九州工業大学
ディペンダブル集積システム研究センター（DISC）
特別講演のご案内

日時： 令和３年１月２７日（水）　９：００〜１０：３０

形式： Zoom を利用したオンライン講演
https://kyutech-ac-jp.zoom.us/j/97349573023?pwd=MGpCOVBubjhMUHh6Q3pKLzcxZ2hjZz09
Meeting ID: 973 4957 3023
Passcode: 571502

講師： Mr. Hugo A. Andrade (Director, Xilinx University Program (XUP))

題目： **Adaptable Intelligent Computing from Edge to Cloud**

Recent technical challenges have forced the industry to explore options beyond the homogeneous "one size fits all" CPU scalar processing solution. Vector processing (DSP, GPU) solves some problems but runs into traditional scaling challenges due to inefficient memory bandwidth usage. Traditional FPGA solutions provide programmable memory hierarchy, but the traditional hardware flow has been a barrier to adoption. The solution is to combine all three elements with a new tool flow that offers a variety of different abstractions - from framework- to C- to RTL-level coding. Such an adaptive compute acceleration platform (ACAP) allows users to customize their own domain specific architecture (DSA) from these three programmable elements.

In this talk, we will review the motivation for this new ACAP device category, overview its broad applicability from cloud to edge domains, and present details about the first ACAP, its architecture and programming environment. We will also provide updates on some of our open source initiatives to enhance developer productivity.

As director of the Xilinx University Program (XUP), Mr. Andrade focuses on enabling the use of Xilinx's Adaptive Compute technologies for academic teaching, research, and entrepreneurial activities. Recent activities have centered on compute acceleration and tools to improve developer and user productivity. Before joining Xilinx in San Jose, CA, he was Principal Product Manager, Advanced Software Technologies, at NI in Berkeley, where he focused on research and productization of system level development tools for heterogeneous platforms. He was founding manager and technical lead of the NI Berkeley LabVIEW Advanced R&D site, was a visiting industrial fellow at the University of California, Berkeley, and served as liaison to other local academic and industrial research labs. Hugo has authored or co-authored over 65 patents and over 30 academic research articles in the areas of virtual instrumentation, hardware/software interfacing, reconfigurable computing, graphical programming, models of computation, and system level design. He earned BS degrees in ECE and CS, and an MS degree in ECE from the University of Texas at Austin.

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