

# Computer Science Seminar

## Cloud Resource Management using Dynamic Data Driven Applications Systems (DDDAS) Principles

Dr. Aniruddha Gokhale

Vanderbilt University



Effective and efficient resource management in cloud data centers is important to address multiple objectives including assuring the customer service level agreements while keeping data center energy costs low and improving revenues for the cloud service provider. Due to the highly dynamic nature of the clouds, statically defined techniques are not applicable. This talk describes how the Dynamic Data Driven Applications Systems (DDDAS) paradigm can help address these needs. The talk will highlight a number of cloud resource management problems for data centers and describe a DDDAS-based solution for one of these problems. The talk will then outline the challenges that emerge in dynamic resource management for a continuum from the Edge to the Cloud, and present some preliminary ideas that can set the stage for collaboration opportunities

**Bio:** Dr. Aniruddha S. Gokhale is an Associate Professor of Computer Science and Engineering in the Department of Electrical Engineering and Computer Science at Vanderbilt University, Nashville, TN, USA. His current research focuses on algorithms and middleware for dynamic resource management and resilience in Cloud and Edge Computing for next-generation Cyber Physical Systems. Dr. Gokhale obtained his B.E (Computer Engineering) from University of Pune, 1989; MS (Computer Science) from Arizona State University, 1992; and D.Sc (Computer Science) from Washington University in St. Louis, 1998. Prior to joining Vanderbilt, Dr. Gokhale was a member of technical staff at Lucent Bell Laboratories, NJ. Dr. Gokhale is a senior member of IEEE and ACM, and a member of ASEE.

**Date: October 24, 2016**

**Time: 2:00 pm**

**209 Computer Science Building**

