MTT Logo

IEEE Microwave Theory and Techniques Society
Washington DC/Northern VA Chapter

www.ieee.org/mtt-wnva
(http://ewh.ieee.org/r2/wash_nova/mtt)

- The eSCANNER
- MTT-S
- 2010 IMS Anaheim
  2011 IMS Baltimore
- ARFTG
- Local Area IEEE Chapters
  - AP/MTT (Baltimore)
  - EDS
  - GRSS
  - IT
  - Photonics
  - WIE
- Sponsors
  - Mid-Atlantic Microwave
  - Artech House
  - Tektronix
  - Agilent
- Microwaves 101
- Microwave Sites Around the World
- Biography of J. C. Maxwell
- Historical Electronics Museum (near BWI)

Lecture 1: Novel Device Architecture for Silicon-based Power Amplifiers at Millimeter-Wave

Dr. Thomas Farmer, U.S. Army Research Laboratory, Adelphi, MD

Lecture 2: Piezo-MEMS Enabled, Low Power Mechanical Logic

Dr. Robert Proie, U.S. Army research Laboratory, Adelphi, MD

Date: Thursday May 31st, 2012

Time: Dinner (Optional) 5:30 pm, Lecture 7:00

Dinner: Sakura Restaurant, 9031 Baltimore Ave., College Park, MD 20740

Place: American Center for Physics

Directions: http://www.acp.org/map.html

Free parking.

All IEEE members and guests are welcome to attend.

Cost: Lecture free, Dinner $10

Please RSVP to Roger Kaul, 301-394-4775 or rogerieeemtt@gmail.com by COB Wednesday May 30th

Abstract 1:

Our architecture reliably operates and has been implemented using 120 ľm SiGe technology at 2.4 GHz and 30 GHz. It allows for very large output voltage swings, leading to high output power with high efficiency when used in a power amplifier design. It is our hope that the reproducibility of our design can be integrated into new devices in a cost-effective manner to ensure their continued proliferation and the unlocking of the next generation millimeter-wave wireless technologies.

Abstract 2:

MEMS devices offer an alternative to solid-state components for ultra low power, digital computation. These devices can have extremely sharp, less than 1-mV/dec, turn-on I-V slopes, and the use of a body bias has been used to demonstrate switching voltages under 200-mV. For those reasons, a design, fabrication and characterization effort, intended to develop a complete MEMS digital library and design flow, has been undertaken to enable ultra low power microcontrollers. Current generation components have a power consumption advantage over bulk CMOS processes at lower frequencies. Furthermore, future scaling of the actuator and contact gap is predicted to reduce dynamic energy consumption to under 10-aJ, with static power scaling similarly.

New Local Chapter Administrative Committee members are needed. Really. If you are reading this sentence, then we need you to help us in the Chapter.

Join us in planning the next lecture series. Please volunteer... everyone has something to offer. The next administrative meeting will be held soon.

Please contact 2011-12 Chapter Chair Michael Nueslein mnueslein@mitre.org