16:45 L'électronique RF imprimée sur papier par jet d'encre : la solution pour l'acquisition de données et le calcul ubiquitaires ?
Inkjet-Printed paper-based RF electronics: the solution for ubiquitous sensing and pervasive computing?

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In this talk, inkjet-printed flexible antennas fabricated on paper substrates are introduced as a system-level solution for ultra-low-cost mass production of UHF Radio Frequency Identification (RFID) Tags and Wireless Sensor Nodes (WSN) in an approach that could be easily extended to other microwave and wireless applications. A compact inkjet-printed UHF "passive-RFID" antenna using the classic T-match approach and designed to match IC's complex impedance, is presented as a demonstrating prototype for this technology. In addition, we briefly touch up the state-of-the-art area of fully-integrated wireless sensor modules on paper and show the first ever 2D sensor integration with an RFID tag module on paper, as well as the possibility of a 3D multilayer paper-based RF/microwave module, that could potentially set the foundation for the truly convergent wireless sensor ad-hoc networks of the future.

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Manos M. Tentzeris received the Diploma Degree in ECE from the National Technical University of Athens, Greece and the M.S./Ph.D. degrees in ECE from the University of Michigan and he is currently an Associate Professor with School of ECE, Georgia Tech. He has published more than 300 refereed papers, 2 books and 15 book chapters. He is the Georgia Electronic Design Center Associate Director for RFID/Sensors research, and he has been the GT NSF-Packaging Research Center Associate Director for RF Research from 2003-2006. He has been the recipient of numerous awards including the 2007 IEEE APS Best Student Paper Award, the 2006 IEEE MTT Outstanding Young Engineer Award, the 2006 Asian-Pacific Microwave Conference Award, the 2004 IEEE Transactions on Advanced Packaging Commendable Paper Award, the 2003 NASA Godfrey "Art" Anzic Collaborative Distinguished Publication Award, the 2003 IEEE CPMT Outstanding Young Engineer Award, the 2002 International Conference on Microwave and Millimeter-Wave Technology Best Paper Award (Beijing, China), the 2002 Georgia Tech-ECE Outstanding Junior Faculty Award and the 2000 NSF CAREER Award. He was the TPC Chair for IEEE IMS 2008 Symposium. He is the Associate Editor of IEEE T-Advanced Packaging and of IEEE T-MTT. He was a Visiting Professor with the Technical University of Munich in 2002 and he has given more than 50 invited talks. He is a Senior Member of IEEE, a member of URSI-Commission D, a member of MTT-15, an Associate Member of EuMA, a Fellow of the Electromagnetic Academy and a member of the Technical Chamber of Greece.