

SPEAKERS

Opening Remarks



Jean King

Peterson Family Dean of Arts & Sciences
Worcester Polytechnic Institute

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.



Terri Anne Gemesano

Professor & Dean of Graduate Studies, Professor of Chemical Engineering



Elke Rundensteiner

Founding Director of Data Science Program, Professor of Computer Science
Worcester Polytechnic Institute

Elke A. Rundensteiner is the founding Director of the interdisciplinary Data Science program at Worcester Polytechnic Institute (WPI); the first program in the country featuring a data science program with a designated Ph.D. degree. She is a Professor in the Computer Science Department at WPI. She is an internationally recognized expert in data management and analytics, having spent over 25 years of her career on the development of scalable big data software tools in support of science and engineering applications. She has authored well over 370 publications, numerous patents, and software systems released to public domain. She has been recipient of numerous honors, including WPI Chairman's Exemplary Faculty Prize, WPI Board of Trustees' Outstanding Research and Creative Scholarship award, Sigma Xi Outstanding Senior Faculty Researcher, and the NSF Young Investigator award.

Keynote Speakers



Dr. Laura Haas

Dean, College of Information and Computer Sciences
University of Massachusetts Amherst
IBM Fellow

Dr. Haas is currently the dean of the College of Information and Computer Sciences (CICS) at the University of Massachusetts Amherst. She spent 36 years at IBM, where she rose to the level of IBM Fellow. Within IBM, she most recently served as Director of the Accelerated Discovery Lab (2011-2017); she was Director of Computer Science at IBM's Almaden research center from 2005 to 2011, and had worldwide responsibility for IBM Research's exploratory science program from 2009 through 2013. Dr. Haas is known for her foundational research on information integration technology.



Patricia Florissi

Vice President, Global CTO for Sales & Distinguished Engineer
Dell EMC

Patricia Florissi is Vice President and Global Chief Technology Officer (CTO) for Sales. As Global CTO for Sales, Patricia helps define mid and long term technology strategy. She holds the honorary title of EMC Distinguished Engineer. Patricia is the creator, author, narrator, and graphical influencer of the educational video series Dell EMC Big Ideas on emerging technologies and trends. She also serves as a board member in many universities including Data Science Graduate Program at Worcester Polytechnic Institute. She holds a Ph.D. in Computer Science from Columbia University in New York, graduated valedictorian with an MBA at the Stern Business School in New York University, and has a Master's and a Bachelor's Degree in Computer Science from the Universidade Federal de Pernambuco, in Brazil.

Technical Talks



Ellen Johnson

Development Manager, MathWorks

Ellen is the manager of the MATLAB I/O group at MathWorks. She leads a group of software engineers developing core MATLAB features for importing and exporting data -- including big data -- for text, spreadsheet, audio, video, image, and scientific formats. Ellen and her team are passionate about providing a wide range of I/O functionality -- from parsing simple text files, to reading/writing complex binary image and scientific data, to accessing big data in cloud computing frameworks for large-scale data analytics. Prior to MathWorks, Ellen was a software engineer at MIT Lincoln Laboratory and Raytheon Integrated Defense Systems, developing MATLAB and C/C++ software for image and signal processing applications. Ellen holds a BS in Molecular Biology and an MS in Computer Information Systems, both from Florida Institute of Technology.



Jie Fu

Assistant Professor, Electrical & Computer Engineering Department,
Robotics Engineering Program
Worcester Polytechnic Institute

Prof. Jie Fu is an Assistant Professor with the Department of Electrical and Computer Engineering, with an affiliation in Robotics Engineering Program, at Worcester Polytechnic Institute, Worcester, MA, USA since 2016. She received the M.Sc. degree in Electrical Engineering and Automaton from Beijing Institute of Technology, Beijing, China, in 2009, and the Ph.D. degree in Mechanical Engineering from the University of Delaware, Newark, DE, USA, in 2013. From 2013 to 2015, she was a Postdoctoral Scholar with the University of Pennsylvania. Her research interests include: Control theory, Formal methods, Machine Learning, with applications to Robotic systems and Cyber-Physical Systems.



Michelle Borkin

Assistant Professor, College of Computer and Information Science,
Northeastern University & Research Fellow, Brigham & Women's Hospital
and Harvard Medical School

Professor Michelle Borkin works on the development of novel visualization techniques and tools to enable new insights and discoveries in data. She works across disciplines to bring together computer scientists, doctors, and astronomers to collaborate on new analysis and visualization techniques, and cross-fertilize techniques across disciplines. Her research resulted in the development of novel computer assisted diagnostics in cardiology, scalable visualization solutions for large network data sets, and novel astrophysical visualization tools and discoveries. Her main research interests include information and scientific visualization, hierarchical and multidimensional data representations, network visualization, visualization cognition, user interface design, human computer interaction (HCI), and evaluation methodologies. Prior to joining Northeastern, Professor Borkin was a postdoctoral research fellow in computer science at the University of British Columbia, as well as an associate in computer science at Harvard and research fellow at Brigham & Women's Hospital. She received her PhD in Applied Physics at Harvard's School of Engineering and Applied Sciences (SEAS) in 2014. She's also earned an MS in Applied Physics and a BA in Astronomy and Astrophysics & Physics from Harvard University. She was previously a National Science Foundation (NSF) graduate research fellow, a National Defense Science and Engineering graduate (NDSEG) fellow, and a TED fellow.

Panel Discussion

Topic: Diverse Career Paths for Data Scientists

Moderator



Pamela Goldberg

President and CEO - Goldberg Consulting LLC

Pamela Goldberg, an internationally recognized leader in technology innovation and entrepreneurship, works with clients to implement technological change, develop industry, and foster entrepreneurship. Goldberg was previously CEO of the Massachusetts Technology Collaborative and the first woman to lead the organization. An experienced leader, Goldberg worked closely with industry, academic and government leaders to advance technology-based solutions that improved the health care system, expanded high-speed Internet access and strengthened the growth and development of the state's technology sector with specific focus on digital health, data analytics, robotics, and cybersecurity. Goldberg served as the

Director of the Center for Entrepreneurial Leadership at Tufts University and Director of Business Relations at Babson College. Goldberg received her BA from Tufts University and MBA from Stanford University.

Panelists



Jomol Mathew

ACIO of Research Computing and Data Innovation at UMass Medical School

Dr. Jomol Mathew oversees Data Science and Technology which includes clinical and research data integration, analytics, data visualization, and high performance computing at University of Massachusetts Medical School (UMMS). Dr. Mathew also directs the clinical informatics for the Clinical and Translational Science Center (UMCCT) at UMMS. She co-founded D3Health,

a Center for Improving Patient and Population Health through Integration of Advanced Digital Technologies, Analytics and Decision Support. Dr. Mathew completed her postdoctoral fellowship in Biostatistics and Bioinformatics from New York University School of Medicine and her Ph.D. from the University of Massachusetts Amherst.



Kajal Claypool

Research Fellow, Harvard Medical School

Kajal Claypool is a research fellow at Harvard Medical School in the Department of Biomedical Informatics. She holds a post-doctorate Masters in Biomedical Informatics from Harvard Medical School, Boston and a Ph.D. in Computer Science from Worcester Polytechnic Institute, Worcester. Her current research focuses on translational informatics to understand the associations between environment, transcripts (gene expressions) and disease. She is particularly interested in the pseudo intervention of physical

activity on obesity, aging and Alzheimer's disease using statistics and machine learning. Prior to her current fellowship, Kajal was an assistant group leader in the Informatics and Decision Support Group at MIT Lincoln Laboratory since 2007. Earlier employment includes Principal Scientist at Oracle Corporation, Nashua and Assistant Professor of Computer Science at the University of Massachusetts, Lowell. Kajal has numerous publications over 20 years in database information integration, transformation, and dissemination.



Ellen Johnson

Development Manager, MathWorks

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analytics. Prior to MathWorks, Ellen was a software engineer at MIT Lincoln Laboratory and Raytheon Integrated Defense Systems, developing MATLAB and C/C++ software for image and signal processing applications. Ellen holds a BS in Molecular Biology and an MS in Computer Information Systems, both from Florida Institute of Technology.



Kara Greenfield

Lead Data Scientist, The MITRE Corporation

Kara Greenfield is a lead data scientist in the Data Analytics Department at the MITRE Corporation. Her primary research is at the intersection of graph theory and natural language processing, focusing on applications such as entity resolution and social network construction and analysis. Her research interests also include crowd-sourcing and data visualization. She is passionate about applying machine learning techniques to solve real-world problems beyond a laboratory setting. Ms. Greenfield received both her B.S. in Mathematics and Computer Science and her M.S. in Industrial mathematics from WPI.



Rekha Kamat

Senior Manager Platform Ecosystem, Dassault Systèmes

Rekha Kamat is leading the platform ecosystem development and working on digital transformation initiatives at Dassault Systèmes - the 3DEXPERIENCE company. Design and innovation in Industries is undergoing a major transformation to become more intelligent and automated through the power of data science. Dassault Systèmes is at the forefront of this new Industry Renaissance through the introduction of the 3DEXPERIENCE platform - the Industry's first completely digital, data science driven design and innovation environment. Rekha holds a Master's degree in Computer Science from Northeastern University in Boston, and a Bachelor's degree in Computer Engineering. She has additional qualifications in Marketing Management and Leadership from Boston University and Harvard University. Rekha is a passionate advocate for women in technology. She is a STEM Ambassador and committed to advancing women in STEM fields. She serves as the co-speaker of the North America Women's Initiative (WIN) at Dassault Systèmes.