

NANOSCALE CASCADED PLASMONIC LOGIC GATES FOR NON-BOOLEAN WAVE COMPUTATION

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Resumen:

CMOS logic scaling is reaching a point with gradually diminishing returns. So that is why so-called Beyond CMOS compute paradigms have gained a lot of attention in the last decade. It is however far from trivial to beat advanced ultimately-scaled CMOS logic realisations. Plasmonics wave computing is one potential emerging option which could have better area-performance metrics for high performance computing and especially exascale computing servers. In this talk a review will be provided of the current status of this technology and why and where it could be beneficial.

Sobre Francky Catthoor:

Francky Catthoor received his Ph.D. in EE from the Katholieke Univ. Leuven, Belgium in 1987. Between 1987 and 2000, he has headed several research domains in the area of synthesis techniques and architectural methodologies. Since 2000, he is strongly involved in other activities at IMEC including deep submicron technology aspects, IoT and biomedical platforms, and smart photovoltaic modules, all at IMEC Leuven, Belgium. Currently he is an IMEC fellow. He is also part-time full professor at the EE department of the KULeuven. He has been associate editor for several IEEE and ACM journals, and was elected IEEE fellow in 2005.