

WE1A Nonlinear Modeling and Analysis
*Chair: J.C.M. Hwang,
Lehigh University*

ROOM A201

- 8:00 AM** WE1A-1: *Analysis of Electrothermal Transients and Digital Signal Processing in Electrically and Thermally Nonlinear Microwave Circuits*
V. Rizzoli, A. Lipparini, Dept. of Elec., F. Mastri, Dept. of Ing. Elet., A. Neri, Fondazione Ugo Bordoni, Bologna, Italy,

- 8:20 AM** WE1A-2: *The Effect of a Variation in Tone Spacing on the Intermodulation Performance of Class A & AB HBT Power Amplifiers*
P.M. McIntosh, C.M. Snowden, Dept. of EEE, Univ. of Leeds, Leeds, UK

- 8:30 AM** WE1A-3: *Comparison of Hybrid Pi and Tee HBT Circuit Topologies and Their Relationship to Large Signal Modeling*
D.A. Teeter, Raytheon Elec., ADC, Andover, MA, W.R. Curtice, W.R. Curtice Consulting, Princeton Junction, NJ

- 8:40 AM** WE1A-4: *A Non-Quasi-Static Model of GaInP/AlGaAs HBT for Power Applications*
J.P. Fraysse, M. Campovuccio, R. Quere, J. Obregon, IRCOM, Brive, France, D. Floriot, THOMSON-CSF, Orsay, France, P. Auxemery, UMS, Orsay, France

- 8:50 AM** WE1A-5: *Modeling of Nonlinear Active and Passive Devices in Three-Dimensional TLM Networks*
L. Cascio, G. Tardioli, W.J.R. Hoefer, Dept. of ECE, Univ. of Victoria, Victoria, B.C., Canada

- 9:00 AM**

- 9:10 AM** WE1A-6: *Scalability of DC/AC Non-Linear Dispersion Models for Microwave FETs*
V. Cojocaru, T. Brazil, Dept. of EEE, Univ. College Dublin, Ireland

- 9:20 AM** WE1A-7: *A Physical Large Signal Si MOSFET Model for RF Circuit Design*
M.C. Ho, Corp. R&D, K. Green, R. Culbertson, J.Y. Yang, D. Ladwig, Mixed Signal Products, P. Ehnis, Design Automation Div., Texas Instruments, Dallas, TX

WE1B Passive Components II
*Chair: E.J. Denlinger,
David Sarnoff Research Center*

ROOM A207

- WE1B-1: A Wide Band Multiport Planar Power Divider Design by Radially Combining Matched Sectorial Components**
Y.-J. Chen, R.-B. Wu, Dept. of EE, Nat'l. Taiwan Univ., Taipei, Taiwan

- WE1B-2: Design and Performance of GaAs MMIC CPW Baluns Using Overlaid and Spiral Couplers**
T. Gokdemir, S.B. Economides, A. Khalid, A.A. Rezazadeh, I.D. Robertson, Dept. of EEE, King's College, Strand, London

- WE1B-3: An Octave Bandwidth Monopulse Processor**
N.S. Barker, G.M. Rebeiz, Dept. of EECS, Univ. of Michigan, Ann Arbor, MI

- WE1B-4: A Compact Ku-Band Power Combining Network Using Rectangular Coaxial Line Technology**
H. Oh-hashi, H. Yukawa, M. Miyazaki, Mitsubishi Elec. Corp., Kanagawa, Japan

- WE1B-5: Cavity-Type Directional Couplers with Simple Structure**
T. Kawai, M. Kishihara, Y. Kokubo, I. Ohta, Dept. of EE, Faculty of Eng., Himeji Inst. of Tech., Himeji, Japan

- WE1B-6: Analysis and Design of H-Plane Waveguide Bends with Compact Size, Wideband and Low Return Loss Characteristics**
Z. Ma, T. Yamane, E. Yamashita, Dept. of EE, Univ. of Electro-Communications, Tokyo, Japan

- WE1B-7: Thin-Film Microstrip Lines for mm and Sub-mm-Wave On-Chip Interconnects**
H.-M. Heiliger, M. Nagel, H.G. Roskos, H. Kurz, RWTH, Aachen, Germany, F. Schnieder, W. Heinrich, Ferdinand-Braun-Inst. fur HFtechnik, Berlin, Germany

WE1C Millimeter-Wave Devices and Components
*Chair: P. Smith, Sanders, Lockheed-Martin
Co-chair: M. Matloubian,
Hughes Research Labs*

ROOM A102

- WE1C-1: A Low Cost Miniature MMIC W-Band Transceiver with Planar Antenna**
H. Fudem, P. Stenger, E.C. Nienhke, M. Sarantos, C. Schwerdt, Northrop Grumman, ESSD, Baltimore, MD

- WE1C-2: A Miniature, MMIC One Watt W-Band Solid-State Transmitter**
P. Stenger, M. Sarantos, E. Nienhke, H. Fudem, Northrop Grumman Corp., ESSD, Baltimore, MD

- WE1C-3: Comparison of W-Band MMIC Mixers Using InP HEMT Technology**
R. Virk, M. Matloubian, M. Le, M. Case, C. Ngo, Hughes Research Labs., Inc., Malibu, CA, L. Tran, Hughes Space & Comm. Co., El Segundo, CA

- WE1C-4: A DC-60 GHz GaAs MMIC Switch Using Novel Distributed FET**
H. Mizutani, C&C LSI Dev. Div., Y. Takayama, Semicond. Group, NEC Corp., Kawasaki, Japan

- WE1C-5: A Single-Bias Diode-Regulated 60 GHz Monolithic LNA**
K. Maruhashi, K. Ohata, Kansai Elec. Research Lab., NEC Corp., Shiga, Japan, M. Madhian, Network Research Lab., NEC Corp., Kanagawa, Japan

- WE1C-6: 60 GHz Flip-Chip Assembled MIC Design Considering Chip-Substrate Effect**
Y. Arai, M. Sato, H.T. Yamada, T. Hamada, K. Nagai, H.I. Fujishiro, Semicond. Tech. Lab., Oki Elec. Ind. Co., Ltd., Tokyo, Japan

- WE1C-7: RF Performance Characteristics of InP Millimeter-Wave N+-N-N+ Gunn Devices**
H. Eisele, G. Munns, G.I. Haddad, SS Elec. Lab., Dept. of EECS, Univ. of Michigan, Ann Arbor, MI

WE1D Digital Microwave Circuits
Chair: A. Oki, TRW

ROOM A101

- WE1D-1: Over 60-GHz Operation of SCFL Dynamic Frequency Divider Using InP-Based HEMTs**
Y. Umeda, K. Osafune, T. Enoki, H. Yokoyama, Y. Ishii, Y. Imamura, NTT Sys. Elec. Lab., Kanagawa, Japan

- WE1D-2: Optical Repeater Circuits Using 40-Gbit/s InAlAs/InGaAs HEMT Digital IC Chip Set**
M. Yoneyama, A. Sano, K. Hagimoto, NTT Optical Network Sys. Labs., T. Otsuji, K. Murata, Y. Imai, S. Yamaguchi, T. Enoki, E. Sano, NTT Sys. Elec. Labs., Kanagawa, Japan

- WE1D-3: A 40 Gbit/s Super-Dynamic Decision IC Using 0.15- μ m GaAs MESFETs**
K. Murata, T. Otsuji, M. Tokumitsu, NTT Sys. Elec. Lab., Kanagawa, Japan, M. Yoneyama, NTT Optical Network Sys. Labs.

- WE1D-4: Monobit Receiver**
J.B.Y. Tsui, J.J. Schamus, D.H. Kaneshiro, Wright Lab., Wright Patterson AFB, OH

- WE1D-5: A 10 Gb/s Package for Digital ICs**
J.B. Hacker, T.C. Banwell, D.T. Kong, Bell Comms. Research, Red Bank, NJ

WE1E New Leakage Effects in Planar Guiding Structures
*Chair: A.S. Omar, TU Hamburg-Hamburg
Co-chair: N.K. Das, Polytechnic University*

ROOM A108

- WE1E-1: The Nature of the Spectral Gap for Leaky Waves on a Periodic Strip Grating Structure**
S. Majumder, D.R. Jackson, Univ. of Houston, Houston, TX, M. Guglielmi, ESTEC, Noordwijk, The Netherlands

- WE1E-2: The Spectral Gap When Power Leaks into More Than One Type of Surface Wave on Printed-Circuit Lines**
M. Tsuji, H. Shigesawa, H. Sannomiya, Dept. of Elec., Doshisha Univ., Kyoto, Japan, A.A. Oliner, Dept. of EE, Polytechnic Univ., Brooklyn, NY

- WE1E-3: Upper Cut-Off Frequency of the Bound Wave and New Leaky Wave on the Slotline**
J. Zehentner, J. Machac, M. Migliozzi, Czech Tech. Univ., Prague, Czech Republic

- WE1E-4: The Role of Complex Waves of Proper Type in Radiative Effects of Nonreciprocal Structures**
P. Baccarelli, C. Di Nallo, F. Frezza, A. Galli, P. Lampariello, "La Sapienza", University of Rome, Dept. of Electronic Engr., Roma, Italy

- WE1E-5: Leaky-Modes Leakage From Planar Circuits**
K.-C. Chen, C.-K.C. Tzeng, Inst. of ECE, Nat'l. Chiao Tung Univ., Hsinchu, Taiwan