Distinguished Speakers Series Presents

Suresh Jagannathan, DARPA

Taming and Exploiting Big Data:
A Programming Languages Perspective

One of the largest transformative changes to take place in the computing landscape over the past decade is the emergence of "big data". While the term itself has been greatly overloaded and has come to mean different things to different communities, the general question of how to perform effective computation in the face of large, heterogeneous, and noisy data is a common theme that is actively being explored by several ongoing DARPA programs. This talk gives an overview of two such efforts - PPAML (Probabilistic Programming Advancing Machine Learning) and MUSE (Mining and Understanding Software Enclaves). While these programs have seemingly disparate goals - PPAML seeks to democratize machine learning through the use of probabilistic programming abstractions, and MUSE aims to exploit predictive analytics over large software corpora to repair and synthesize programs, they both nonetheless critically rely on foundational advances in programming language design, analysis, and implementation to realize their vision, and both seek to revolutionize the way we think about software construction at scale.

Bio: Suresh Jagannathan joined the Information Innovation Office at DARPA as a Program Manager in 2013. He is currently on leave from Purdue University where he is a Professor of Computer Science. Prior to Purdue, he was a Senior Research Scientist at the NEC Research Institute. His interests are in programming languages generally, with specific interests in program verification and analysis, concurrent and distributed systems, and compilers. He has served on numerous program and steering committees in these areas, and is on the editorial boards of several journals. He received his Ph.D from MIT.

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3:30–4:30 PM

University at Buffalo – Clemens 120 - North Campus

This talk is free and open to the public - Refreshments for attendees after talk in Davis 310
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