COMPUTER SCIENCE RESEARCH SEMINAR

Programming Language Support for Sustainable Software

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Friday, February 16th at noon in room R15, Engineering Building

Abstract: This talk presents Eco, an energy-aware and temperature-aware programming language with first-class support for sustainability. An Eco program may adaptively adjusts i / I Sustainability r

language runtime consistently maintains the equilibrium between supply and demand. Among the efforts of energy-adaptive and temperature-adaptive systems, Eco is distinctive in its role in bridging the programmer and the underlying system, and in particular, bringing both programmer knowledge and application-specific traits into energy optimization. Through a number of intuitive programming abstractions, Eco reduces challenging issues in this domain — such as workload characterization and decision making in adaptation — to simple programming tasks, ultimately offering fine-grained, programmable, and declarative sustainability to energy-efficient computing. Eco is an minimal

omputer systems, and software

engineering.

This event is funded by GSOCS, a subsidiary