD

Kevin Vos, PhD is the Director of Pipeline Management at Bold Therapeutics, a biopharmaceutical company based in Vancouver, BC, developing novel metallotherapeutics for difficult-to-treat cancers. In this role, he leads business development and global collaborations, drives corporate strategy, oversees Bold's intellectual property portfolio, and manages the development of pipeline drug candidates. Dr. Vos earned his BSc in Biochemistry from the University of Victoria in 2015, followed by a PhD in Physical Chemistry in 2020. He then pursued a Postdoctoral Research Fellowship at the University of Calgary, working with the World Health Organization to develop decontamination strategies for the reuse of personal protective equipment during the SARS-CoV-2 pandemic. Transitioning to industry, He joined VoxCell BioInnovation, a pioneering 3D bioprinting company developing vascularized tissue models for preclinical drug screening in late 2021. He initially served as the Technical Lead and Director of Preclinical R&D, later advancing to Vice President of Business Development, where he forged innovative partnerships with academic and industry leaders. A passionate advocate for scientific innovation, he has competed in global entrepreneurship competitions and delivered a TEDx talk at TEDxVictoria in 2024, titled "Printing Our Future: How 3D **Bioprinting Will Revolutionize Medicine.**"







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AI and Global Health: Ethics and Policy Implications



#### Jared N. Smith, PhD, MA

Jared N. Smith, PhD, MA is currently a Clinical Ethics Fellow and incoming Assistant Professor at Baylor College of Medicine in the Center for Medical Ethics and Health Policy. He earned his PhD in Philosophy ('22) from the University of California, Riverside and an MA in Philosophy from the University of Houston. His research in bioethics has concerned topics such as the use of Al/ML and algorithmic tools in risk prediction for heart failure, the agential status of psychotherapy chatbots, the ethics of decision-making in deep brain stimulation for refractory pediatric OCD and dystonia, and the purposes bioethicists have for soliciting the moral judgments of the public about emerging technologies (like driverless cars and brain implants). His other research interests focus on the way philosophers engage conceptually with psychopathology and other issues in neuroethics such as the ethics of using Al/ML tools in closed-loop neuromodulation devices to treat a variety of conditions and restore lost capacities.



#### David Pynadath, PhD

David Pynadath, PhD joined Rice University November 2024 as the Ken Kennedy Institute's Executive Director for Research Initiatives. Dr. Pynadath comes to Rice from the Institute for Creative Technologies (ICT), a DoD University Affiliated Research Center (UARC) sponsored by the US Army at the University of Southern California (USC). Dr. Pynadath was the Director for Social Simulation Research at ICT and a research assistant professor in USC's Department of Computer Science, where he taught classes in Applied Machine Learning and Data Mining and Foundations of Al. He completed his undergraduate degrees at MIT and his Ph.D. at the University of Michigan, Ann Arbor. Dr. Pynadath has extensive research in computing, Al, human-machine teaming, and social simulation with a proven track record of funding from federal funding agencies.









AI and Global Health: Ethics and Policy Implications



#### Joan LaRovere, MD, MSc, MBA

Joan LaRovere, MD, MSc, MBA is an Assistant Professor of Pediatrics at Harvard Medical School, the Interim Chief Medical Officer at Boston Children's Hospital, and the Co-Founder and President of Virtue Foundation. Previously, Dr. LaRovere was the Chief of Pediatric Intensive Care and a member of the Children's Services Management Committee at the Royal Brompton Hospital in London, where she also served on the faculty at Imperial College School of Medicine. Dr. LaRovere holds a Bachelor of Arts from Harvard University, a Master of Science in Genetics from the University of St. Andrews in Scotland, a Doctorate in Medicine from Columbia University, and an MBA from the Massachusetts Institute of Technology (MIT) Sloan School of Management. She is actively involved in research and education at MIT and Harvard and has received multiple awards. Additionally, she is a Healthcare Operating Partner with iSelect Fund. Dr. LaRovere is a Co-Founder and serves as President of the Virtue Foundation.



#### Kenneth R. Fleischmann, PhD

Kenneth R. Fleischmann, PhD is a Professor in the School of Information at University of Texas Austin. He is the Founding Chair of Good Systems: Ethical AI at UT Austin, one of three campus-wide research grand challenges. He is also the Founding Director of Undergraduate Studies for the iSchool's B.A./B.S. in Informatics, and the Founding Editor-in-Chief of the ACM Journal on Responsible Computing. For over 25 years, his research and teaching have focused on the ethics of AI and more broadly on the role of human values in the design and use of information technologies. His research has been funded by NSF, IARPA, MITRE, Microsoft, Cisco, Micron, and the Public Interest Technology University Network. His research has been recognized by iConference Best Paper awards in 2012, 2021, and 2022; the ASIS&T Best Information Behavior Conference Paper Award in 2012 and 2022; the ASIS&T SIG-SI Social Informatics Best Paper Award in 2018; the ASIS&T SIG-AI Artificial Intelligence Best Paper Award in 2023; the Civic Futures Award for Designing for the 100% in 2019; and the MetroLab Innovation of the Month Award in July 2020 and October 2021.



















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