



COLLOQUIUM

ADDRESSING BIG DATA CHALLENGES IN SIMULATION-BASED SCIENCE

PROF. MANISH PARASHAR RUTGERS UNIVERSITY

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MBG AUDITORIUM

REFRESHMENTS AT 4:00PM

Data-related challenges are quickly dominating computational and data-enabled sciences, and are limiting the potential impact of end-to-end coupled application formulations enabled by current high-performance distributed computing environments. These data-intensive application workflows present significant data management, transport and processing challenges, involving dynamic coordination, interactions and data-coupling between multiple application process that run at scale on different high performance resources, and with services for monitoring, analysis and visualization and archiving. In this talk I will explore data grand challenges in simulation-based science application workflows and investigate how solutions based on managed data pipelines, in-memory data-staging, in-situ placement and execution, and in-transit data processing can be used to address these data challenges at petascale and beyond.

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