Paolo Faraboschi

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Paolo Faraboschi leads research in the Systems Architecture Lab at Hewlett Packard Labs. His technical interests lie at the intersection of hardware and software and include high-performance computing (HPC), workload optimized systems-on-a-chip (SoC), and highly-parallel systems. In the past, he worked on instruction-level-parallel VLIW processor architectures, compilers, and energy-efficient servers. Dr. Faraboschi's current research focuses on next-generation high-end memory-driven computing systems, and specifically on R&D to address the most challenging problems of Exascale computing.

His career spans a wide technology spectrum, from high performance Exascale systems to embedded SoCs in printers. He was the hardware architect of "The Machine" prototype which showed the feasibility of fabric-attached memory and was the first instantiation of HPE's Memory Driven Computing paradigm. His work on system-level integration for low energy servers was a key element of the Hewlett Packard Enterprise Moonshot System, a new class of software-defined servers built to address the energy efficiency challenges of hyperscale datacenters. From 2003 to 2009 he led the Barcelona Research Office, which pioneered research in content-processing systems, system-level modeling and simulation, an effort that resulted in open-source simulation platform (COTSon). From 1995 to 2003, he was the technical lead for the Custom-Fit Processors Project at Hewlett Packard Labs, Cambridge (MA), building highly-optimized, software-defined CPU cores. In that role, he was the principal architect of the instruction set architecture for the Lx/ST200 family of VLIW embedded processor cores (in collaboration with STMicroelectronics) which have been used for over a decade in a variety of audio, video, and imaging consumer products, including printers and scanners.

A regular keynote speaker at conferences and industry events, Dr. Faraboschi is an IEEE Fellow for *"contributions to embedded processor architecture and system-on-chip technology."* An active member of the computer architecture community, he serves regularly on IEEE program and organizational committees. He co-authored over 100 scientific publications, 36 granted patents, and the book, *"Embedded Computing: a VLIW Approach to Architecture, Compilers and Tools"* (with Josh Fisher and Cliff Young).

He received his M.S. and Ph.D. in electrical engineering from the University of Genoa, Italy, in 1993.

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