CHIPs Act and Related Efforts in North Texas

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ABSTRACT

This talk will introduce some of the coordinated efforts ongoing in North Texas to utilize the state infrastructure and capabilities to engage in upcoming opportunities created by the CHIPs act. In particular, we will discuss two new centers, BEACONS (Batteries and Energy to Advance Commercialization and National Security) and CHESS (Center for Harsh Environment Semiconductor and Systems). BEACONS is working on advancing the commercialization and security of the nation's energy storage systems by developing a resilient and sustainable domestic supply chain through transformative technology, agile infrastructure, and an accomplished workforce. CHESS conducts research and development to advance fundamental understanding of processes, materials, and devices for harsh environments (e.g. extreme temperatures, radiation exposure, etc.). Examples of projects in these two new centers will be presented.

BIO

Prof. Manuel Quevedo is Department Head at the Materials Science and Engineering Department and Texas Instruments Chair In Nanoelectronics at the University of Texas at Dallas. He is also the Director of the Center for Harsh Environment Semiconductors and Systems. Dr. Quevedo joined UT-Dallas in 2007. Before joining UT-Dallas he worked at Texas Instruments R&D Department where he developed novel materials and devices for Si-based technology. While at Texas Instruments, Dr. Quevedo was appointed Texas Instruments assignee at International Sematech to work with other companies (Intel, IBM, Motorola, Samsung, AMD, etc.) in research related to alternate materials for metal gate and high-k applications. Prof. Quevedo has published more than 350 papers, 3 book chapters, and holds 15 US patents with 6 more pending. His current research includes materials and devices for large area electronics and sensors as well as novel materials for Si-based technology. Dr. Quevedo is member of the scientific board of Nanoholdings LLC and RDUSA LLC, member of the executive board of Contex, the Center for Advanced Materials (Mexico), Center for Applied Chemistry (Mexico), and The Texas Task Force to host the National Semiconductor Tech Center (NSTC). Prof. Quevedo's research is supported by The National Science Foundation (NSF), The Air Force Office of Sponsored Research (AFOSR), Defense Advanced Research Projects (DARPA), Domestic Nuclear Detection Office (DNDO), Conacyt, Texas Instruments, Department of Homeland Security (DHS) and NanoHoldings LLC.