UC San Diego
JACOBS SCHOOL OF ENGINEERING
NanoEngineering

UCSD NanoEngineering/Chemical Engineering

SPECIAL SEMINAR

Tuesday, November 12, 2019
Seminar Presentation: 1:00pm – 2:00pm
SME room 248

"Thin film ASICs for flexible wearables"

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Managing the Thin Film Electronics R&D program at Imec Belgium

Abstract: One of the key challenges for wearables is that one-size-fits-all does not work. Most of the focus on customization and personalization of the wearables has been on the software and data analysis fronts. The hardware (sensors, readout, signal conditioning and processing, etc) is typically common across all the units of specific version of specific wearables. Human body has inherent variability from person to person as well as across different sites on the body. Thus, the hardware should ideally be customized across persons and across sites of body to ensure that high quality data can be captured. However, customization of hardware is constraint by high time and cost required and the trade-offs involved in customizability, cost, performance and power. This talk will present imec's work in thin film ASICs that can enable hardware customization at lower cost and manufacturing turn-around times as well as enable flexible and skin-conformable form factors.

Biosketch: Prashant Agrawal received his PhD in Electrical Engineering from KU Leuven (Belgium) and MS in Computers Science & Engineering from Indian Institute of Technology Kharagpur. He is currently managing the Thin Film Electronics R&D program at Imec Belgium. Prior to this, he had been Entrepreneur-in-Residence at Imec during which he managed technical and business development activities, and fund raising for internal ventures. He has also worked in the Hyperspectral Imaging Group at Imec (Belgium) and in the High Performance Computing Group at IBM Research India.

This talk will give an introduction to imec and an overview of its activities. It will also present different student and career opportunities available at imec (thesis, internships, PhD, post-doc, tenure track). It will introduce to audience how imec has built completely new platform of flexible circuits, imagers, displays and MEMS devices using the TFT technologies from flat panel display industry.