

## Department of Data Science

### Data Science Seminar Series

Realizing the Potential of Data Science by Leading in Innovation,  
Engagement, and Impact



### **Tevfik Kosar, Ph.D.**

**Professor**

**The State University of New York at Buffalo**

**Date:** Monday, February 28<sup>th</sup>, 2022

**Time:** 11:00 AM – 12:00 PM EST

**Location:** Zoom Virtual Room

**Web Link:** [Zoom Meeting Room Link](#)

The research communities across different fields of science are undergoing a profound transformation with the use of large-scale, heterogeneous, and possibly uncertain data sets that allow for data-intensive computing and scientific discovery at a level never before imagined. This requires novel data science technologies to enable scientists to easily and intelligently discover, access, and analyze valuable information in a timely fashion from massive distributed data sets, which complement and extend existing methods of data analytics, inference, and decision making. The existing end-to-end data analytics approaches do not scale for the dynamic and extremely fast-growing data requirements, especially in a wide-area collaborative setting which is essential for a scientific breakthrough. In this talk, I will present some of my research efforts on the development of a seamlessly distributed cyberinfrastructure that enables easy search, discovery, access, and analysis of a vast amount of widely-distributed, heterogeneous, complex and dynamic data sets. I will also present my vision for the NJIT Department of Data Science to lead in data science research and education through discovery and innovation both in training and scholarly activities, engagement of all stakeholders and industrial partners, and high impact for societal benefit.

Tevfik Kosar is a Professor of Computer Science and Engineering at the State University of New York at Buffalo (UB). He is also serving as a Program Director in the Office of Advanced Cyberinfrastructure at NSF and as an expert member in the US EPA e-Manifest Advisory Board. His research focuses on applying advanced data science techniques to optimize the performance, scalability, and efficiency of distributed computing systems and big-data analytics pipelines. His significant contributions are in the areas of geo-distributed data analytics, performance and energy efficiency in large-scale distributed systems, wide-area distributed coordination, and end-to-end dataflow management. Some of the awards received by Dr. Kosar include NSF CAREER Award, IBM Research Award, Google Research Award, IEEE Region-I Technological Innovation Award, UB Senior Faculty Research and Teaching Awards, and UB Exceptional Scholar: Sustained Achievement Award. Dr. Kosar has published over 100 scholarly articles in top journals and conferences in his area, including several best paper awards. Dr. Kosar led the development of NSF's Blueprint for National Data and Software Cyberinfrastructure, and he is co-chairing the NITRD Middleware and Grid Interagency Working Group. He has served as the associate chair for the CSE Department at UB and led the creation of a new Ph.D. program in Computational and Data-enabled Science and Engineering.