



UNIVERSIDAD COMPLUTENSE
MADRID

AVISO DE CONFERENCIA

Towards Energy-Efficient Computing: Adaptive Management Strategies from Software to Systems

Prof. Ayse K. Coskun
Boston University

Facultad de Informática
Aula 12 • 18 de junio de 2015 • 16:00
entrada libre hasta completar el aforo

resumen:

Energy efficiency is a central issue in all computing domains. In data centers, operational and cooling costs impose significant sustainability challenges. In tandem, computing systems increasingly run complex, highly performance demanding workloads, making the well-studied energy management policies inadequate. High power densities also increase the chip temperatures and thermal variations, which degrade system reliability, add to the system design complexity, and increase monetary cost of cooling. Achieving the target exascale computing performance, and also, designing a sustainable cloud computing future require the design of dynamic and intelligent techniques that recognize the hardware-software characteristics and optimize the interplay among performance, energy, and temperature in an application-aware manner.

This talk will discuss how to design adaptive workload management and power modulation methods in a servers and various types of data centers to help achieve a sustainable computing future.

sobre Ayse K. Coskun:

Ayse K. Coskun is an assistant 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 are energy-efficient computing, 3D-stacked architectures, embedded systems, and intelligent management of data centers. Prof. Coskun worked at Sun Microsystems (now Oracle), San Diego prior to her current position at BU. Coskun received the best paper award at IFIP/IEEE VLSI-SoC Conference in 2009 and at High Performance Embedded Computing (HPEC) Workshop in 2011, and she is a recipient of the NSF CAREER award. She currently serves as an associate editor for IEEE Embedded Systems Letters and writes a bi-weekly column on green computing at the Circuit Cellar magazine.