

## Opening Remarks

### **Dr. Jean King**

Peterson Family Dean of Arts & Sciences, WPI



A widely respected neuroscientist, Jean King joined the WPI community as the Peterson Family Dean of Arts and Sciences in 2017. In addition to her duties as dean, she is a professor in the Department of Biology and Biotechnology. Dr. King's research uses functional magnetic resonance imaging (fMRI) to identify and monitor neuronal plasticity associated with addiction, ADHD, depression, fearfulness, anxiety, autism and neurological disorders (PD and TBI) in animal models with the hope of finding clues to help us understand these conditions in humans. Dr. King has published over 60 original scientific papers in highly respected international scientific journals, over 10 chapters in books and review articles in major neurophysiology journals, and is an editor of New York Academy of Sciences Publication – Roots of Mental Illness in Children. Prior to joining WPI, she was vice provost for biomedical research at the University of Massachusetts Medical School; a tenured professor of psychiatry, radiology, and neurology; and director of the university's Center for Comparative Neuroimaging.

### **President Laurie Leshin**

16<sup>th</sup> president, and first woman, to lead Worcester Polytechnic Institute.



Under her leadership, WPI has built its reputation as the global leader in project-based learning, with a focus on educating STEM leaders with real-world skills to positively impact the world.

WPI has been recognized by the *Wall Street Journal/Times Higher Education* as the #1 University that best balances excellence in teaching and groundbreaking research, and is regularly acknowledged by *The Princeton Review* and other rankings for the success and earning power of its graduates.

While at WPI, Leshin has prioritized diversity, equity, and inclusion, and an elevation of the institution's unique approach to STEM through the founding of the Global School. The Global School will build upon the great expansion in off-campus project work being undertaken by WPI students and faculty – WPI works on local challenges in over 50 project center locations worldwide. The WPI research enterprise has also grown significantly, with an over 140% increase in awards in the past 5 years.

Prior to joining WPI, Leshin was an accomplished space scientist and leader in academia and government service. She was dean of the School of Science at Rensselaer Polytechnic Institute, a scientist for the Mars Curiosity Rover mission, and held several senior executive roles at NASA, including the deputy head of the agency's future human spaceflight programs.

Leshin serves in advisory and leadership positions for many organizations beyond WPI. She is currently the Chair of both the Associate of Independent Technological Universities and the Association of Independent Colleges and Universities of Massachusetts. She is Vice-chair of FIRST. She serves on the Federal STEM Advisory Board and was appointed to the Massachusetts Governor's Reopening Advisory Board representing all of higher education in the state's reopening plans during the COVID-19 pandemic. Through that appointment she chaired a statewide Higher Education Working Group, which built the framework for reopening colleges and universities in Massachusetts.

Leshin earned a BS from Arizona State University and an MS and PhD from the California Institute of Technology.

## **Panel One: Ethics and Fairness in Artificial Intelligence (AI)**

### **Moderator**

**Julia Stoyanovich**



Julia Stoyanovich is an Assistant Professor of Computer Science and Engineering and of Data Science at New York University. Julia's research focuses on responsible data science: on operationalizing fairness, diversity, transparency, and data protection in all stages of the data lifecycle. She is the founding director of the Center for Responsible AI at NYU, a comprehensive laboratory that is building a future in which responsible AI will be the only kind accepted by society. Previously Julia established the Data, Responsibly consortium and served on the New York City Automated Decision Systems Task Force. She is developing and teaching courses on Responsible AI at NYU, and is the co-creator of an award-winning comic on this topic. Julia holds M.S. and Ph.D. degrees in Computer Science from Columbia University, and a B.S. in Computer Science and in Mathematics and Statistics from the University of Massachusetts at Amherst. Her work has been funded by the NSF, BSF, and by industry. Julia is a recipient of an NSF CAREER award and of an NSF/CRA CI Fellowship.

### **Panelists**

**Dessislava Pachamanova**



Dr. Pachamanova's interests are in the design and application of advanced analytical tools to numerous areas, including hospital operations, patient treatment, healthcare policy, innovation management, corporate social responsibility enforcement, the law, financial risk management, business strategy, and engineering. She is Professor and Zwerling Family Endowed Scholar at Babson College and Research Affiliate at the Massachusetts Institute of Technology. Dr. Pachamanova's research employs predictive analytics, machine learning, financial modeling, robust optimization, simulation, reinforcement learning, and text analytics. She holds an A.B. in Mathematics with a certificate in Public and International Affairs from Princeton University and a Ph.D. from the Sloan School of Management at the Massachusetts Institute of Technology.

**Sarah Khatry**



Sarah Khatry is an Applied Data Scientist on the Trusted AI team at DataRobot. Her work focuses on the ethical use of AI, particularly the creation of tools, frameworks, and approaches to support responsible but pragmatic AI stewardship, and the advancement of thought leadership and education on AI ethics. Her particular interests within AI ethics are multi-stakeholder impact assessment, algorithmic bias and fairness, model stability, robustness, and humility, and privacy and security. Her background in data science includes applications in biomedicine, banking and finance, retail, entertainment, and sports analytics.

### **Zahra Timsah**

Dr. Zahra Timsah is the Lead for AI Governance and Ethics at Mass Mutual. She leads the development of company-wide policies, controls and monitoring strategies for AI initiatives in accordance with AI principles to ensure auditability, accountability, fairness and transparency of Mass Mutual products and solutions.

Prior to joining Mass Mutual, she held executive positions such as Chief Executive Officer, Chief Operation Officer and Chief Technology Officer across a wide-range of companies around the world including AMCL, Ward Medication Management in Australia, Johnson and Johnson, Assurance Medication Management and Bristol Meyer Squibb.

At these companies, she led the creation of AI programs with the goal of helping stakeholders navigate the adoption of machine learning fairly, safely and effectively. This balanced the ethical and innovative use of algorithmic systems while considering the complexity, benefits, impact and possible risks of AI. Her key performance indicators extended to entail financial and business development areas at companies which include maximizing customer pool and satisfaction rate, triggering IPOs, Series A fund raises and profit margin optimization.

Zahra has also held academic positions in the UK as tenured Assistant Professor at the University of Leeds with work published in high impact journals and supported by the Royal Society and Wellcome Trust.

Zahra holds an MBA with focus on management, a PhD and MSc in Biochemistry and Molecular biology with training in machine learning and bioinformatics.

## **Panel Two: Professional Development**

### **Moderator**

#### **Dr. Gillian Smith**



Dr. Gillian Smith (she/they) is an Associate Professor in Interactive Media & Game Development and Computer Science. Her research focuses on generative design for games and crafts, computational creativity, and issues surrounding feminism and social justice especially as they intersect with AI, HCI, and generative design.

Dr. Smith is currently co-PI for an NSF-funded research project on broadening public understanding of computer science in crafting communities, specifically quilting. She is also co-PI for a new NSF-funded researcher-practitioner partnership program on integrating computer science education into PK-5 classrooms.

### **Panelists**

#### **Julie Buard**



Julie Buard is an R&D product owner for GE Renewables Grid Solutions. She is passionate about using applied maths turned into deployable software to maintain grid reliability and enhance assets sustainability across the world.

Before that, she worked as a data scientist for NextEra Analytics, where her role was to leverage her mathematical, engineering and coding skills to integrate renewables into the grid.

Originally from France, she studied theoretical maths and physics where she first started as a civil engineer. Interested in the interactions between infrastructures, humans and energy, she then pivoted to civil systems with a master of science at the University of California Berkeley, allowing her to dive into the world of dynamic data and algorithms.

She is a Julia enthusiastic and is engaged in her local communities to promote women in STEM.

**Shiri Dori-Hacohen, Ph.D.**



Dr. Shiri Dori-Hacohen is the CEO & founder of AuCoDe, an AI-based startup that detects controversies and misinformation online and turns them into actionable intelligence. She has eighteen years of academic and industry experience, including Google and Facebook. She received her M.Sc. and B.Sc. (cum laude) at the University of Haifa in Israel and her M.S. and Ph.D. from the University of Massachusetts Amherst where she researched computational models of controversy. Dr. Dori-Hacohen is the recipient of several prestigious awards, including the 2011 Google Lime Scholarship and first place at the 2016 UMass Amherst's Innovation Challenge. She is married with two kids; identifies as a person with disabilities; and has taken an active leadership role in broadening participation in Computer Science on a local and global scale.

### **Jocelyn Petitto**



Jocelyn Petitto is a PhD candidate in the WPI/UMMS Joint Program. She studies mitochondrial transcriptomics using RNAseq and fluorescent microscopy in the Grunwald Lab at UMMS RTI. When time allows, she works for the MDPH studying Lyme disease surveillance. She left the DVM program at Tufts University to come to the WPI BCB program after completing an MPH. Previously, she taught high school math and science as well as worked in educational publishing. Jocelyn holds a B.A. in Mathematics and Philosophy from Boston College, an MPH in Epidemiology and Biostatistics from Tufts University, and a M.A.T. for Social Justice in Secondary School Mathematics from Marlboro College/Spark Teacher Education Institute.