2006 Outstanding Young Engineer
Ian Gresham and Emmanouil Tentzeris

The Outstanding Young Engineer Award is presented to recognize an outstanding young MTT-S member, who is less than 39 years old at the time of nomination, who has distinguished himself/herself through a sequence of achievements, which may be technical (within the MTT-S Field of Interest), may constitute exemplary service to the MTT-S, or may be a combination of both. Multiple awards may be made at the discretion of the Awards Committee. This year there are two recipients of this Award.

This first recipient is Ian Gresham, whose citation reads: *"FOR THE DEVELOPMENT OF MM-WAVE Si AND GaAs-BASED CIRCUITS AND SYSTEMS-ON-CHIP FOR COMMERCIAL AND DEFENSE APPLICATIONS."*

Ian Gresham was born and educated in North Wales, UK where he attended Connah's Quay High School. He enrolled to study Electronic and Electrical Engineering at the University of Leeds, and concentrated his final year studies on Microwave Engineering. After graduating with a B. Eng (Hons.) degree in 1988, he joined Marconi Command and Control Systems, Leicester, U.K. as a Microwave Engineer developing Receiver Front-Ends, and frequency agile synthesizers for Fire Control and Naval radar applications. In 1990, he returned to the University of Leeds and joined the Microwave and Solid-State Group to study for his Ph.D. His doctoral research focused on low-phase noise signal generation at microwave and millimeter-wave frequencies. Upon graduation in 1993, he joined M/A-COM, Milton Keynes, U.K. as a Senior Engineer responsible for the design of microwave components and sub-systems for both military and commercial applications, prior to concentrating on MMIC design using GaAs HBT and pHEMT processes for wireless applications. After becoming Engineering Manager for the IC design group in the U.K., Dr. Gresham was responsible for the introduction of activities ranging from device modeling and process characterization, through to the development of design-for-manufacturability methodologies. In 1997, he won the 1997 AMP Global Design for the Environment Award. In 1998, he joined the M/A-COM Corporate Research and Development centre in Lowell, MA as a Principal, and then Senior Principal Engineer. His research interests have been oriented towards the commercialization of millimeter-wave systems with particular emphasis on automotive radar, being part of the team that introduced the first 77GHz Autonomous Cruise Control into commercial production. Since 2001, his work has focused on the development of millimeter-wave Transceiver chipsets for multiple sensor applications initially at 24GHz, but also extending to Ka-band and W-band. As part of this work, he won the European Microwave Prize for Best Conference Paper in 2003.

Dr. Gresham is a Senior Member of the IEEE and Chair of the Sensors and Sensor Systems Technical Program Committee for the Microwave Theory and Techniques Society (MTT-S). He is a member of the Editorial Board for a number of refereed Journals, including the IEEE Transactions on Microwave Theory and Techniques, IEEE Microwave and Wireless Components Letters, and the International Journal of RF and Microwave Computer-Aided Engineering. He served as the Directories Chair for the MTT-S for a period of 5 years, and has also been active in other professional societies in organizing conferences and other technical activities. He has authored or co-authored 18 papers in refereed journals or peer-reviewed conferences, and is the holder of five US patents with an additional four pending.

In his spare time, Ian has a variety of interests. His interest in music has migrated from playing to renovating vintage Wurlitzers. He also spends several hours a week in training and playing football (a.k.a. soccer) for his local team in Boston, MA. In a similar vein, he enjoys traveling and seeing new places, and likes to combine this activity with following Liverpool Football Club – still possessing a season ticket and watching them several times a year despite the hindrance of living on a different Continent.

This second recipient is Emmanouil M. Tentzeris, whose citation reads: *"FOR THE DEVELOPMENT OF ADAPTIVE NUMERICAL TOOLS FOR THE FULL-WAVE MODELING AND DESIGN OF RF COMPONENTS AND 3-DIMENSIONAL MODULES."*

Emmanouil (Manos) M. Tentzeris received the Diploma Degree in Electrical and Computer Engineering from the National Technical University of Athens ("Magna Cum Laude") in Greece and the M.S. and Ph.D. degrees in Electrical Engineering and Computer Science from the University of Michigan, Ann Arbor, MI and he is currently an Associate Professor with School of ECE, Georgia Tech, Atlanta, GA.

He has published more than 200 papers in refereed Journals and Conference Proceedings and 8 book chapters and he is in the process of writing 3 books. Dr. Tentzeris has helped develop academic programs in Highly Integrated/ Multilayer 3D Packaging for RF and Wireless Applications, Microwave MEM's, SOP-integrated antennas,flexible organics (e.g.LCP) and Adaptive Numerical Electromagnetics (FDTD, MultiResolution Algorithms) and heads the ATHENA research group (15 researchers). He is the Georgia Tech NSF-Packaging Research Center Associate Director for RF Research and the RF Alliance Leader. He is also the leader of the RFID Research Group of the Georgia Electronic Design Center (GEDC) of the State of Georgia.

He was the recipient of the 2004 IEEE Transactions on Advanced Packaging Commendable Paper Award, the 2003 NASA Godfrey "Art" Anzic Collaborative Distinguished Publication Award for his activities in the area of finite-ground low-loss low-crosstalk coplanar waveguides, the 2003 IBC International Educator of the Year Award, the 2002 International Conference on Microwave and Millimeter-Wave Technology Best Paper Award (Beijing, CHINA) for his work on Compact/SOP-integrated RF components for low-cost high-performance wireless front-ends, the 2002 Georgia Tech-ECE Outstanding Junior Faculty Award, the 2001 ACES Conference Best Paper Award and the 2000 NSF CAREER Award for his work on the development of MRTD technique that allows for the system-level simulation of RF integrated modules and the 1997 Best Paper Award of the International Hybrid Microelectronics and Packaging Society for the development of design rules for low-crosstalk finite-ground embedded transmission lines.

He was also the 1999 Technical Program Co-Chair of the 54th ARFTG Conference, Atlanta, GA and the Chair of the 2005 IEEE CEM-TD Workshop and he is the Vice-Chair of the RF Technical Committee (TC16) of the IEEE CPMT Society. He has organized various sessions and workshops on RF/Wireless Packaging and Integration in IEEE ECTC, IMS and APS Symposia in all of which he is a member of the Technical Program Committee in the area of "Components and RF". He is the Associate Editor of IEEE Transactions on Advanced Packaging.

Dr. Tentzeris was a Visiting Professor with the Technical University of Munich, Germany for the summer of 2002, where he introduced a course in the area of High-Frequency Packaging. He has given more than 50 invited talks in the same area to various universities and companies in Europe, Asia and America. He is a Senior Member of IEEE, a member of URSI-Commission D, an Associate Member of EuMA, and a member of the Technical Chamber of Greece.