

SOI Academy FD-SOI Training

Bld A, 1455 Pingcheng Rd, Jiading Shanghai, China

Nov. 19-20, 2018 Shanghai, China



SITRI

AGENDA

Session 1 : November 19

13:00 – 13:30 Registration

13:30 – 14:00 Opening Remarks

- Dr. Mark Ding, CEO, SITRI
- Dr. Julien Arcamone, EVP, Leti

14:00 – 14:20 Overview of Worldwide FD-SOI Ecosystem

Dr. Carlos Mazure, Executive VP, Soitec

14:20 – 14:40 FD-SOI Activities in China

Jiong Zhu, Director, Design Implementation, VeriSilicon

14:40 – 15:00 FDX Brings Differential Chip Solutions

Dr. Zhiyong Han, China Sales GM, GLOBALFOUNDRIES

15:00 – 15:30 Networking Break

15:30 – 16:15 General Introduction to FD-SOI Technology (Part I)

Prof. Sorin Cristoloveanu, Director of Research CNRS, Laureate of IEEE Andrew Grove Award

- Very short history of SOI
- Basics about FD-SOI MOSFETs and typical mechanisms: coupling, super-coupling, thickness effects and short-channel effects
- Characterization methods for FD-SOI, including reliability issues
- Beyond MOSFETs: A short review of innovating FD-SOI devices

16:15 – 16:45 General Introduction to FD-SOI Technology (Part II)

Dr. Bich-Yen Nguyen, Senior Fellow, Soitec

- Introduction of UTBB substrate quality and control-ability to support variability
- MOSFET architecture and scaling

AGENDA

- FD-SOI ecosystem and products: RF, low-power, mid-power (LDMOS), variability advantages, etc

16:45 – 17:30 **FD-SOI Product Design Methodology**

Dr. Christophe Tretz, Senior Engineer, Sector Lead, IBM, SOI Industry Consortium

17:30 – 19:00 **Buffet Dinner**

Session 2 : November 20



Hands-on Training

09:00 – 12:00 **Training on the Basics of FD-SOI Digital Circuit Design**

Dr. Alexandre Valentian, Senior Expert, Leti

Digital Modules:

- Critical path replica, power switch transistor and flip-flop for the data path
- Bitcell, wordline driver and sense amplifier for the SRAM memory

12:00 – 13:30 **Lunch**

13:30 – 16:30 **Training on the Basics of FD-SOI RF Circuit Design**

Dr. Baudouin Martineau, Senior Expert, Leti

RF Modules:

- A tunable ultra low power inductorless low noise amplifier exploiting body biasing of FD-SOI technology
- A reconfigurable, efficiency improved, low noise amplifier for 5G applications using FD-SOI

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