Wednesday Panel Sessions

12:00–13:15 PWA HCC 313C

Is GaN Ready for Prime Time?

Moderator:
- Mark Rosker, DARPA

Panelists:
- Mike Wojtowicz, NGST
- Toshi Kikkawa, Fujitsu
- Silvain Delage, Alcatel
- Paul Saunier, TriQuint Semiconductor
- Jeff Shealy, RFMD
- John Palmour, Cree

Sponsor: IMS

GaN-based materials and devices have been in development worldwide for years. In a market packed with established technologies, what is the readiness of GaN-based devices and where will they find a home?

12:00–13:15 PWB HCC 316C

Will RF-MEMS Make the Commercial Leap?

Moderator:
- Scott Barker, University of Virginia
- Gabriel Rebeiz, University of California San Diego

Panelists:
- William Panton, Qualcomm
- John McKillop, TeraVicta
- John Maciel, Radant MEMS
- John Ebel, U.S. Air Force Research Laboratory

Sponsor: MTT-21

RF-MEMS devices have recently achieved dramatic increases in reliability and power handling. Therefore, the attainment of real-time adaptable RF front ends should be at hand but will system designers consider RF-MEMS for use within cell phones in the near future? This panel session will bring together industry experts from cell phone manufacturers as well as leading RF-MEMS researchers to explore this question.

12:00–13:15 PWC HCC 317A

Grant Opportunities at the National Science Foundation

Panelists:
- Leda Lunaradi, NSF
- Don Senich, NSF

Sponsor: IMS

The National Science Foundation (NSF) is a federal agency committed to support fundamental research, generating new technologies and scientific understanding and developing a well-educated workforce. This session will provide an overview of the agency, information on several programs of interest, and guidelines on how to submit a proposal.

Wednesday Special and Focused Sessions

08:00–09:40 WE1E HCC 316A

A Tribute to Dr. K. C. Gupta

Dr. K. C. Gupta passed away at the age of 66 in February 2007. He was not only a scholar and a dedicated leader in the microwave field but also touched the lives of many people by his warmth, selfless service, and sincerity. KC was a most valuable role model, collaborator, mentor, educator, and wonderful friend whose wisdom and counsel will be remembered by many. Dr. Gupta was a pioneer in the field of microwave education and computer-aided design. Some of KC's well-known books are *Microstrip Lines and Slotlines*, *Computer-Aided Design of Microwave Circuits*, and *Neural Networks for RF and Microwave Design*. He was the founding editor for the *International Journal of RF and Microwave Computer-Aided Engineering*. KC's extensive professional activities included service as the IEEE MTT-S President in 2005. He received numerous awards including the IEEE Millennium Medal, the MTT-S Distinguished Service Award, and the MTT-S Distinguished Educator Award. Dr. Gupta was a Fellow of IEEE and a Life Fellow of IETE, India.

13:20–15:00 WE3A HCC 311

Advances in GaN Technology

This focused session highlights advances in GaN MMIC power and low-noise performance and maturation of the technology to enable multiple commercial applications. New broadband power and efficiency benchmarks are reported for designs in NDPA distributive technology. Wideband sub-dB noise figure has been achieved in a broadband L- and C-band amplifier with 2W output power, and over 50% PA efficiency is reported at 35 GHz. Devices packaged in commercial plastic packaging have achieved 18W output at 3.5 GHz. GaN device reliability improvement is addressed through reduction in early current drop degradation.

13:20–15:00 WE3F HCC 315

Microwaves in Support of Societal Security

Microwaves play a key role in support of societal security. The frequency range used extends from the MHz region to 100 GHz for various communication and detection systems. Threat detection, counter threat techniques, and first response technology to man-made as well as natural disasters will be considered. This session will present detection technology that is under development to protect societies against threats as experienced by multiple nations from terrorists. Passive imaging, radar, and ultra-wideband sensors will be presented that have a variety of applications of great use to make life safer and provide a key advantage under low-visibility conditions.

15:30–17:00 WE4F HCC 315

Advances in Microwave Systems for Deep Space Missions

Current and planned deep-space missions depend on advanced techniques in microwave/RF design to accomplish demanding science and telecommunications requirements. This session focuses on advances in microwave systems and technologies in recently launched missions, including the New Horizons Mission to Pluto and the MESSENGER mission to Mercury, on planned improvements to NASA's Deep Space Network, and on the technologies that future missions to the Moon, to Mars, and beyond are depending on to achieve their goals.