92CH3211-0

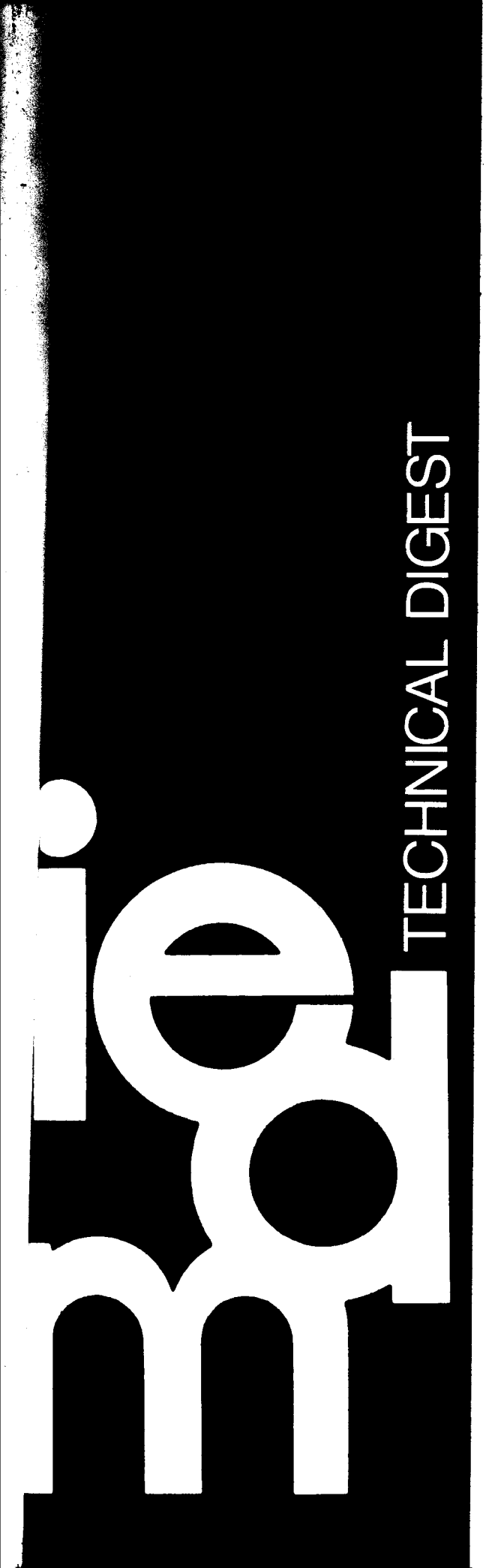
international ELECTRON DEVICES meeting

1992

SAN FRANCISCO, CA
DECEMBER 13-16, 1992

TECHNICAL DIGEST

Sponsored by Electron Devices Society of IEEE



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Papers have been printed without editing as received from the authors.

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WELCOME FROM THE GENERAL CHAIRMAN

Al Ipri
General Chairman

Malcolm Thompson
Technical Program Chairman

The Conference Committee and I welcome you to the 1992 IEEE International Electron Devices Meeting. This year the conference returns to San Francisco, California, and continues a 37-year tradition as a forum for the presentation of the latest research and development in the area of electron devices and their applications. The strong international nature of the IEDM is reflected in this year's exciting program which was selected from 659 submitted abstracts from 23 countries. While the majority of the abstracts were submitted from North America, papers were also submitted from Asia, Europe, South America, Australia, and Africa. A strong effort was made this year to solicit papers from eastern Europe. Industrial facilities generated the largest number of submitted abstracts but many were also submitted from Universities and government institutes. The area of greatest interest this year was Device Technology with 131 abstracts. Over 100 abstracts were also received in the areas of Modeling and Simulation, Quantum Electronics, and CMOS Devices. The total number of accepted abstracts this year was 223.

On Sunday, the 1992 IEDM will offer two short courses specially designed to enhance one's technical vitality. These courses are designed to broadly appeal to IEDM participants, including those unfamiliar with the topic areas. The courses are entitled, "Interconnect for the 90's", and "Reliability—Silicon to System Considerations". Both of these courses cover recent developments in their perspective areas as well as serving as tutorial and review courses.

The Tuesday luncheon will feature Mr. Jaron Lanier, President of VPL Research Inc., Foster City, California, who will discuss the topic of Virtual Reality. Mr. Lanier is a recognized authority in this area and has given numerous presentations on this subject and served on various panels discussing the uses and directions for Virtual Reality.

On behalf of the IEEE Electron Devices Society, which sponsors the IEDM, and Malcolm Thompson, Technical Program Chairman, I wish to express my sincere appreciation and congratulations to the members of the Conference Committee for the outstanding job they have done in planning and organizing the 1992 meeting. The authors are to be commended for their efforts in preparing and presenting the high-quality papers that form the foundation of this conference. It is with great pleasure that I extend a hearty welcome to them and to all of the attendees of the 1992 IEEE International Electron Devices Meeting.

Al Ipri
General Chairman

SPECIAL PRESENTATIONS

PLENARY SESSION
Monday, December 14

J. J. EBERS AWARD

To: Louis Parrillo and Richard Payne

The J.J. Ebers Award is given annually by the IEEE Electron Devices Society for outstanding technical contributions to electron devices. This year it is presented to:

PAUL RAPPAPORT AWARD

To: H. Fukuda, A. Imai, T. Terasawa and S. Okazaki Hitachi, Ltd., Tokyo, Japan

For the paper entitled: "New Approach to Resolution Limit and Advanced Image Formation Techniques in Optical Lithography"

1991 ROGER A. HAKEN BEST STUDENT PAPER AWARD:

To: Elyse Rosenbaum
University of California, Berkeley, CA

For the paper entitled: "The Effects of Oxide Stress Waveform on MOSFET Performance"

IEDM LUNCHEON
Tuesday, December 15

1992 IEEE DAVID SARNOFF AWARD

To: J. Jim Hsieh
Lasertron, Inc., Burlington, MA

"For the invention and commercialization of the GaInAsP semiconductor laser for fiber-optic communications"

1992 IEEE JACK A. MORTON AWARD

To: Takuo Sugano
Toyo University, Saitama, Japan

"For contributions to Metal-Insulator-Semiconductor devices and technology"

LUNCHEON PRESENTATION

Virtual Reality: A presentation by Mr. Jaron Lanier, Chief Scientist and Founder of VPL Research, Inc. on Virtual Reality.

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NASA Lewis Research Center
Cleveland, OH

Ray Wilson
Teledyne MEC
Mountain view, CA

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J. Van der Spiegel, University of Pennsylvania

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A. McCurdy, University of Southern California

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