

Editor's Report Transactions on MTT

IEEE Transactions on Microwave Theory and Techniques

Statistics from 1/1/97 to 9/15/97
Compiled September 16, 1997

New papers received:	184	
Dispositions:		
Papers accepted:		129
Papers rejected:	34	
Papers trans. to another journal:	10	
Total rejected or trans.:		44
Revise and resubmit (R&R):		27

Total dispositions:		200
Rejection rate:		25.4%
Papers requiring editorial action		
Original papers in review:		107
R&R papers in review:		37

Total papers in review:		144
Papers requiring author action		
Acc. papers awaiting final:		67
R&R papers awaiting final:		139

Total papers requiring author action:		206
Total manuscripts in process:		350

Year	Workshop/Title	Organizers	Announcement	Deadline for Submission	Submitted Papers	Accepted Papers	Invited papers	Publication date	Present Status
	Superconductivity and Microwave Applications	Marin Nissenoff Bill Meyers NRL (202)574-7298						Jul-96	COMPLETED
	Medical Applications and Biological Effects of RF Microwaves	Prof. Andra Vendevoret Arya Rosen SRI Genoff Research Center (609) 734-2927 arosen@sri.com			50-60 papers	24 papers	1 paper	Oct-96	COMPLETED
	Symposium Special Issue	Jerry Fedzuszko Sapac Systems/Loral H1G 852-6888 S.J.Fedzuszko@ieee.org	Feb-98	1-Apr-98	139 papers	66 papers	none	Dec-98	COMPLETED
	Automated Circuit Design Using EM Simulators	John Bender OAS 1905 628-8228 bender@nichell.CIS.McMaster.CA	October-December 1995 August-September 1996	1-Sep-96	34 papers	18 papers 4 full papers 4 short papers	1 papers	May-97	COMPLETED
	Microwave and MM-Wave Photonics	Peter Herzfeld, organizer Drexel (215) 895-2258 Guest Editors: Alwyn Gedeo Univ. of College London Ron Esmen, NRL (202) 767-9359 esmen@ocsa.alpha2.nrl.navy.mil	May 1996 MTT Transactions June-July 1996 in other publications	12/1/96	80 papers		3-4 invited papers	Aug-97	COMPLETED
	Microwaves and Millimeter Wave Packaging and Manufacturing Technologies	Vijal Tapedi Oregon State (503) 737-2888	October 1996 at EPEP December 1996 Traps	28-Jan-97	expected 25-30 papers	15 papers	4 papers	Oct-97	
	Symposium Special Issue	Mark M. (303) 444-8858 Fax: (303) 497-8885	Feb-97	Apr-97					
	Advanced Integration Schemes for High-Frequency Circuits	Dr. Jim Harvey, ARO Dr. Elliot Brown, DARPA	Aug-97	Jan-98				Jul-98	
	New Developments in Millimeter-Wave Oscillator Designs	Adalbert Beyer University of Duisburg (+49)203-3789-217 Soren Meas Nonlinear Technologies, Inc. Long Beach, CA	Jun-97	Feb-98				Sep-98	
	Microwave Circuits on Silicon Substrates	George Ponchak NASA Lewis Research Center george.ponchak@larc.nasa.gov Johann-Friederich Luy Daimler-Benz AG	May-97	Oct-98				May-98	

		Research Center zt2h082@highfreq.dmag.um damaar@enc.com						
	Symposium Special Issue		Feb-98	Apr-98				
	Microwave and Millimeter- Wave Photonics	Dr. Ronald D. Eaman, NRL Tel. (202)767-9359 eamant@nrl.navy.mil Prof. Ulrik Giese, Technical University, Denmark Tel. 45-45-25-37-95 ug@emt.dtu.dk	Mar-98	Oct-98			Jul-99	
	Global Modeling of Millimeter-Wave Circuits	Prof. Samir Ghazali Arizona State Prof. Roberto Sorrentino Universita di Perugia Prof. Michael Steer North Carolina State	Jan-98	Jun-99			Jan-99	
	Multilayer Microwave Circuits	Prof. K.C. Gupta Univ. of Colorado	Jun-98	Feb-99			Sep-99	
	Under Revision	Prof. Rolf Jansen Aachen Technical Univ.						
	Symposium Special Issue		Feb-99	Apr-99			Dec-99	

Proposal for a Special Issue of
IEEE Transactions on Microwave Theory and Techniques
GLOBAL MODELING OF MILLIMETER-WAVE CIRCUITS

Guest Editors:

Samir M. El-Ghazaly
Arizona State University

Roberto Sorrentino
Universita di Perugia

Michael Steer
Univ. North Carolina

To meet the increasing demand for processing and transmitting more information at a faster rate, analog and digital electronic systems must operate at higher frequencies or higher clock speeds. On the other hand, there is a continuous pressure towards lower-cost products. On the circuit level, this leads to highly integrated circuits such as MMICs. The highly packed circuits consist of closely spaced active and passive devices, with many levels of transmission lines and discontinuities. The circuit performance may be adversely affected by the high density, due to unwanted effects such as crosstalk, caused by coupling, surface waves, and unintended radiation, to name just a few. Evidently careful circuit designs must be developed based on advanced design tools that consider all the circuit elements simultaneously, including the active devices, the passive components, the radiation elements, and the package.

The development of the above mentioned design tools is much easier said than done. The drastic diversity in physical dimensions, physics and electromagnetic basics, mathematical tools, numerical stability and accuracy requirements for modeling the various circuit components makes it extremely difficult to achieve the desired global modeling approach. Moreover, independent simulators are currently developed to deal with what is traditionally viewed as loosely related aspects of the circuits; for example, electromagnetics, electron transport and thermal properties of the devices. Global circuit modeling requires that such diversified models be connected together. Due to the challenges complexity of the process, the pioneering efforts in this direction must be encouraged. Therefore, the MTT Society must promote the efforts leading towards global modeling.

Microwave and Millimeter-wave Photonics

Special Issue of the IEEE Transactions on Microwave Theory and Techniques

Jointly Prepared with the JOURNAL OF LIGHTWAVE TECHNOLOGY

Guest Editors:

Dr. Ronald D. Esman Professor Ulrik Gliese
Naval Research Laboratory Technical University of Denmark

The interface between photonics and microwaves has been intriguing researchers for some time. Recent dramatic advances in high-speed photonic components have opened up significant applications of hybrid lightwave-microwave systems. These include antenna remoting, ultrawideband beamforming and feed networks for array antennas, fiber-optic wireless communication networks, linear combiners and filters, cable television signal distribution, personal communications and instrumentation. As the applications of lightwave technology to microwave systems mature, chip level integration of microwave and photonic functions is emerging as a powerful new technology. At the same time the development of ultrahigh bit rate optical transmission systems requires increased use of microwave techniques in transmitter and receiver design.

Papers are solicited for a special issue of the IEEE Transactions on Microwave Theory and Techniques on "Microwave and Millimeter-wave Photonics II", to be published in June/July, 1999. This issue follows the successful special issue on Microwave and Millimeter-Wave Photonics published in September 1995 and August 1997. The intent is to emphasize the merging of microwave and photonic concepts, components, circuits and systems. The special issue will be distributed jointly to subscribers to the Transactions on Microwave Theory and Techniques and to the Journal of Lightwave Technology. Relevant topics of interest include, but are not limited to, the following areas:

- * Optically controlled microwave semiconductor devices and circuits, including MMICs
- * Optical generation, distribution, and control of microwave and millimeter-wave signals
- * Lightwave technology for array antennas and antenna remoting.
- * Microwave photonic instrumentation
- * Ultra-fast optical analog and digital transmission systems
- * Ultra-fast optical transmitters & receivers
- * Microwave/millimeter-wave controlled optical devices and circuits
- * Chip level integration of photonic and microwave components
- * Computer-aided design of microwave photonic circuits and systems
- * Microwave signal processing functions implemented with photonics

Manuscript requirements for submitted papers can be found in the January 1998 issue of the IEEE Transactions on Microwave Theory and Techniques. Authors are requested to send four copies of their manuscripts, by not later than **October 1, 1998**, to one of the guest editors for this special issue:

Dr. Ronald D. Esman

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DEADLINES:

Proposed Contribution Submission Deadline: October 1, 1998

Proposed Invited Submission Deadline: December 1, 1998

Proposed Publication Month: June or July,

Special Issue
of
IEEE Transactions on Microwave Theory and Techniques
on
Multilayer Microwave Circuits

UNDERREVISION

Sponsors (Proposed):

MTT-S Technical Committee on CAD (MTT-1)
MTT-S Technical Committee on Filters and Passive Components (MTT-8)

Guest Editors:

1. K.C. Gupta, University of Colorado at Boulder, USA
2. Rolf H. Jansen, RWTH Aachen Technical University, Germany

Rationale:

The multilayer configurations provide another dimension in the integration of microwave components, circuits and systems making them more compact. The other strong reason for employing multilayer configurations is the fact that several circuit functions (like baluns and tight coupling directional couplers) which are difficult to realize in single layer planar configuration, can be obtained conveniently in two or multiple layer configurations. Multilayer configurations also provide a convenient method of integrating circuits and printed antennas in single modules.

The purpose of this Special Issue is to provide a forum for presenting the state-of-the-art in design and technology of multilayer microwave modules. The Special Issue will provide MTT-S membership with the review of the current research in this area in a single volume, and encourage further research and development on related issues.

Suggestions pointing to the need for this Special Issue were made during a full-day workshop on this topic at the 1996 International Microwaves Symposium at San Francisco. This Workshop (organized by Professors Gupta and Jansen) was sponsored by MIT-1 and attracted the largest participation among all the workshops organized (was completely sold out!).

Speakers at this workshop will be invited to contribute articles for this Special Issue.

These include:

R.G. Arnold and D. J. Pedder, GEC Plessey Semiconductors, UK
Paul D. Cooper, Lockheed Martin, USA
A. Dravet, et al., Dassault Electronique, France
John Gipprich, Northrop Grumman, USA
KC. Gupta, University of Colorado, USA
Toshikazu Imaoka, et al., ATR, Japan
R.H. Jansen, et al., RWTH Aachen Technical University, Germany
Fred A. Myers and Mike Green, GMMT, UK

H. Ogawa, ATR Opt. & Com Research Labs, Japan
Tony Pavio, Motorola, USA
R. Pengelly, et al., Raytheon Research Labs, USA
T. Tokumitsu, NTT Wireless Systems Labs, Japan
John Wooldgridge, et al., Hughes Aircraft, USA

The topics covered in this special issue will include (but not limited to):

- * Multilayer transmission line structures
 - * Design approaches for multilayer passive components
 - * Synthesis and realization of multilayer filters
 - * Multilayer baluns and directional couplers
 - * Design considerations for active circuits in multilayer configuration
 - * Technology for multilayer hybrid and monolithic circuits
 - * Vertical inter connects in multilayer microwave and millimeter-wave circuits
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