Prof. Ayşe Kıvılcım Coşkun

Boston University, Director of the Center for Information and Systems Engineering (CISE)
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Ayşe Kıvılcım Coşkun is the Director of the Center for Information and Systems Engineering (CISE) and BU College of Engineering Associate Dean for Research and Faculty Development. She is a Professor in the Electrical and Computer Engineering and Systems Engineering Departments and Head of the [Performance and Energy Aware Computing lab (Peac Lab)](). Coşkun is also the Chief Scientist at [Emerald AI](), a venture focused on implementing flexible computing in real-world AI data centers.

Professor Coşkun's research focuses on designing computer systems that reduce energy consumption and thermal problems at chip-level and at system/datacenter level, while maintaining resilience, security, and high performance at the same time. Current research directions include (1) design of future energy-efficient computer systems using new integration technologies (e.g., 3D-stacking, silicon photonic networks-on-chip, emerging on-chip cooling), (2) applied machine learning for improving cloud and HPC performance, and (3) sustainability in data centers via integration into smart grid programs. Her sustainable computing research refers particularly to the study and practice of designing, manufacturing, and using computing resources –within a wide range from small embedded computing devices to large scale clusters, data centers, and cloud computing– efficiently and effectively with substantially lower energy costs than today and with minimal impact on the environment.

Prior to joining BU, Professor Coşkun worked at Sun Microsystems (now Oracle), San Diego. She received her BSc degree in Microelectronics from Sabancı University in 2003, and her PhD degree from the Computer Science and Engineering Department at UC San Diego in 2009, as a member of the System Energy Efficiency Lab.