

Title	<i>Heterogeneous, High Scale Computing in the Era of Intelligent, Cloud-Connected Devices</i>
Speaker	David Pellerin Amazon, US

Abstract

Rapid advances in connected devices, coupled with machine learning and “data lake” methods of advanced analytics, have led to an explosion in demand for non-traditional, highly scalable computing and storage platforms. This increasing demand is being seen in the public cloud as well as in cloud-connected IoT edge devices. AI/ML is at the heart of many the newest, most advanced analytics and IoT applications, ranging from robotics and autonomous vehicles, to cloud-connected products such as Alexa, to smart factories and consumer-facing services in the financial and healthcare sectors. In support of these important workloads, alternative methods of computing are being deployed in the cloud and at the edge. These alternative, heterogeneous computing methods include CPUs, GPUs, FPGAs, and other emerging acceleration technologies. This talk presents examples of such use-cases within Amazon, as well examples of how Amazon customers increasingly rely on AI/ML, accelerated using alternative computing methods and coupled with smart, cloud-connected devices to create next-generation intelligent products. The talk will conclude with examples of how cloud-based semiconductor design is being enhanced using these same methods.

Biography



David Pellerin serves as Head of Worldwide Business Development for Infotech/Semiconductor at Amazon Web Services. Prior to joining AWS, Mr. Pellerin had a career in electronic design automation and hardware-accelerated reconfigurable computing. He has experience with digital logic simulation and optimization, high-level synthesis, grid and cluster computing, and embedded systems for image, video, and network processing. He has published five Prentice Hall technical books on EDA and FPGA-related topics.