### NATIONAL UNIVERSITY OF SINGAPORE

# School of Computing

## CS SEMINAR

Title: Mathematical Garbage: Formal Models of Memory Management

Speaker: Dr Jeremy Singer

School of Computing Science

University of Glasgow

Date/Time: 5 September 2014, Friday, 03:00 PM to 04:00 PM

Venue: SR7, COM1-02-07

Chaired by: Dr Tay Yong Chiang, Professor, School of Computing

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#### Abstract:

Garbage collection is no longer an esoteric research interest. Mainstream programming languages like Java and C# rely on high-performance memory managed runtime systems. In this talk, I will motivate the need for rigorous models of memory management to enable more powerful analysis and optimization techniques. I will draw on a diverse range of topics including thermodynamics, economics, machine learning and control theory.

#### Biodata:

Jeremy Singer is a lecturer at the School of Computing Science, University of Glasgow, Scotland. He has research interests in programming languages, compilation, runtime code optimization and memory management. Singer received his PhD from Cambridge in 2006. Website: http://www.dcs.gla.ac.uk/~jsinger