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## **Data-drive Science across the Cyberinfrastructure Continuum**

Abstract:

Large-scale experimental and observational facilities provide new opportunities for data-driven research across a wide range of science and engineering domains. These facilities provide shared-use infrastructure, instrumentation, and data products that are openly accessible to a broad community of researchers and educators. However, as these facilities grow in scale and provide increasing volumes of data and data products effectively using them has become a significant challenge. In this talk, I will explore how the cyberinfrastructure continuum, from the edge to extreme scales systems, can be harnessed to support end-to-end data-driven workflows. Specifically, I will explore approaches for intelligent data delivery, in-transit data processing and edge-core integration. This research is part of the Computing in the Continuum project at the Rutgers Discovery Informatics Institute.

**Bio:** Manish Parashar is Distinguished Professor of Computer Science at Rutgers University. He is also the founding Director of the Rutgers Discovery Informatics Institute (RDI<sup>2</sup>). He is currently on an IPA appointment at the National Science Foundation. His research interests are in the broad areas of Parallel and Distributed Computing and Computational and Data-Enabled Science and Engineering. Manish is the founding chair of the IEEE Technical Consortium on High Performance Computing (TCHPC), Editor-in-Chief of the IEEE Transactions on Parallel and Distributed Systems. He has received a number of awards for his research and leadership, and is Fellow of AAAS, Fellow of IEEE/IEEE Computer Society and ACM Distinguished Scientist. For more information please visit <http://parashar.rutgers.edu/>.