

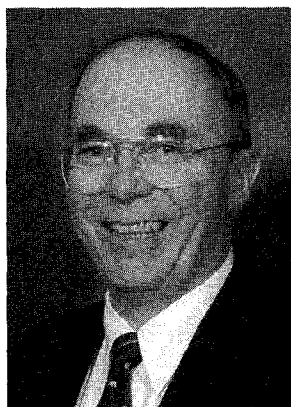
**1996 IEEE MTT-S
INTERNATIONAL MICROWAVE
SYMPOSIUM DIGEST**

*Symposium Steering Committee,
Technical Program Committee,
Administrative Committee,
and MMWMC Committees*



1996 Symposium Steering Committee

Steering Committee

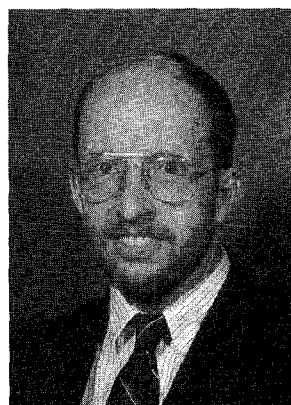


E. James Crescenzi Jr.
Chairman



Joe Barrera
Vice Chairman

Technical Committee



Derry Hornbuckle
Co-Chairman

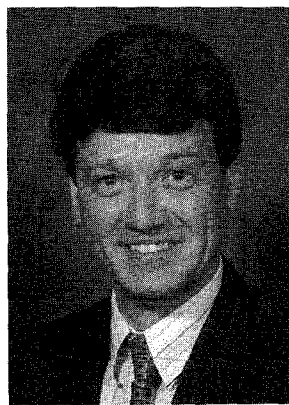


Jerry Fiedziuszko
Co-Chairman

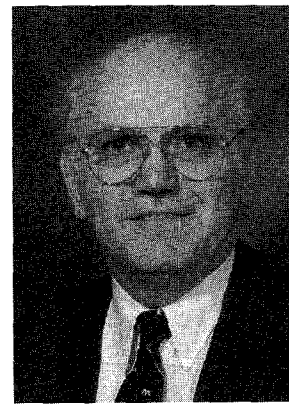
Publications



John Barr
Publicity



Richard Ranson
Digest Editor



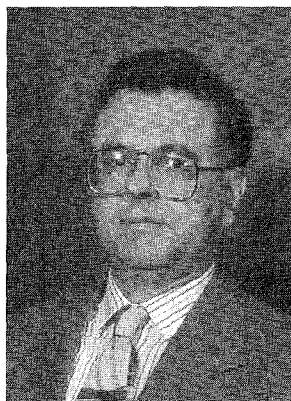
Roger Pollard
CD-ROM Editor

1996 Symposium Steering Committee

Special Sessions

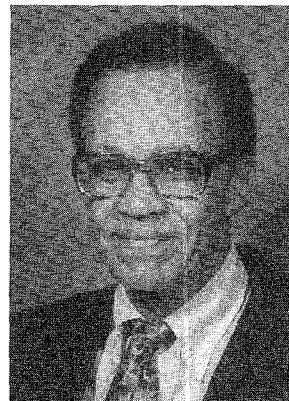


Paul Khanna
Chairman



Edmar Camargo

Student Papers

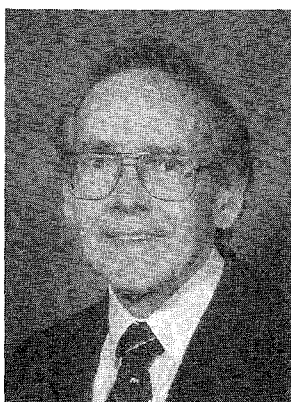


Rick Branner

Workshops



Steve Cripps



Chuck Holmes

Speakers Award



Guo-Chun Liang

Interactive Forum

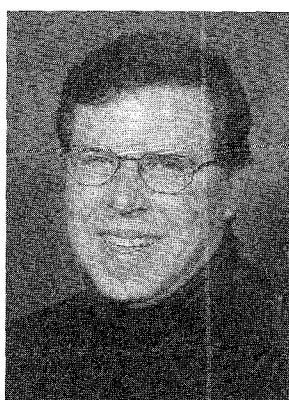


Alfred Riddle



Cindy Yuen

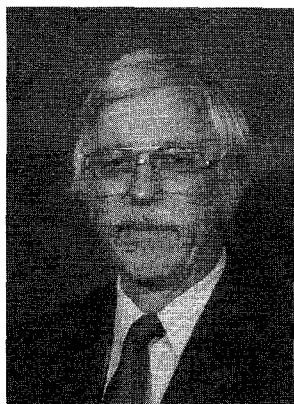
μ APS



Martin Grace
Technical Chair

1996 Symposium Steering Committee

Local Arrangements



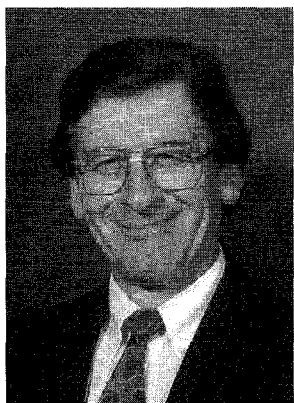
George Vendelin
Chairman



Steve Kenney
Awards Banquet



Dan Swanson
Convention Center
Chairman



Peter Sturzu
Audio Visual



Scott Wetenkamp
Convention Center Signs

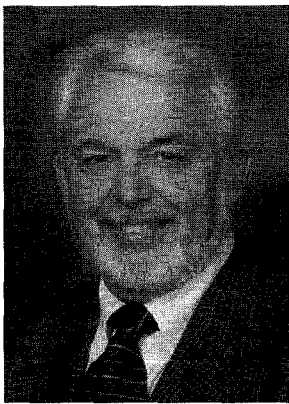


Kumiko Christopher
Local Services
Administrator

Industry Participation



Barry Bakner
Co-Chair

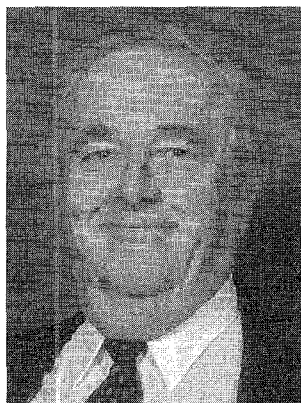


Gary Koker
Co-Chair

1996 Symposium Steering Committee

Operations

Registration



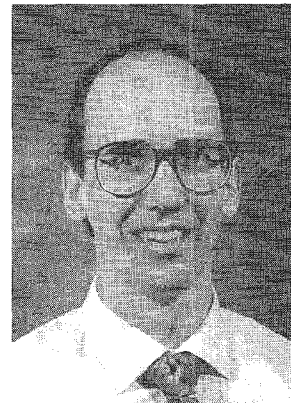
Vernon Dunn

Finance



Frank Emery

Secretary



Titus Wandinger

Protocol



Elaine Crescenzi

Guest Program



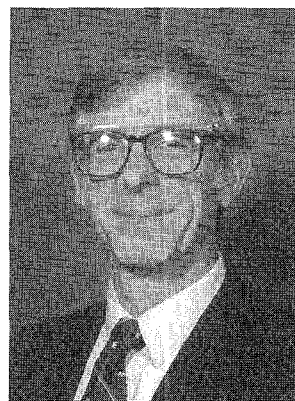
Ibis Swanson

Historical Exhibit



Wes Matthews

Liason



Bob Owens
University



Val Peterson
MMWMC



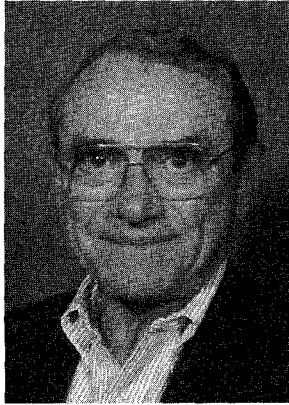
Ken Wong
ARFTG



Tatsuo Itoh
Asia

1996 Symposium Steering Committee

Exhibition



Howard Ellowitz

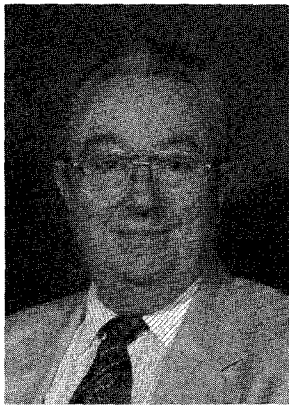


Harlan Howe Jr.

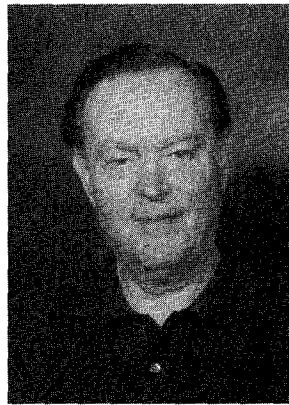


Christine Blanchard

Members at Large



Steve Adam



Ferdo Ivanek



Larry Whicker



Margaret Whicker

LRW Associates



Other Committee Members not shown

Travis Duder, Operations / Hospitality

Michael Frank, Conference Center Signs

Tom Strouth, Transportation

and Weiming Ou.

Message from the Technical Program Co-Chairs



Derry Hornbuckle

Welcome to San Francisco and the 1996 MTT "Microwave Week". We hope that the '96 International Microwave Symposium provides the best possible opportunity for you to keep up-to-date on our rapidly changing field. The program structure is similar to previous years, with the International Microwave Symposium papers scheduled Tuesday through Thursday, including 7 focused sessions, 2 open forums, and the Student Paper Competition (in two daytime sessions this year instead of the evening). One of the focused sessions provides a retrospective on the history of microwaves in the San Francisco Bay Area, with speakers from



Jerry Fiedziuszko

among the founders of the Silicon Valley microwave industry. A special joint IMS/ARFTG session is dedicated in memory of the late Mario Maury and his contributions to the industry.

The choice of workshop topics is the widest ever presented. An expanded Sunday schedule includes both MTT and MMWMC workshops. Other workshops run on Monday and Friday, in parallel with the MMWMC and ARFTG conferences. Lunch-time panel sessions and an evening rump session complete the technical program offerings.

Selection of such a comprehensive program is a major undertaking. Over 810 papers were reviewed (an all-time record) in order to select the 466 papers in the program! More than 200 dedicated volunteers on the Technical Program Committee reviewed an average of 30 papers each to select the top papers for inclusion in the Symposium. We would like to thank all of them; refer to the photographs on the following pages for their names. In addition, special thanks are due to the Steering Committee Technical Group. Paul Khanna headed the Special Sessions Committee, consisting of Edmar Camargo, Steve Cripps, and Chuck Holmes, who handled workshops and panels, along with Alfie Riddle and Cindy Yuen, who managed the open forums. Professors Rick Branner (U.C. Davis) and Bob Owens (U. of Santa Clara) organized the Student Paper Competition. Richard Ranson edited the Symposium Digest. Roger Pollard and Richard Ranson contributed a major innovation by arranging for publication of the Digest and other MTT material on CD-ROM. Alfie Riddle and Guo-Chun Liang arranged gifts for technical contributors. ARFTG Liaison/Conference Chairman Ken Wong initiated the joint MTT/ARFTG paper session, and Val Peterson served as MMWMC liaison. Our special thanks as well to all the members of the '96 Steering Committee, who worked tirelessly to support bringing you an outstanding technical program.

We look forward to meeting you and hearing your feedback on the program. Have a great week in San Francisco!

Derry Hornbuckle and Jerry Fiedziuszko

Technical Program Co-Chairs, 1996 International Microwave Symposium

1996 Technical Program Committee



Symposium Technical Group

K. C. Gupta, Glenn Thoren, John Wassel, Randy Lehmann
Harlan Howe Jr.,* Derry Hornbuckle, C. Larry Brockman



Steering Committee

Howard Ellowitz, Steve Kenney, Frank Emery, Larry Whicker
Joe Barrera, Kumiko Christopher, Elaine Crescenzi,* Jim Crescenzi



Biological Effects and Medical Applications

Guglielmo D'Inzeo, Andre Vander Vorst.
* Arye Rosen



Passive Components

Ralph Levy, Toshio Nishikawa, Wai-Cheung Tang, A.M.K. Saad
Kawthar Zaki.,* Tatsuo Itoh, Linda Katchi



Filters and Multiplexers

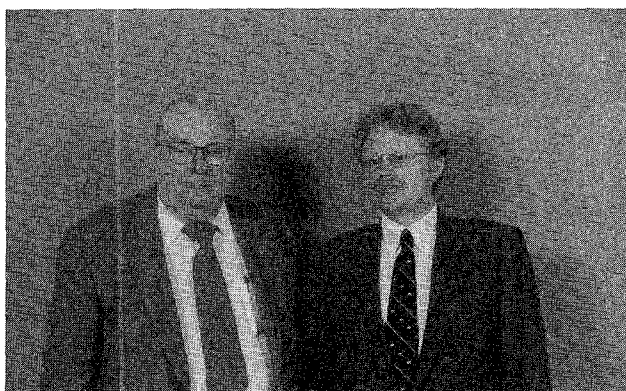
S. Jerry Fiedziuszko, Daniel Swanson
Chandra Kudsia, George Matthaei, Pierre Guillon, Rene Bonetti
* H. Clark Bell, Yi-Chi Shih, Ali Atia, Richard Snyder



Ferrite Components

Vernon Dunn,* William Hord, Denis Webb, John Owens
Lionel Davis, Clifford Krowne, Mohammed Afsar

1996 Technical Program Committee



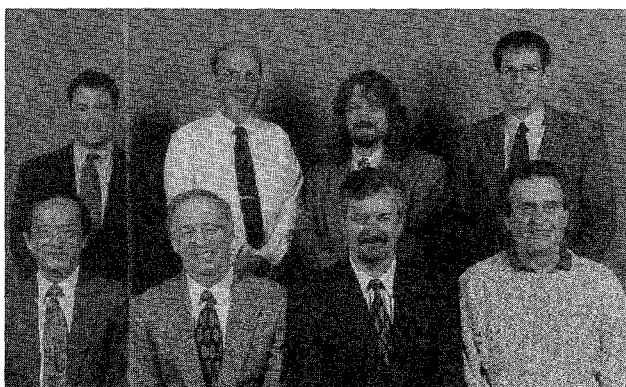
Acoustic and Surface Wave Components

* Bruce McAvoy, Robert Weigel
Ted Lukaszek (not shown)



Signal Generation, Frequency Conversion and Control Circuits

Scott Wetenkamp, M. Odyniec, Manfred Schindler, Peter Staecker
* Nick Jansen, A.P.S. (Paul) Khanna, Dean Peterson, Bernard Sigmon



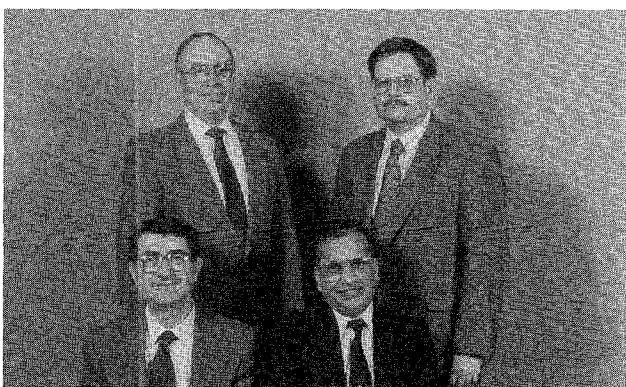
Nonlinear Modeling and Analysis

Steve Kenney, Stephen Maas, J. Mike Golio, Michael Steer
James Hwang,* Walter Curtice, Mark Calcaterra, John Bandler



Transistor Power Amplification

John Eisenberg, Peter Asbeck, William Wisseman
John Heaton, Terry Cisco, Aryeh Platzker, Lawrence Kushner
K. Ikossi-Anastasiou, Karl Niclas,* H. John Kuno, James Degenford



High Power Sources and Control Components

Don Reid, Steven Stitzer
Franco Sechi,* Jitendra Goel



Low Noise and Special Function Amplifiers

Henrik Morkner, Steve Cripps, Marian Pospieszalski
Ed Rezek, Sander Weinreb, Madhu Gupta
* James Whelehan, Jr. (not shown)

1996 Technical Program Committee



Advanced Hybrid Technology

John Pierro, Charles Buntschuh, Gailon Brehm
Jozef Modelski,* Frank Sullivan



Monolithic Technology

Zaher Bardai, Eliot Cohen
Marvin Cohn, Reynold Kagiwada, Inder Bahl, Natalino Camilleri
Sarjit Bharj,* Roger Sudbury, Cindy Yuen, H. Alfred Hung



Millimeter and Submillimeter Wave Technology

Phillip Smith, Edward Niehenke
* Gabriel Rebeiz, Krishna Agarwal, J. W. Dees, Alfred Riddle
Don D'Avanzo, Margaret Frerking, James Wiltse, M. Matloubian



Field Theory

Roberto Sorrentino, Robert Trew, Adalbert Beyer
Victor Fouad Hanna,* James Mink, Hung-Yu Yang



EM Analytical and Numerical Techniques

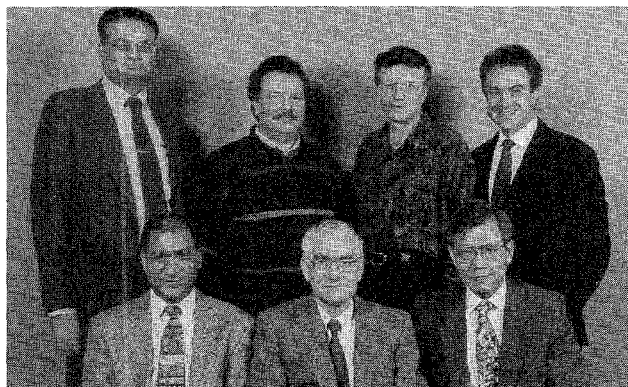
Barry Spielman, Ruediger Vahldieck,* N. Alexopoulos, Peter Russer
James Rautio, Andreas Cangellaris, Wolfgang Hoefer



CAD Procedures, Techniques and Modeling

Anthony Pavio, Sam Pritchett, Mauro Mongiardo
Mohamed Abouzahra, Rolf Jansen, Arvind Sharma, S. Michael Saad
Joy Laskar, Barry Perlman,* Vijai Tripathi, Ravender Goyal

1996 Technical Program Committee



Guided Waves and Propagation Techniques

Tapan Sarkar, Abbas Omar, Michael Dydyk, Paolo Lampariello
Samir El-Ghazaly,* Arthur Oliner, Song-Tsuen Peng



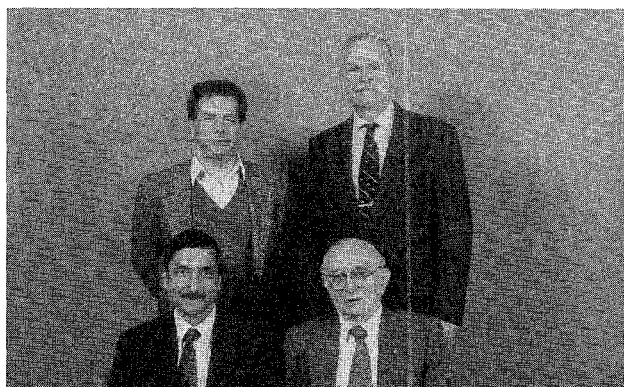
Measurement Theory and Techniques

John Barr, Zbynek Skvor, Roger Marks
Stephen Adam,* Ron Ham, Roger Pollard
David Wait (not shown)



Microwave and Communications Systems

D. McQuiddy Jr., Christoph Mahle, D. Meharry, J. K McKinney
Edmar Camargo,* Klaus Breuer, Allen Katz, Richard Ranson
George Heiter (not shown)



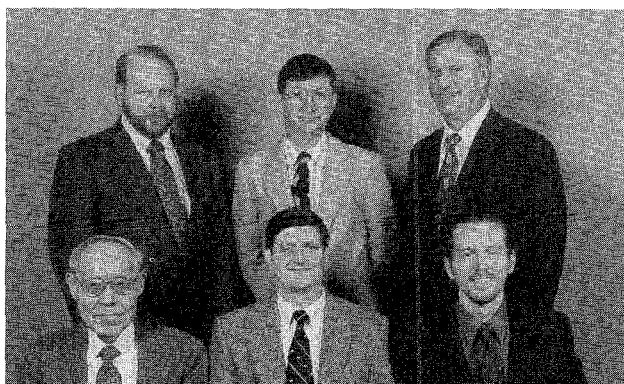
Vehicular Technology

Lamberto Raffaelli,* Richard Sparks
Rahul Dixit, Rudi Henning



Wireless Technology

John Bellantoni, Douglas Maki, Ramesh Gupta, John Horton
Weiming Ou, Ferdo Ivanek, Vijay Nair, George Vendelin
R. E. (Skip) Bryan, Kuohsiung Li, Joseph White,* Bernard Geller
Fazal Ali (not shown)



Phased Arrays

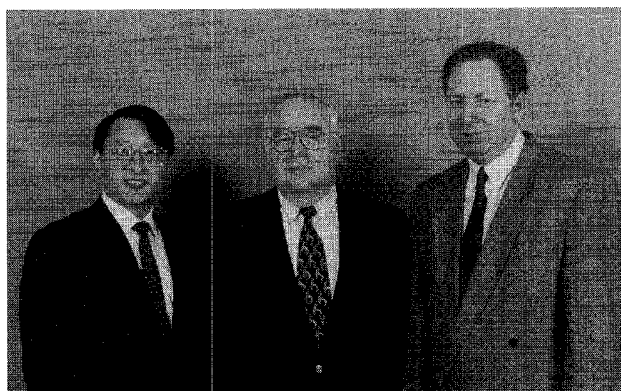
Austin Truitt, J. Dayton Adams, Don Parker
Kiyo Tomiyasu,* David Zimmermann, Glenn Hopkins

1996 Technical Program Committee



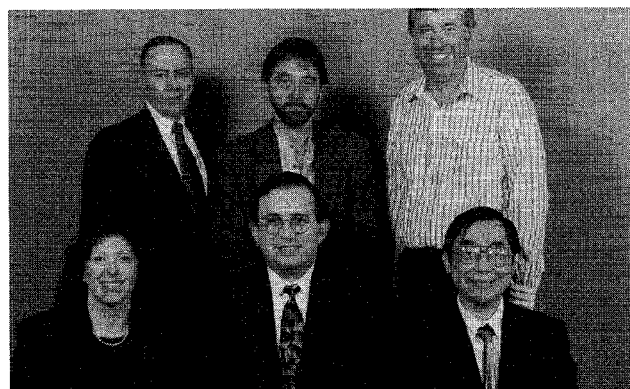
Lightwave Technology and Techniques

Dieter Jaeger, Anand Gopinath
Arthur Paoletta, Harold Sobol, Hiroyo Ogawa, Alwyn Seeds
Chi Lee,* Norman Dietrich, Carol Gee, Peter Herczfeld



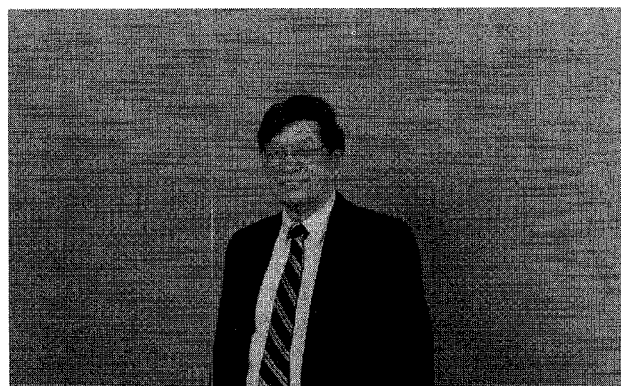
Superconductivity Technology

Guo-Chun Liang,* Martin Nisenoff, Aly Fathy
Jeffrey Pond(not shown)



Manufacturing, Production and Packaging

Mike Harris, Don Dodson, Tim Kemerley
Jeanne Pavio, Rick Sturdivant, Ken Wong
Titus Wandinger (not shown)



Digital Microwave Circuits

* Christopher Chang
Robert Inkol, Stephen Kaiser, Jim Tsui (not shown)



Active and Quasi-Optic Arrays

Charles Jackson,* David Rutledge, James Harvey, Koji Mizuno
Lawrence Dunleavy, Zoya Popovic, Amir Mortazawi

1996 IEEE MTT-S Administrative Committee



Glenn Thoren, Dan Swanson, John Barr, Roger Sudbury
Denis Webb, John Wassel, Charles Jackson, Ed Rezek



Skip Bryan, R.J. Ra, Manfred Schindler, Jerry Fiedziuszko
Larry Whicker, Harlan Howe, Jim Crescenzi, Roger Pollard



Eliot Cohen, John Horton, Steve Adam
R. Kagiwada, Arthur Oliner, Tatsuo Itoh, Vladimir Gelnovatch



1996 IEEE MTT-S Administrative Committee

Officers

President John W. Wassel
Vice President R.E. (Skip) Bryan
Treasurer Daniel G. Swanson
Secretary Randall E. Lehmann

Elected ADCOM Members

John T. Barr, IV	R.E. (Skip) Bryan	S. Jerry Fiedziuszko	J. Mike Golio
Charles M. Jackson	Rolf H. Jansen	Robert T. Kemerley	Roger D. Pollard
Jung-Woong Ra	Manfred J. Schindler	Roger Sudbury	Daniel G. Swanson
Glenn R. Thoren	Robert J. Trew	John W. Wassel	Denis C. Webb

Immediate Past Presidents

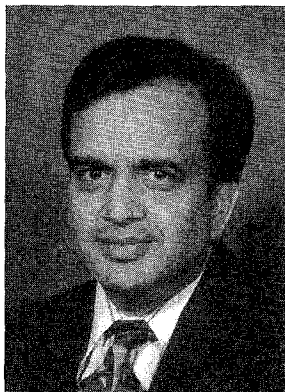
1995 Eliot D. Cohen
1994 E. James Crescenzi, Jr.
1993 Peter W. Staecker

Honorary Life Members

A. C. Beck	Tatsuo Itoh	Arthur A. Oliner	Kiyo Tomiyasu
Seymour B. Cohn	Theodore S. Saad	Leo Young	

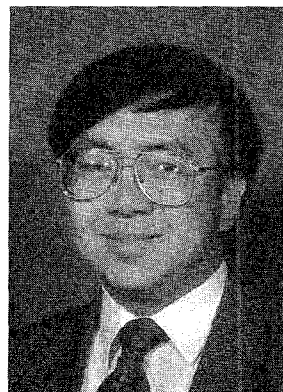
1996 MMWMC Committees

General Chairman



Mahesh Kumar

**Technical Program
Chairman**

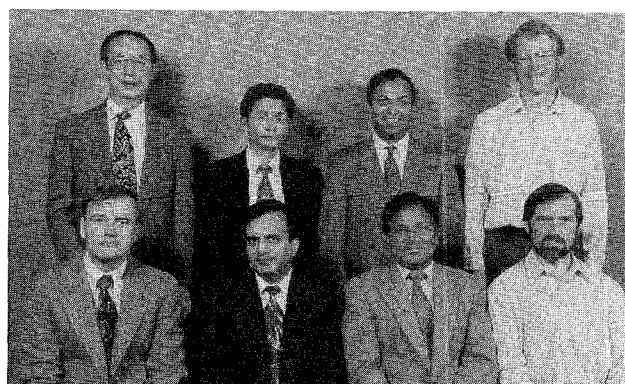


Louis C.T. Liu



Steering Committee

Eric Strid, Ho C.Huang, James Schellenberg
Val Peterson, Fazal Ali, Christian Kermarrec, Inder Bahl, Tsuneo Tokumitsu, Vijay Nair
Eliot Cohen, Reynold Kagiwada, Mahesh Kumar, Louis Liu



Technical Program Committee

Aharon Adar, Jyoti Mondal, Inder Bahl, James Schellenberg
Reynold Kagiwada, Eliot Cohen, Ho C.Huang, Louis Liu

Chente Chao, Tsuneo Tokumitsu, Fazal Ali, Eric Strid
Val Peterson, Mahesh Kumar, Vijay Nair, Christian Kermarrec