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1995 International Microwave Symposium

Volume 1

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IEEE MTT-S
INTERNATIONAL MICROWAVE SYMPOSIUM
DIGEST**

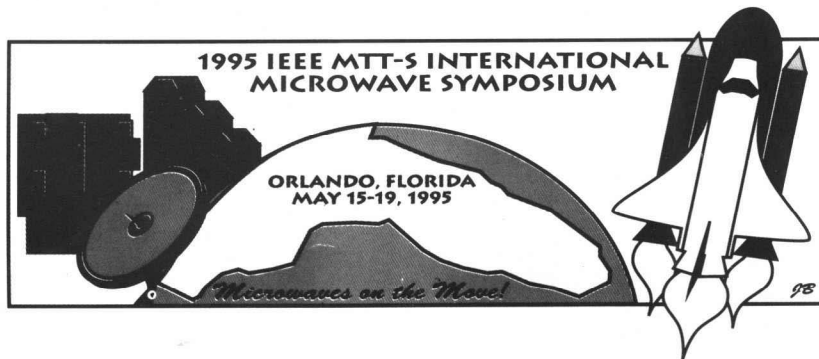
Volume 1

May 16-20, 1995

**Orange County Convention Center
Orlando, Florida**

**Lynn Kirby
Editor**

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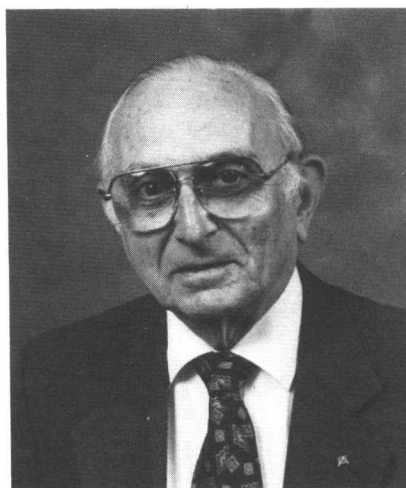
Welcome to the 1995 International Microwave Symposium *Microwaves on the Move*"



Keith Huddleston

A warm welcome to all who have come to visit *Microwave Week*. Your hosts, the IEEE's Microwave Theory and Techniques Society, and particularly its local members, have prepared a Smorgasbord of activities for you in their beautiful city of Orlando. We have striven to provide you with many choices - technical, social and entertaining.

Our efforts will provide to have been successful when in Microwave Week you discover in its rich technical program a solution to a technical problem you may face, or an idea that, with time, will develop into a new design technique, a novel technical approach or a successful product. We hope that being a part of Microwave Week will also enhance your future professional career. To make sure that you will find these rewards, we selected 390 technical papers from 636 submitted. Our selection basis was simple - peer leaders in each specialized technical field judged the selected papers worthy of presentation and archiving in this Digest. Our Keynote Speaker, Roger J. Rusch, will afford us a special glimpse into the future: communications via world-wide orbiting systems. *Microwaves are truly on the Move!*



Rudolph Henning

To help you stay in step with today's dynamic engineering environment, making new and renewing old professional ties is important. You will find the pleasant lounging areas and meeting rooms of the Orange County Convention Center and its neighboring hotels conducive to your own professional networking and to developing new friendships. We hope to see you at the special receptions and at Magic Night - ideal occasions for meeting old and making new friends and for, concurrently, enjoying some of Florida's and Orlando's special, warm hospitality.

Your Steering Committee has worked hard to provide you with many choices. Put together your own, personalized program and make the most of Microwave Week! Make your selection from the Microwave Symposium, the Microwave and Millimeter Wave Monolithic Conference, the Automatic R.F. Techniques Group's Conference, the National Telesystems Conference, and the many workshops and exhibits. All of us hope your visit with us will turn out to be memorable, enriching and delightful.

Enjoy every minute of it!

Rudolph Henning and Keith Huddleston
Co-Chairmen
Steering Committee
1995 International Microwave Symposium

1995
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Technical Program Committee
MTT-S Administrative Committee
Historical Exhibit
Future International Microwave Symposia



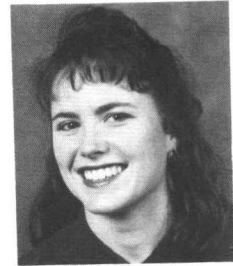
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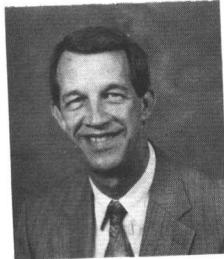


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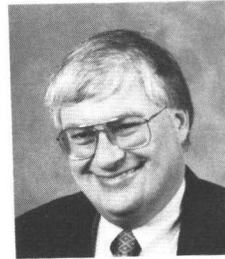
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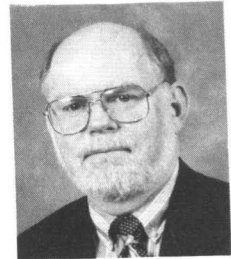
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Open Form



Martin Tanenhaus
Quality Presentation
Awards



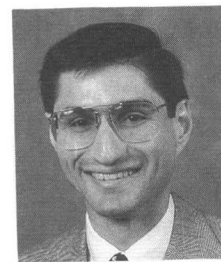
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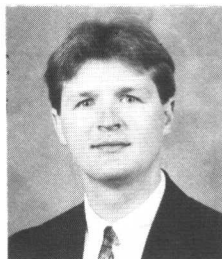


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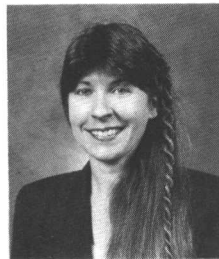
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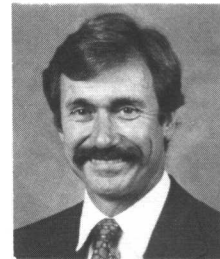
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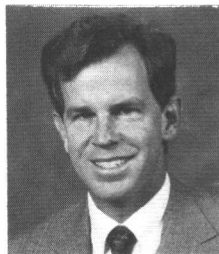
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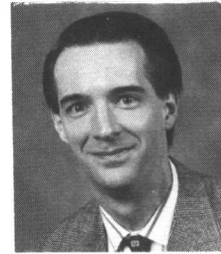
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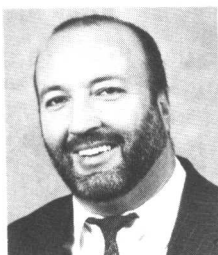
Chris Rizzo

Historical Exhibit

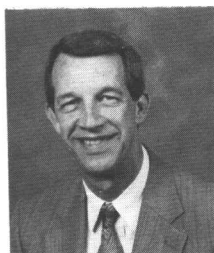
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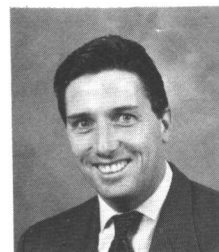
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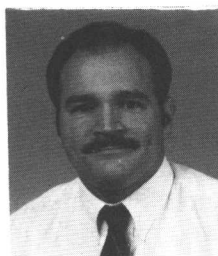


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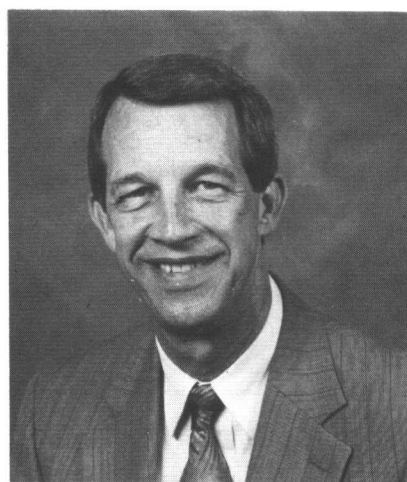
Margaret and Larry
Whicker—LRW

Message from the Technical Program Chairmen



Larry Brockman

Welcome to Orlando, home of the 1995 MTT-S and "Microwave Week". As with our predecessors a wide variety of program activities, including workshops, focus sessions and lunchtime panel sessions, have been planned. The technical programs of MMWMC, NTC and ARFTG have been coordinated with the program as well, providing something for everybody! In keeping with the "Microwaves on the Move" theme, special emphasis has been added this year on the role microwave and millimeter-wave systems play in emerging commercial markets. A new technical theme, wireless and vehicular technology, is featured in 1995. Focus sessions on this technology highlight technology conversion and its importance in the future. The program structure is similar to previous years, with a single workshop highlighting wireless on Sunday and various workshops on Monday and Friday, the core of the MTT program Tuesday, Wednesday and Thursday, including lunchtime panel sessions and open forum poster sessions, and a rump session on Tuesday night. Selection of such a comprehensive program is a real job, and could only be assembled with the help of a dedicated group of professional paper reviewers. The review process was moved back a month this year to accommodate our



Terry Duffield

mid-May conference date, a much better time in Orlando than June. But reviewers were forced to put in precious hours of review time between Thanksgiving and Christmas. A special word of thanks to all who helped - all 200+ TPC members.

In addition to a word of thanks to the TPC steering committee, special thanks goes out to Drs. Jim Wiltse and Parveen Wahid for their efforts in coordinating the special sessions, panel sessions and workshops; Ed Rizzo who coordinated the open forum; and Mike Thursby, who conducted the student paper competition. Special thanks in general go to my colleagues on the Orlando Steering Committee, all of whom worked tirelessly to put this event together and support the Technical Program.

I hope to meet many of you personally during the week and look forward to hearing what you liked (and even what you didn't like) about the program. I am confident you will all enjoy your time in sunny Orlando!

Larry Brockman and Terry Duffield
Co-Chairmen
Technical Program
1995 International Microwave Symposium

1995 Technical Program Committee



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 Center Row (l-r): Harlan Howe, Jr., John W. Wassel,
 E. James Crescenzi, Jr.
 Front Row (l-r): Glenn R. Thoren, Daniel J. Masse,
 Larry Brockman*, Larry Whicker
 (Not Pictured) Don Parker



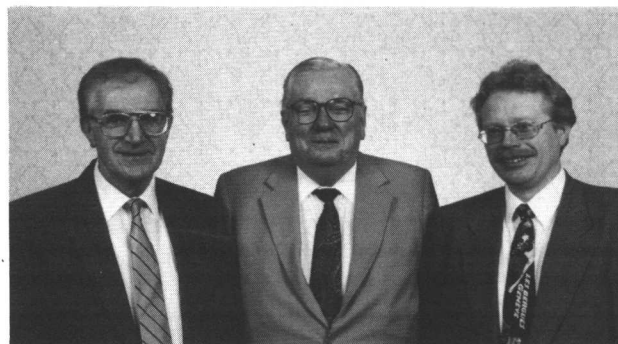
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 (Not Pictured) Christos Christodoulou,
 Amir Mortazawi



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Active & Quasi-Optic Arrays

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Digital Signal Processing

(l-r): Jim B.Y. Tsui*, Christopher T. Chang



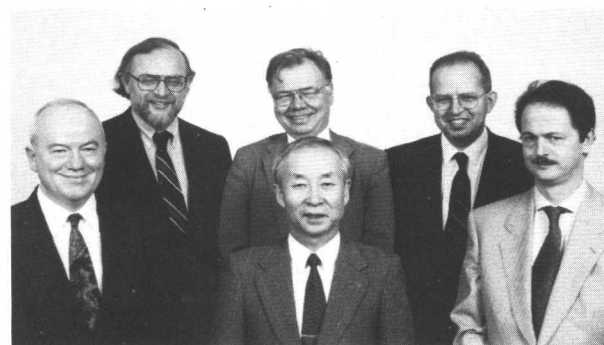
EM Analytical & Numerical Techniques

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Ferrite Components

Back Row (l-r): Mohammad Ghahremani, Lionel E. Davis
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Field Theory

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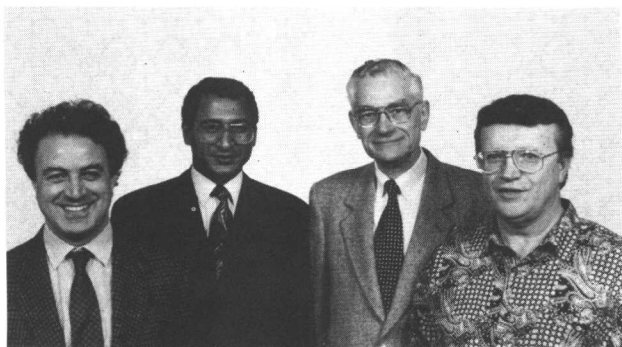
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Filters & Multiplexers

Back Row (l-r): Yi-Chi Shih, George L. Matthaei, Richard V. Snyder
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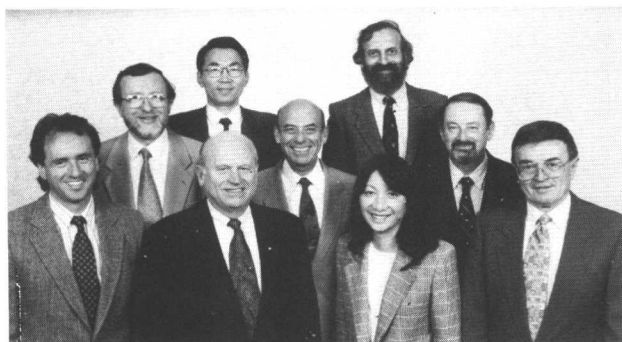
Guided Waves & Propagation Techniques

Back Row (l-r): Samir M. El-Ghazaly, Arthur A. Oliner*
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High Power Sources & Control Components

(l-r): Steven N. Stitzer, Jitendra Goel*



Lightwave Technology & Techniques

Back Row (l-r): Hiroyo Ogawa, Anand Gopinath,
Center Row (l-r): Dieter Jager, Harold Sobol,
Peter R. Herczfeld
Front Row (l-r): Arthur Paoletta, Norman R. Dietrich*,
Carol Gee, Reinhard H. Knerr



Low Noise Receivers & Detectors

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Marian W. Pospieszalski, Sander Weinreb
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Millimeter & Submillimeter Wave Technology

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Monolithic Circuits & Modules

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Superconductivity Technology

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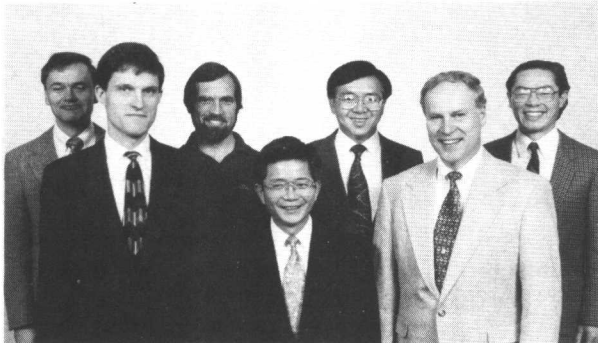
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