



## QNERC Seminar

**Tuesday, March 25, at 14:00 – 15:00**  
**Conference Room 605, South-9**

**Title: *The Future of Micro and Nanoelectronics in the Zero Power and Zero Variability Era and the role of Cooperations***

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**Abstract—** Nanoelectronics will have to face major challenges in the next decades in order to proceed with increasing progress to the sub 10 nm nodes level and face the challenge to approach zero variability. The main requirements will be to reduce leakage currents and reduce access resistances at the same time in order to fully exploit 3D integration at the device, elementary function, chip and system. New progress laws combined to the scaling down of CMOS based technology will emerge to enable new paths to Functional Diversification. New materials and disruptive architectures, mixing logic and memories, Heterogeneous Integration, introducing 3D schemes at the Front End and Back End levels, will come into play to make it possible.



**Bio** - Simon Deleonibus, received his PhD from Paris University(1982) , started his career with Thomson Semiconducteurs(1981-1986), joined CEA-LETI in 1986. He was Director of the Electronic Nanodevices Laboratory till 2008 and is Chief Scientist since.

Editor of IEEE Trans. on Electron Devices, European Physical Journal - EPJ AP, ECS Trans-ULSI Process Integration, Science China-Information Sciences, 2 books (WSPC and Pan Stanford), 1 Special issue of SSE, 1 Special Issue of European Physical Journal - EPJ AP. Published more than 460 papers (110 journal papers), 10 book chapters, filed 30 patents among which the

invention of the “contact/via plug principle”, used as a standard technology by the micro/nanoelectronics industry.

Member of ITRS, European Research Council, Board of Governors of Nanosciences Foundation and IEEE EDS, 10 International Conferences Program Committees, Vice- Chair Region 8 of the IEEE Electron Device Society,

He is IEEE Fellow, IEEE Distinguished Lecturer, CEA Research Director, “Chevalier de l’Ordre National du Mérite”, “Chevalier de l’Ordre des Palmes Académiques”, “ Grand Prix de l’Académie des Technologies” 2005 Laureate.

量子ナノエレクトロニクス研究センター客員教授として滞在中の Simon Deleonibus 先生にナノエレクトロニクスの将来展望と国際連携に関するお話をして頂きます。ふるってご出席下さい。

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