

Smart Analytics on the MOC: System Discovery, Performance Analysis and Beyond

Abstract

Administrators of cloud systems face a number of system management challenges, from monitoring the VMs/containers under their supervision so as to track security and compliance requirements, to diagnosing the causes of severe performance variations observed on their systems. This talk gives an overview on Prof. Coskun's group's latest research on cloud monitoring and analytics, which use a coordinated mesh of machine learning, statistical, and NLP-inspired methods to automatically characterize system behavior. Examples use cases include (1) automated software discovery in the cloud and (2) automated diagnosis of a variety of performance anomalies in both cloud and HPC systems. Results collected on the MOC demonstrate great potential for smart analytics for solving difficult cloud management problems.

Presenter

Ayse K. Coskun is an Associate Professor in the Electrical and Computer Engineering Department at Boston University. She received her MS and PhD degrees in Computer Science and Engineering from University of California, San Diego. Coskun's research interests broadly span energy efficiency in computing systems, emerging computer architectures, and analytics and system management for cloud and HPC systems. Prof. Coskun worked at Sun Microsystems (now Oracle), San Diego prior to her current position at BU. Coskun is a recipient of the NSF CAREER award and the IEEE CEDA Early Career Award, and currently serves as an associate editor for IEEE Transactions on CAD.