

ECE Colloquium Lecture

2019 ECE SPEAKER SERIES

Aleksandra Mojsilovic

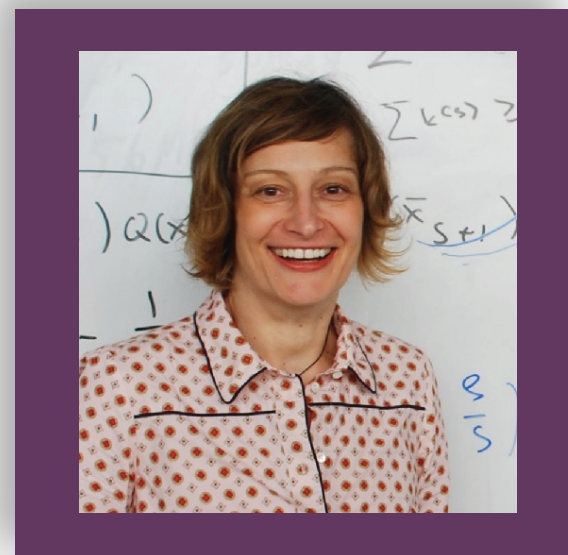
Head of Foundations of Trustworthy AI
Co-Director of IBM Science for Social Good
IBM

Thurs. Dec. 5, 2019 @11:00 AM

110 Cummington Mall, ENG 245

Faculty Host: Vivek Goyal

Light refreshments will be available
inside of 245 at 10:45 AM



TOWARDS AI SYSTEMS WE CAN TRUST

Abstract: Artificial Intelligence (AI) systems are increasingly being used to support human decision-making. AI can help doctors make sense of millions of patient records, farmers determine exactly how much water each individual plant needs and insurance companies assess claims faster. While AI holds the promise of delivering valuable insights and knowledge across multitude of applications, broad adoption of AI systems will rely heavily on the ability to trust their outputs. To trust a decision made by an algorithm, we need to know that it is reliable and fair, that it can be accounted for, and that it will cause no harm. We need assurance that the decision cannot be tampered with and that the system itself is secure. We need to understand the rationale behind the algorithmic assessment, recommendation or outcome, and be able to interact with it, probe into it, even ask questions. Moving forward, "build for performance" will not suffice as an AI design paradigm; fairness, robustness, explainability, and accountability will be the underpinnings of trusted AI, and we must learn how to build, evaluate and monitor for trust. "Do no harm," "be honest and trustworthy," "be fair and do not discriminate", is the universal code of ethics that distinguishes humans from other species. Another universal ethical principle is to perform good works for society and contribute to our well-being. In our research, we aspire to create AI systems that rise to such expectations. In this talk Saška will cover the recent work from her team directed at building trustworthy and responsible AI technologies, and promoting innovative applications of AI towards addressing social and humanitarian challenges.

Bio: Aleksandra (Saška) Mojsilović is an IBM Fellow, Head of Foundations of Trustworthy AI at IBM Research, and Co-Director of IBM Science for Social Good. Saška received her B.S. (92), M.S. (94), and Ph.D. (97) degrees in Electrical Engineering from the University of Belgrade, Belgrade, Serbia. From 1998 to 2000, she was a Member of Technical Staff at the Bell Laboratories, Murray Hill, New Jersey. She joined IBM Research in 2000. She has spent last two decades pursuing innovative applications of data science and machine learning in real-world challenges, including IT operations, healthcare, multimedia, finance, insurance, HR, economics, AI ethics, and social good. Saška is the author of over 100 publications and holds 20 patents. Her work has been recognized with multiple awards, including IEEE Signal Processing Society Young Author Best Paper Award, European Conference on Computer Vision Best Paper Award, INFORMS Wagner Prize, Computing Community Consortium and Schmidt Futures AI for Good Award, IBM Extraordinary Accomplishment Award, and IBM Gerstner Prize. She has recently been named one of the Top 50 women in AI Ethics. Saška serves on the Board of Directors for Neighborhood Trust Financial Partners, which provides financial literacy and economic empowerment training to low-income individuals. She is a Fellow of the IEEE and a member of the IBM Academy of Technology.