

Title

Toward a New Era of Computer Architecture

Abstract

The current era we live in faces several challenges. First, Moore's law ended and it is very challenging to get more transistors on chip. Second, the rise of big data raises many questions about storage and processing. Third, the increasing usage of AI in many domains poses hard questions regarding hardware design. In this talk, I discuss the current status quo of computer architecture, the open questions we have, and what the future may look like in this field and its interaction with other fields.

Bio

Mohamed Zahran is currently a professor with the Computer Science Department at New York University (NYU). His research interest spans several aspects of computer architecture, including architecture of heterogeneous systems, hardware/software interaction, and high-performance computing.

He received his Ph.D. in Electrical and Computer Engineering from University of Maryland at College Park in 2003. Zahran is a senior member of IEEE, senior member of ACM, and Sigma Xi scientific honor society. He served on many committees in premiere conferences and journals in addition to the National Science Foundation and Department of Energy. In 2022 he served as the general chair of the premiere computer architecture conference: the 49th IEEE/ACM International Symposium on Computer Architecture.