

“AI Hardware Research at IBM Albany”

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Abstract:

Artificial Intelligence (AI) is expected to be the primary driver for growth in global computing markets over the coming decade. In recognition of the need for end-to-end system optimization and new devices and architectures to support AI workloads, IBM has established its AI Hardware Research Center in Albany. This partnership with New York State, SUNY POLY, and a growing roster of industrial concerns, is charged with developing the core technologies for customized devices and chips that will form the foundation for AI computing in the post-GPU era. This presentation, the first installment of IBM and SUNY POLY's new IDEA Exchange, will review the motivation and requirements for AI-specific hardware, describe IBM Albany's mission and operations, and lay out the framework for a series of follow-on lectures covering specific topics in more detail during 2020.

Bio:

John C. Arnold has spent the last 35 years working in a variety of process engineering and management positions in manufacturing, development, and research for semiconductor and magnetic devices. He holds degrees in Chemical and Electrical Engineering from RPI, the University of Arizona, and MIT. He has been part of IBM's Albany operation since late 2005, serving primarily in the areas of etch and lithography for interconnect and advanced memories during that time. In his current role, he has broad responsibility for the processes and equipment necessary to enable IBM's research in AI hardware.