

### Thursday Panel Sessions

10:10–11:50 PTHA HCC 317A 12:00–13:15 PTHB HCC 313C

#### Career Development: Giving Your Career A Never-Ending Boost

Chair:

- S. Pacheco, Freescale Semiconductor
- R. Henderson, Freescale Semiconductor

Panel:

- Peter Blakey, Northern Arizona University
- Rhonda Drayton, University of Minnesota
- Larry Dunleavy, Modelithics, Inc.
- Mike Golio, *IEEE Microwave Magazine*, Editor
- Barry Perlman, U.S. Army Research

Sponsor: IEEE MTT-S GOLD Committee

In the past, employers partnered with their employees by assisting them in their career planning and development. Today, employers are coming to view career development primarily as the employee's responsibility. This places new employees as well as those looking to make a career change at a disadvantage. In this panel session, representatives from academia, industry, and government will show you how to take charge of your career. They will discuss the intricacies of developing a career plan and how to manage it through the very dynamic professional climate in which engineers work. A wide array of topics will be presented, such as networking, influence, diversity, balancing work and life, starting your own company, investing, and planning for retirement. Thus, the IEEE MTT-S GOLD Committee is glad to invite all of its GOLD members as well as anyone who is interested in learning and discussing ideas for giving your career a never-ending boost!

#### THz Electronics for the 21st Century

Moderator:

- Richard Lai, NGST

Panelists:

- Lorene Samoska, Jet Propulsion Laboratory
- Axel Tessmann, Fraunhofer University
- Bobby Weikle, University of Virginia
- Elliott Brown, University of California Santa Barbara
- Mark Rosker, DARPA

Sponsor: IMS

Solid state electronic advancements at terahertz frequencies (0.1 THz to 10 THz) will enhance and enable future imaging and sensing applications. The panel will address the latest capabilities, future challenges for system insertions, and critical system requirements.

12:00–13:15 PTHC HCC 316C

#### RF Techniques for Signal Integrity Engineering

Moderator:

- Ashok Bindra, *RF Design* Editor

Panelists:

- Colin Warwick, The MathWorks
- Jeff Sinsky, Alcatel-Lucent
- Niranjana Kanaglekar, Agilent Technologies
- Juergen Hartung, Cadence Design Systems

Sponsor: MTT-1

The reliable transmission of multigigabit-per-second serial data over board traces and back-planes is compromised by the distributed nature of the propagation media. Can RF and microwave engineers transfer their skills to the growing field of signal integrity? If so, how?

### Thursday Special and Focused Sessions

10:10–11:50 TH2E HCC 316A 15:30–17:00 TH4E HCC 316A

#### Advanced Signal Processing Techniques for Microwave Photonics

Microwave photonic links promise low loss and high bandwidth, which are essential for many wireless applications such as antenna remoting and low-loss backhaul of wireless basestations to central offices. Recently, significant progress has been made in utilizing digital signal processing techniques to significantly enhance the signal integrity of microwave analog and digital signals which are transported using an optical carrier either in silica fiber or via free space. In this focused session, we will survey several emerging optical signal-processing techniques in the signal generation, signal integrity, and coherent detection of microwave signals, utilizing innovative optical means in combination with electronic processing.

13:20–15:00 TH3E HCC 316A

#### Millimeter- and Submillimeter-Wave Imaging

Millimeter- and submillimeter-wave imaging is a rapidly developing area, not only due to renewed interests in security screening but also because of advances in technology that have enabled video rate detection and display capability up to and beyond 100 GHz. Both small and large companies as well as government and university research labs have been actively pursuing a wide range of available techniques and accompanying source and sensor technologies. The variety and quality of the images are growing each year. These systems bring together the whole range of microwave components, techniques, and data processing schemes. This focused session will cover active and passive imaging at frequencies from 100 GHz to over 1 THz.

#### Submillimeter-Wave Radio Astronomy and Mauna Kea

The historic role that Mauna Kea has played in the development of Radio Astronomy as well as the historic role that radio astronomy has played in the MTT society will be highlighted in this very special focus session on submillimeter wave instrumentation, techniques, and astronomy. A wide range of talks will cover both current topics in millimeter and submillimeter wave astronomy and technology, as well as a look backwards at some of the major contributions this field has had in microwave theory and techniques. The session chair and cochair are active long-time members of the radio astronomy community and past participants in this conference series.