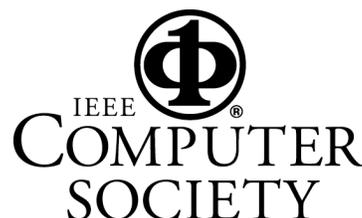


PRINCETON ACM / IEEE-CS CHAPTERS  
APRIL 2013 JOINT MEETING



## High-Performance Computing: Addressing Data Challenges in Simulation-based Science

Big computers doing big simulations create big data management problems.

In the field of computational and data-enabled sciences, there are some significant issues in managing the flow of data. Current high-performance distributed computing environments must be designed for large end-to-end applications. These data-intensive applications have complex workflows that present significant data management, transport, and processing challenges. It is difficult to do dynamic coordination, interactions, and data coupling between multiple application processes that run at scale in different high performance resources.

This presentation will explore the data grand challenges of the workflows in simulation-based science. The talk will investigate how solutions based on managed data pipelines, in-memory data staging, in situ placement and execution, and in-transit data processing can address some of these data challenges at petascale and beyond.

**Manish Parashar** is Professor of Electrical and Computer Engineering at Rutgers University. He is the founding director of the Rutgers Discovery Informatics Institute (RDI<sup>2</sup>) and of the NSF Cloud and Autonomic Computing Center (CAC). Manish received a B.E. from Bombay University, India and M.S. and Ph.D. degrees from Syracuse University. His research interests are in the broad area of parallel and distributed computing, including Computational and Data-Enabled Science and Engineering, Autonomic Computing, and Power/Energy Management.

Date:	Thursday, April 18, 2013, 8:00 pm. (Refreshments and networking at 7:30 pm.)
Place:	Small Auditorium, Room CS 105 Computer Science Building, Princeton University
Information:	Dennis Mancl (908) 582-7086, Jan Buzydlowski (610) 902-8343
On-line info:	<a href="http://PrincetonACM.acm.org">http://PrincetonACM.acm.org</a>

All Princeton ACM / IEEE-CS meetings are open to the public. Students and their parents are welcome. There is no admission charge, and refreshments are served.

A pre-meeting dinner is held at 6:00 p.m. at Ruby Tuesday's Restaurant on Route 1. Please send email to [princetonacm@acm.org](mailto:princetonacm@acm.org) in advance if you plan to attend the dinner.

