

Distinguished Lectures

Fall 2017



Colorado State University's Information Science and Technology Center (ISTeC) presents two lectures by

Dr. Mostafa Ammar

Regents' Professor
School of Computer Science
Georgia Institute of Technology

ISTeC Distinguished Lecture

In conjunction with the Department of Electrical and Computer Engineering, and Department of Computer Science Seminar Series

"The Time-Traveling Computer Networking Researcher and Other Short Stories"

Monday, Sept. 18, 2017
Reception with refreshments: 10:30 a.m.
Lecture: 11:00 a.m.-12:00 noon
Morgan Library Event Hall

Department of Electrical and Computer Engineering, and Department of Computer Science Seminar Series Sponsored by ISTeC

"The Cirrus Cloud Project: Opportunistic Mobile Cloud Computing"

Monday, Sept. 18, 2017
Lecture: 3:00-4:00 p.m.
Lory Student Center 300

Abstracts

The Time-Traveling Computer Networking Researcher and Other Short Stories

A computer networking researcher traveling forward in time from 1985 to the present would be shocked by many things – not the least of which is the fact that people are still doing computer networking research over 30 years later. While some of the terminology would sound familiar, the networks themselves and what we use them for would be totally unrecognizable – yet quite impressive. For those of us who could not afford a time machine, we have observed a more gradual evolution interspersed with the occasional shocking development. This will be the highly personal story of my journey through these decades of change in the computer networking field. I will attempt to answer these very deep questions: What were the biggest surprises along the way? What came first: the Internet or content services? Were there any discernible evolutionary patterns? Is there anything left to do in networking? Are we having fun yet?

The Cirrus Cloud Project: Opportunistic Mobile Cloud Computing

Mobile devices are increasingly being relied on for tasks that go beyond simple connectivity and demand more complex processing. In cases where such processing exceeds a device's capability, remote cloud resources can be used to off-load the "heavy lifting" needed by mobile computation tasks. The Cirrus Cloud project focuses on the design and analysis of techniques that enable the provision of cloud computation services to mobile devices. The project is distinguished by 1) its consideration of specific challenges of the wireless and mobile environment and 2) its focus on leveraging the computational capability of a variety of entities present in a mobile device's environment in an opportunistic manner. In this talk I will first give an overview of the Cirrus Cloud project and its aims. I will then describe some of our work within the project that addresses the following questions: Can one bridge the gap between mobile computation requirements and traditional public cloud computing services? How can one configure clusters of mobile devices into a meaningful edge compute resource? Does it make sense to make edge computing resources mobile and what might be the challenges of such a deployment?

Speaker Biography

Mostafa Ammar is a Regents' Professor with the School of Computer Science at the Georgia Institute of Technology. He has been with Georgia Tech since 1985. Dr. Ammar received the S.B. and S.M. degrees from the Massachusetts Institute of Technology in 1978 and 1980, respectively and the Ph.D. from the University of Waterloo, Ontario, Canada in 1985. Dr. Ammar's research interests are in network architectures, protocols and services. He has contributions in the areas of multicast communication and services, multimedia streaming, content distribution networks, network simulation, disruption-tolerant networks, and most recently, in mobile cloud computing and network virtualization. He has published extensively in these areas. To date, 35 PhD students have completed their degrees under his supervision; many have gone on to distinguished careers in academia and industry. Dr. Ammar has served the networking research community in multiple roles. Most notably, he served as the Editor-in-Chief of the IEEE/ACM Transactions on Networking (ToN) from 1999 to 2003, and he was the co-TPC Chair for the IEEE ICNP 1997, ACM CoNEXT 2006 and ACM SIGMETRICS 2007 conferences. He currently serves on the steering committee of the IEEE Transactions on Mobile Computing. His awards include the IBM Faculty Partnership Award (1996), Best Paper Award at the 7th WWW conference (1998), the GT Outstanding Doctoral Thesis Advisor Award (2006), the Outstanding Service Award from the IEEE Technical Committee on Computer Communications (2010), the ACM Mobihoc Best Paper Award (2012), and the GT College of Computing Faculty Mentor Award (2015). Dr. Ammar was elected Fellow of the IEEE in 2002 and Fellow of the ACM in 2003.

To arrange a meeting with the speaker, please contact Prof. Anura Jayasumana (Anura.Jayasumana@colostate.edu).

Upcoming Distinguished Lectures

Sept. 25

"My Business is None of Your Business: Employing Secure Computation for Core Business"

11:00 a.m.-12:00 noon



Morgan Library Event Hall

Dr. Moti Yung

Oct. 16

"Tracing the Arc of Smartphone Application Security"

11:00 a.m.-12:00 noon



Morgan Library Event Hall

Dr. Patrick McDaniel

Oct. 30

"Large-Scale Machine Learning and AI: A Cross-Industry Perspective"

11:00 a.m.-12:00 noon



Morgan Library Event Hall

Dr. Ashok Srivastava