



**IEEE/LEOS**



## **1993 Summer Topical Meetings**

**July 19-30, 1993**

**Fess Parkers's Red Lion Resort, Santa Barbara, CA**

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### **GIGABIT NETWORKS**

**July 28-30**

#### **Program Committee:**

##### **Co-Chairs:**

Nim K. Cheung, Bellcore \* R.P. Skillen, Northern Telecom Ltd.

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**This topical meeting** is jointly organized by the Gigabit Networks Technical Committee of the IEEE Communications Society and the IEEE Lasers and Electro-Optics Society. It will provide an open forum for the communications and computer networking community to review the state-of-the-art technologies for the emerging gigabit networks and address outstanding issues in their implementation. Special emphasis will be placed on the most recent systems integration experience in the ongoing gigabit testbeds in the United States and internationally. The meeting will include a combination of keynote speeches by leaders of the gigabit community, invited talks and panel discussions by subject-matter experts, and contributed papers by active researchers in the field. The key topics covered in the meeting include the following:

\*Systems integration experience in ongoing gigabit testbeds \* Network technologies for public and private gigabit networks -Advanced SONET and ATM technologies for the public networks - Technologies for ATM and PTM local area networks \* Host and network interfaces \* Protocols for gigabit networking \* Communications software and operation systems \* Resource allocation and congestion control \* Signaling and network management \* Commercial, educational and scientific applications of gigabit networks \* Business and public policy changes

**Co-Sponsored by IEEE/ComSoc**

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### **HYBRID OPTOELECTRONIC INTEGRATION AND PACKAGING**

**JULY 26-28**

#### **Program Committee:**

##### **Co-Chairs:**

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**This topical conference** will emphasize work related to increasing the functionality and manufacturability of optoelectronic modules. Paper presentations include devices, processing of packaging that contribute to enhanced performance and better reliability or lower cost through higher levels of integration. Hybrid functional modules that contain optoelectronic integrated circuits or photonic integrated circuits, in addition to other devices, both active and passive, electronic and optical will be reported. Papers on extending the electronic multichip module concept to include optoelectronics and optical I/O are an integral part of the program. Optoelectronic computer-aided design (CAD) papers will reflect the increasing importance of CAD tools to acceptance of (monolithic and hybrid) OEICs by system designers. Applications will be broadly based in communications and computers, with papers on topologies ranging from the computer backplane to the telephone network. To chart the future of optoelectronics, speakers from ARPA, OIDA, CO-OP and NIST will describe current industry, academia and government collaborative programs. **Co-Sponsored by IEEE/CHMT**

## **VISIBLE SEMICONDUCTOR LASERS**

**July 21-22**

### **Program Committee:**

#### **Conference Chair:**

Thomas L. Paoli, Xerox Palo Alto Research Center

#### **Program Chair:**

David Welch, Spectra Diode Labs

David P. Bour, Xerox Palo Alto Research Labs \* Russell D. Dupuis, University of Texas \* C.P. Kuo, Hewlett Packard \* Keiichi Yodoshi, Sanyo Electric Company \* Peter Zory, University of Florida

**Significant progress** has occurred recently in the science and technology of semiconductor lasers emitting at wavelengths shorter than 700 nm. This topical meeting will provide a forum for discussing recent technical advances toward and critical problems blocking achievement of practical semiconductor lasers emitting from the red to the ultraviolet. The scope of the meeting will encompass all aspects of the physics, materials, processing, design, and performance of short-wavelength semiconductor lasers, including but not limited to III-V and II-VI systems as well as GaAlN, CuGaAl(SSe), and other potential material systems. Technical sessions will be structured to encourage identification of current technological limitations and discussion of potential solutions to critical problems.

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## **OPTICAL MICROWAVE INTERACTIONS**

**July 19-21**

### **Program Committee:**

#### **Co-Chairs:**

G. Arjavalingam, IBM T.J. Watson Research Center \* C.H. Lee, University of Maryland

H. Fetterman, University of California \* D. Hornbuckle, Hewlett Packard \* T. Itoh, University of California Los Angeles \* T. Kamiya, University of Tokyo \* A. Seeds, University College London \* J. Wiesenfeld, AT&T Bell Laboratories \* X.C. Zhang, Rensselaer Polytechnic Institute

**The interaction** between optical techniques and microwave/millimeter-wave applications will be the focus of this topical meeting. A forum will be provided for the presentation of the latest developments in the following broad areas: 1) Use of ultrashort-pulse lasers and high-speed optoelectronics for the control and characterization of devices, circuits and interconnects; 2) Microwave signal generation and distribution with cw lasers and optical modulators; 3) Generation of ultrashort electromagnetic transients and their applications. Fundamental advances, novel measurements and systems applications will be discussed.

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## **IMPACT OF FIBER NONLINEARITIES ON LIGHTWAVE SYSTEMS**

**July 26-27**

### **Program Committee:**

#### **Chair:**

A. Chraplyvy, AT&T Bell Laboratories

#### **Co-Chairs:**

N. Doran, Aston University \* S. Saito, NTT Transmission Laboratories \* R.W. Tkach, AT&T Bell Laboratories

G. Agrawal, University of Rochester \* N. Bergano, AT&T Bell Laboratories \* K. Emura, NEC Corporation \* W. Heinlein, Universitat Kaiserslautern \* N. Shibata, NTT Transmission Systems \* S. Wabnitz, Fondazione Ugo Bordoni \* J.V. Wright, BT Laboratories \* S. Yamamoto, KDD R&D Laboratories

**The advent** of erbium-doped fiber amplifiers and their application to lightwave communication systems magnifies the problems of optical nonlinearities in the transmission fibers. This topical meeting addresses the systems implications of optical nonlinearities. Degradations caused by stimulated Brillouin scattering, stimulated Raman scattering, four-photon mixing, self-phase and cross-phase modulation will be explored. Single-channel and WDM systems employing conventional (e.g. NRZ) signaling formats and soliton based systems will be addressed. Counter-measures to reduce the deleterious effects of nonlinearities are of particular interest.

### **For further information, contact:**

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