

UNL Department of Physics and Astronomy presents:

Hybrid-Systems-in-Foil for Flexible Electronics— Technology and Applications

PRESENTED BY
**CHRISTINE
HARENDT,**
Institut für
Mikroelektronik
Stuttgart



THURSDAY
SEPTEMBER 16
4:00 PM
VIA ZOOM

ABSTRACT

Flexible, thin and bendable electronics are desired systems for applications in robotics, automatization, medical and life science. The demanded system performance requires the integration of different components such as thin and flexible silicon ICs, sensors and thin-film large-area components. Technologies for the integration of silicon chips in flexible foil systems with chip thicknesses ranging from a few microns up to 50 μm are presented. Typical applications are embedded multichip modules for industry 4.0 solutions, bendable sensor foils for robotic gripper fingers and smart sensors for medical diagnostics.

Bio

Christine Harendt received her Ph.D. in Physical Chemistry from Freie Universität Berlin in 1987. The following year she joined the Institut für Mikroelektronik Stuttgart in Germany (IMS CHIPS) where she heads the Semiconductor Integration business unit.

She is involved in the development and application of new technologies in combination with CMOS processes. She has participated in several national and international research programmes and coordinated a European Research Project focussing on the development of miniaturised video endoscopes. Within the cluster MicroTEC Südwest she is involved in the development of the platform PRONTO, a joint initiative of industrial-oriented R&D institutes in Baden-Württemberg for development and fabrication of microsystems. She coordinated research projects developing flexible foil systems for applications in robotics, safety in industrial automation and medical applications. Her current research interests are fabrication, packaging and characterisation of ultra-thin silicon chips and Hybrid Systems in Foil.

