

國立清華大學資訊工程學系

Department of Computer Science

National Tsing Hua University

專題演講

SEMINAR



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題目：Rethinking Architectures for Data-centric Computing in the Post-Von Neumann Era

時間：113年10月16日(三) 下午1:30-3:00

地點：台達館 105 107 室

Abstract

The Von Neumann Architecture used to be the mainstream architecture of computers for decades. However, the recent emergence of various data-centric computing applications, such as deep learning, introduces new challenges in overcoming the notorious memory-wall problem and delivering the demanded system performance. In this talk, we shall take racetrack memories (RTMs) for example, and discuss how the new nonvolatile memories change the existing computer architecture and accompanying management designs. These changes deeply affect all layers of a computer system, from the top-level user applications to the low-level firmware of memory/storage media. In addition to the introduction of current designs, we shall also shed light on the key directions that are worth more-in-depth investigation in the future.

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