

# ***Microwave and Millimeter-wave Photonics II***

## **Special Issue of the IEEE Transactions on Microwave Theory and Techniques**

**Jointly Prepared with the JOURNAL OF LIGHTWAVE TECHNOLOGY**

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 ultra-high 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 August, 1997. This issue follows the successful special issue on Microwave and Millimeter-Wave Photonics published in September 1995. 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 1996 issue of the IEEE Transactions on Microwave Theory and Techniques. Authors are requested to send four copies of their manuscripts, by not later than **December 1, 1996**, to one of the guest editors for this special issue:

### **Professor Alwyn Seeds**

Dept. of Electronic & Electrical Engineering  
University College London  
Torrington Place  
London WC1E 7JE, England  
Tel: +44-171-380-7928  
Fax: +44-171-388-9325  
e-mail: a.seeds@eleceng.ucl.ac.uk

### **Dr. Ronald D. Esman**

Naval Research Laboratory  
Code 5672  
4555 Overlook Avenue, SW  
Washington, DC 20375-5338  
Tel: +1-202-767-9359  
Fax: +1-202-404-8645  
e-mail: esman@ccsalph2.nrl.navy.mil