

# NATIONAL UNIVERSITY OF SINGAPORE

School of Computing

## C S S E M I N A R

**Title:**           **Concurrency Platforms for Parallel Programs**

**Speaker:**       Associate Professor Kunal Agrawal  
Washington University in St. Louis

**Date/Time:**   9 March 2017, Thursday, 11:00 AM to 01:00 PM

**Venue:**         SR@LT19

**Chaired by:**   Dr Gilbert, Seth Lewis, Dean's Chair Assistant Professor, School of  
Computing  
(gilbert@comp.nus.edu.sg)

### Abstract:

In recent years, parallel computing has become ubiquitous, as modern computation platforms, from smartphones to network routers and personal computers to large clusters and clouds, each contain multiple processors. We will discuss work on provably good concurrency platform designs to support these parallel programs. Concurrency platform is a software abstraction layer that provides low-level functionality such as scheduling, resource allocation, synchronization mechanisms and tools, allowing programmers to write their programs in higher level languages. In this talk, we will focus on runtime scheduling algorithms and tools for parallel programming.

### Biodata:

In 2009, Professor Agrawal joined the Washington University in St. Louis faculty after she worked with Professor Charles Leiserson in the Massachusetts Institute of Technology Supercomputing Technologies Group.

The goal of her 2012 National Science Foundation CAREER Award, "Provably Good Concurrency Platforms for Streaming Applications," is to design platforms that will allow programmers to easily write correct and efficient high-throughput parallel programs.