Einladung zum Vortrag

28. November 2022, 16.00 Uhr c.t.
Universität Bremen | MZH | 4380

Dr. Farhad Merchant
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The First Principles of In-Memory Computing

In-memory computing (IMC) has gained immense popularity with the emergence of novel memory technologies such as RRAM, MRAM, PCM, etc. However, IMC based on DRAM or SRAM is equally challenging and exhibits equally interesting outcomes. Furthermore, emerging memory technologies' non-volatile and memristive nature renders exciting opportunities for the design and development of non-von Neumann architectures. In this talk, firstly, I will discuss the basic principles of digital and analog computing-in-memory. In the second part of the talk, I will touch upon the automatic synthesis flows for the rapid design and prototyping of RRAM-based computing systems. Finally, I will delve into the roadmap for the hardware prototyping of RRAM-based IMC architectures.

Biography

Farhad Merchant received his Ph.D. from the Indian Institute of Science, Bangalore (India), in 2016. His Ph.D. thesis title was "Algorithm-Architecture Co-design for Dense Linear Algebra Computations." He received the DAAD fellowship during his PhD. He worked as a postdoctoral research fellow at Nanyang Technological University (NTU), Singapore, from March 2016 to December 2016. In December 2016, he moved to Corporate Research in Robert Bosch in Bangalore as a Researcher, where he worked on numerical methods for ordinary differential equations. He joined Institute for Communication Technologies and Embedded Systems, RWTH Aachen University, in December 2017 as a postdoctoral research fellow in the Chair for Software for Systems on Silicon. Farhad is the recipient of the HiPEAC technology transfer award in 2019, and best paper award at ISQED 2022. Farhad will be joining Newcastle University in the UK from December 2022.

Dieser Gast wurde von Rolf Drechsler eingeladen.