

“Embracing Big Data using Scalable Workflows”

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**Dr. Jianwu Wang** is the Assistant Director for Research at Workflows for Data Science (WorDS) Center of Excellence at San Diego Supercomputer Center, University of California, San Diego (UCSD), and a Project Scientist at UCSD. He is also a Visiting Research Scientist at University of Maryland and an Adjunct Professor at North China University of Technology. He received his Ph.D. degree from Chinese Academy of Sciences in 2007 and was a postdoctoral researcher at UCSD from 2008 to 2010. His research interests include Big Data, Scientific Workflow, Distributed Computing and End-User Programming. He has published over 50 papers with more than 400 citations. He is associate editor or editorial board member of four international journals, co-chair of three workshops. He is also program committee member for over 30 conferences/workshops, and reviewer of over 10 journals or books. Much of his work has been part of a widely used open source workflow system.

**Abstract:** The amount of potentially valuable information buried in Big Data is of interest to many data science applications ranging from natural sciences to marketing research. An important aspect of Big Data applications is that these applications typically involve many phases, such as data ingestion, preparation, integration, analysis, visualization and dissemination. In this talk, I will first explain the challenges on usability/programmability at front end –and execution optimization at back end for these Big Data applications. Then, I will present an easy-to-use, workflow-based approach to build and execute two types of applications: Big Batch Data applications and Big Stream Data applications. I will use real-world applications and experiments to show the results of the approach.

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