Future of Computing

Will More-than-Moore technologies with 3D integration meet the challenges of edge AI devices ?

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Abstract

In the world of high performance computing, over a decade the performances of the computing has constantly increase beyond the almost automatic but slowing down improvement in processor performance with Moore's Law. Big players have moved to new architectures such as chiplets only possible thanks to the integration of More-than-Moore technologies. 2.5D and 3D integration, memory cubes, accelerators and heterogeneous architectures are key elements of the success towards performance and energy efficiency. This transition has shown clear benefits and sustainability for HPC market. The question is still open for Edge AI components where real time, ultra-low power, large amount of data, low cost are the main drivers: how can 3D integration play a role for these embedded processors? CEA-Leti has been involved for more than two decades in 3D integration with industrial partners. This presentation will discuss about:

- What are the main drivers for computing in edge devices ?
- What could be the architectures' new paradigm ?
- How 3D integration will be an enabler, and how CEA-Leti's roadmap supports this promising technology

Biography

Sylvie Joly is currently working as 3D integration and packaging Partnerships Manager at CEA-LETI. Sylvie received M.Sc. in Microelectronics from ISEP "Institut Supérieur d'Electronique de Paris" in 1989. She completed her education with a Master in Marketing and Innovation at the Grenoble Ecole de Management (GEM) in 2001. Prior to this position, she worked for more than 8 years as display business developer at CEA-LETI. In 2004 as Sr. Marketing Engineer in the CEA's Technology Transfer Department, she built a strong experience in setting up and managing technical marketing surveys. Before joining CEA, she spent 10 years in the industry as an R&D engineer, and 8 years as Sales engineer in several companies including Hewlett Packard and Ericsson.