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UCSD NANOENGINEERING SEMINAR

Tuesday
April 12, 2016

Seminar Presentation: 11:00am – Noon

SME 248 - Cymer Conference Center

Electronic Skin in Robots

Dr. Ravinder Dahiya
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Abstract:

This lecture will present various approaches for obtaining distributed electronics and sensors on flexible and conformable substrates, especially in context with electronics skin patches. The lecture will begin with the developments such as using off-the-shelf sensors and electronic components on flexible printed circuit boards. This will be followed by various alternatives being explored today (e.g. printing of nanowires) and the potential challenges and success on various time scales. The lecture will conclude with a discussion on how the field and associated technologies may evolve in the future with new applications such as disposable solutions for healthcare or skin-on-objects as enabler for internet of things and smart cities.

Biosketch:

Dr. Ravinder Dahiya is Reader and EPSRC Fellow in the School of Engineering at University of Glasgow, UK. He is the leader of Bendable Electronics and Sensing Technologies (BEST) group, which conducts fundamental research on flexible electronics using high-mobility materials to develop electronics skin for robotics and prosthetics applications. Recently, the BEST group was one of the 3 finalists for NMI's University Group of the Year award.

His multidisciplinary research interests include Flexible and Printable Electronics, Electronic Skin, Robotic Tactile Sensing, and Wearable Electronics. He has published more than 120 research articles, 4 book (3 at various publication stages) and 4 patents (including 2 submitted). He has led many international projects funded by many agencies including European Commission and EPSRC.