

The 1981 MTT-S International Microwave Symposium

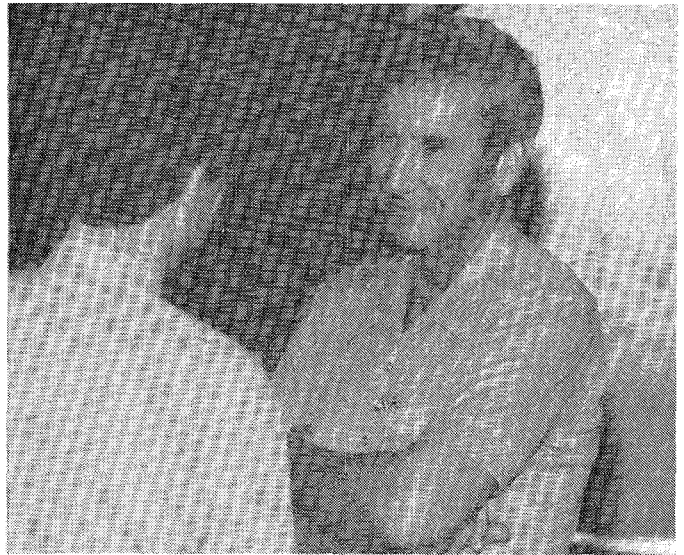
ALVIN CLAVIN, FELLOW, IEEE

THE 1981 International Microwave Symposium, Exhibition, and Workshops were held at the Bonaventure Hotel, Los Angeles, CA, during the week June 15–June 19, 1981. This year the Symposium was held jointly with the IEEE Antennas and Propagation Society (AP-S) and the International Union of Radio Science (URSI). The Symposium continues to grow and this year was no exception. Records were broken in all areas of attendance. The Steering Committee decided to inaugurate a new one day only registration to help reduce costs for local Symposium attendees. Approximately 1500 people registered for MTT-S (including 200 one-day people) with a total joint registration including AP-S and URSI of 2050. Over 1000 people registered for the exhibit only. Workshops registration was 450. Including exhibitors, it was estimated that approximately 4000 Microwave and Antenna people were at the Bonaventure during the week.

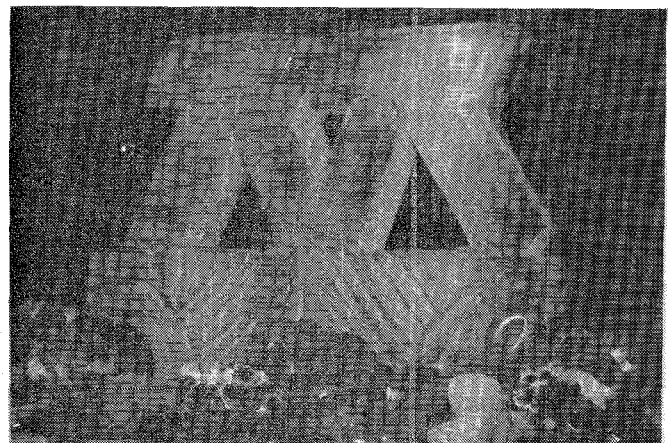
The Joint Symposium was arranged so as to have an overlap day on Wednesday, June 17. On the morning of the 17th, a plenary session was held with no competing sessions. The regular contributed papers, of which there were 160, were presented in four parallel sessions going from Monday morning until Thursday noon. There were panel sessions Monday and Wednesday evening, the Awards Banquet on Tuesday evening, and Workshops were scheduled Thursday and Friday.

The Symposium was started in an opening session of welcome by the AdCom President, Fred Rosenbaum, and the Steering Committee Chairman, Al Clavin, who commented on the theme of the Symposium, "Around the World with Microwaves." Most sessions were well attended with enthusiastic audience participation including the evening panel sessions. The sessions that drew large audiences were the plenary session, FET applications, millimeter-wave integrated circuits, and GaAs monolithic circuits. The spouses program had only moderate attendance, probably due to the 104° temperature outside.

The Awards Banquet was an outstanding event. The Bonaventure put on a magnificent feast of prime rib. The dinner was finished off with the "March of the Penguins" where 50 baked alaskas were carried into the dining hall aflame under dim lights. Mariachi bands serenaded the diners throughout the meal. Chuck Swift, Chairman of Arrangements for the Steering Committee, was anxious to introduce the other Steering Committee members—but instead put on a "Roast"—all in good fun. Approximately 500 banquet goers came to see Kiyo Tomiyasu accept the



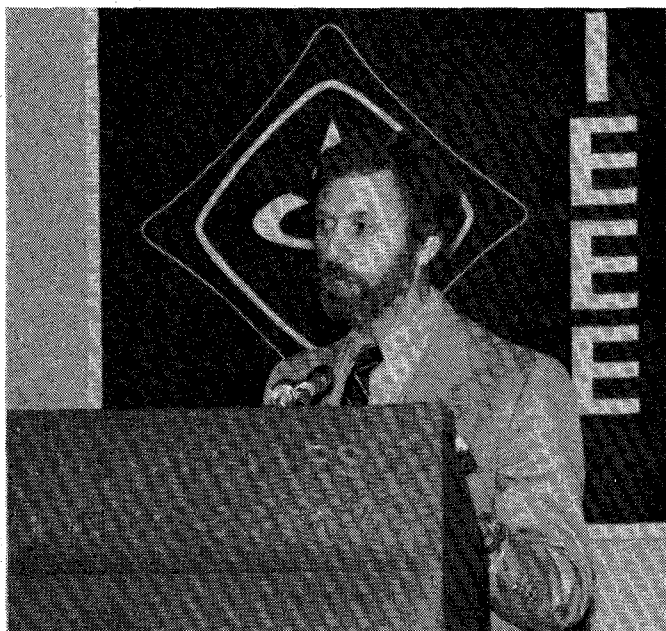
Chairman Al Clavin.



The MTT logo "in ice" at the cocktail party.



Head table with (left to right) Don Parker, Kiyo Tomiyasu, Mrs. Tomiyasu, and Fred Rosenbaum enjoying themselves.



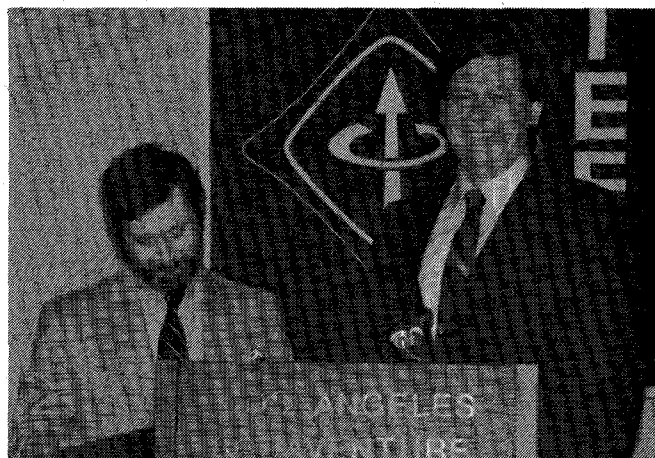
MTT AdCom President Fred Rosenbaum addressing banquet.



Kiyo Tomiyasu accepting the Microwave Career Award from Fred Rosenbaum.

Microwave Career Award. We are all proud of Kiyo's accomplishments. The Microwave Applications Award was presented to Dr. Julius Lange for "The Development of the Interdigitated Microstrip Quadrature Hybrid-The Lange Coupler." The Microwave Prize was presented to Dr. Hatsuaki Fukui for his paper, "Design of Microwave GaAs MESFET's for Broad-Band Low Noise Amplifiers (vol. MTT-27, no. 7). Steve Adams was awarded two items, the Past President's Pin, and a certificate showing that he was elevated to the grade of Fellow of the IEEE. This latter award was presented by Allan C. Schell, Director of Division IV. Distinguished Service awards were presented to Larry Whicker and Hal Schrank, and Certificates of Recognition were given to Larry Whicker, Ken Button, R. Van Waggoner, Steve Temple, and Glenn Thoren. Bob Pucel received a beautiful plaque for his efforts as National Lecturer.

Following the awards presentation Dr. Irving S. Bengelsdorf gave us a most interesting talk on how the brain works, "Snake-Root, Tremors, and Mental Illness."



Julius Lange accepting the Microwave Applications Award.



Hatsuaki Fukui accepting the Microwave Prize.

We were then all entertained by a most talented group of young people called The Brothers Mc Dougle. They continued to entertain until 11 P.M.

Ted Saad has his traveling road show, the MTT-S Historical Exhibit on the move again. This year it was arranged by John Horton. Ted and John managed to gather together some beautiful and interesting old hardware and written material to put on one of the best exhibits yet. One hundred forty-four items were on display, and 700 people signed the register.

The exhibition was the biggest MTT-S has had with over 155 booths present. The quality of the exhibit was very high, and many favorable reports were heard about the good interaction of Symposium attendees and exhibitors. I understand that nearly all exhibitors signed up for next year at Dallas.

Some details on workshops and panels are as follows.

- 1) Workshop on "Automatic Radio Frequency Measurements"—2 days—organized by H. George Oltman (attendance 177).
- 2) Workshop on "Advanced Computer Aided Design Techniques for the 1980's"—1 day—organized by L. Besser and S. March (attendance 88).



Steve Adam addressing the banquet.



Bob Pucel after receiving his plaque as National Lecturer.

- 3) Workshop on "Power GaAs FET's"—1 day—organized by J. W. Gewartowski and H. Q. Tserng (attendance 183).

- 4) Panel Session on "Microwave Devices Technology Transfer from Research and Development to Manufacturing," organized by H. J. Kuno.
- 5) Panel Session on the "State of the Art of mm/Sub-millimeter Wave Receivers," organized by J. J. Whelehan.
- 6) Panel Session on "Manpower Problems in Microwave and Antenna Engineering," organized by Robert F. McIntosh.
- 7) Panel Session on "Impact of GaAs IC's on Microwave Systems," organized by Paul T. Greiling.

TECHNICAL SESSIONS

The 82 Technical Committee Members working through 18 subcommittees, selected 160 contributed papers and invited papers for presentation at the Symposium. These papers were presented in 24 sessions. Additionally, there was organized a plenary session on common interest topics to MTT-S, AP-S, and URSI.

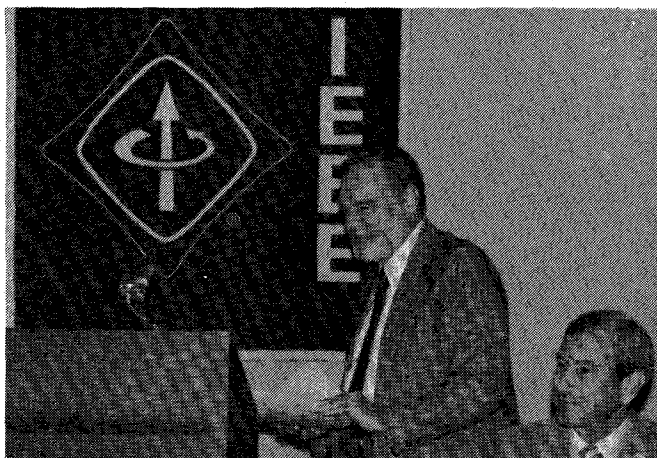
The Technical Program and Session Chairmen are listed below.

Monday, June 15

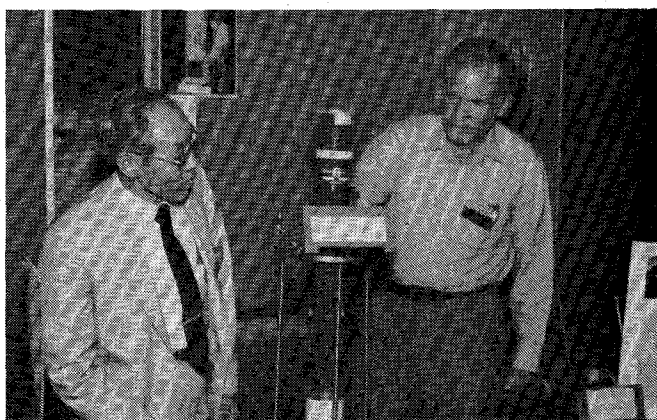
- Opening Session:* Welcome and Keynote Address—Fred Rosenbaum/Alvin Clavin.
- Session A:* Millimeter Wave Integrated Circuits—Dielectric and Image Guide—chaired by H. J. Kuno.
- Session B:* Microwave FET Devices—chaired by R. L. Camisa.
- Session C:* Computer Aided Design and Measurements—chaired by H. Ku.
- Session D:* Latin American Session—chaired by A. J. Giarola.
- Session E:* Millimeterwave Integrated Circuits—Printed Circuits Session II—chaired by R. T. Kihm.
- Session F:* FET Applications—chaired by R. T. Kemerley.
- Session G:* The Six-Port and Its Applications—chaired by S. F. Adam.
- Session H:* Japanese Session—chaired by Y. Konishi.

Tuesday, June 16

- Session I:* Passive Components and Networks—chaired by H. C. Bell.
- Session J:* Solid State Circuits and Devices—chaired by C. T. Rucker.
- Session K:* High Power Circuits and Systems—chaired by K. Tomiyasu.
- Session L:* Ferrite Applications—chaired by C. R. Boyd.
- Session M:* Microwave Integrated Circuits—chaired by W. E. Schroeder.



Irving Bengelsdorf, the Banquet Speaker, approaching the podium.



Kiyo Tomiyasu (left) and John Horton looking at one of the hardware items in the Historical Exhibit.

- Session N:* Millimeter Wave Solid State Devices
—chaired by T. T. Fong.
- Session O:* GaAs Monolithic Circuits
—chaired by G. Chao.
- Session P:* Microwave Acoustics
—chaired by T. Lukazek.

Wednesday, June 17

- Plenary Session:* chaired by S. B. Cohn.
- Session Q:* Microwave and Millimeter Wave Systems, Joint MTT-S, AP-S
—chaired by H. Sobol.
- Session R:* Phased and Active Array Techniques, Joint MTT-S, AP-S
—chaired by R. Van Wagoner.

Thursday, June 18

- Session S:* Low Noise Techniques
—chaired by S. Okwit.
- Session T:* Biological Effects and Medical Applications
—chaired by W. R. Adey.

- Session U:* Microwave Field and Network Theory
—chaired by S. March.
- Session V:* Guided Wave Optics and Signal Processing
—chaired by J. K. Butler.

DIGEST

The *Digest* was edited by Jorg Raue, in a real labor of love. This outstanding volume has 543 pages. It sports a beautiful color shot of the Bonaventure Hotel taken by Susan Cisco, wife of Terry Cisco. The *Digest* can be ordered by IEEE Catalog No. 81CH1592-5.

ACKNOWLEDGMENT

A Symposium of this magnitude is put together by much hard work by many volunteer workers. I believe this Steering Committee enjoyed its work, and this showed in the final result. It is also true that many local companies supported the efforts involved, and this is greatly appreciated. The staff of the Bonaventure Hotel was marvelous. For example, due to the hot weather, they moved the prebanquet poolside cocktail party into the third floor lounge on two-hours notice without a ripple. We experienced a great deal of help from Bob Elliott and his AP-S, URSI Steering Committee in registration and financial planning, and certainly we need to acknowledge the help of Horizon House and Howard Ellowitz for their many consultations.

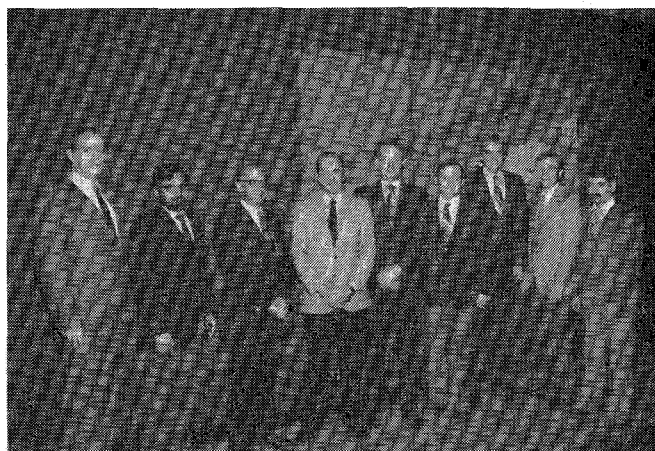
Following is a list of the participants and their employers.

1981 SYMPOSIUM STEERING COMMITTEE

- | | |
|---|---|
| <i>Chairman:</i> | Al Clavin, Hughes Aircraft Company |
| <i>Vice Chairman:</i> | Seymour Cohn, Seymour B. Cohn Associates |
| <i>Secretary:</i> | Leo A. Mallette, Hughes Aircraft Company |
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| <i>Member-at-Large:</i> | Dean Anderson |
| <i>Technical Program Chairman:</i> | Don Parker, Hughes Aircraft Company |
| <i>Technical Program Vice-Chairman:</i> | John Kuno, Hughes Aircraft Company |
| <i>Special Sessions:</i> | Rolf Weglein, Hughes Aircraft Company |
| <i>Finance:</i> | H. George Oltman, Hughes Aircraft Company |
| <i>Publications:</i> | Jorg Raue, TRW |



Symposium Steering Committee
Seated (left to right): S. Cohn, R. Weglein, D. Swift, A. Clavin,
 G. Oltman, S. Sensiper, T. Bristol, H. J. Kuno.
Standing (left to right): C. Swift, B. Gunshinan, H. Pomeranz,
 D. Anderson, L. Mallette, J. Aukland, D. Parker.
Not Pictured: J. Raue.



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 C. T. Rucker, J. Aukland, J. E. Degenford, E. C. Niehenke,
 B. Berson, S. L. March.

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Ladies Program:

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Ladies Program Vice-Chairman:

Myrna Olsson,
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 P. T. Greiling, F. J. Rosenbaum.

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B. E. Spielman, Naval Research
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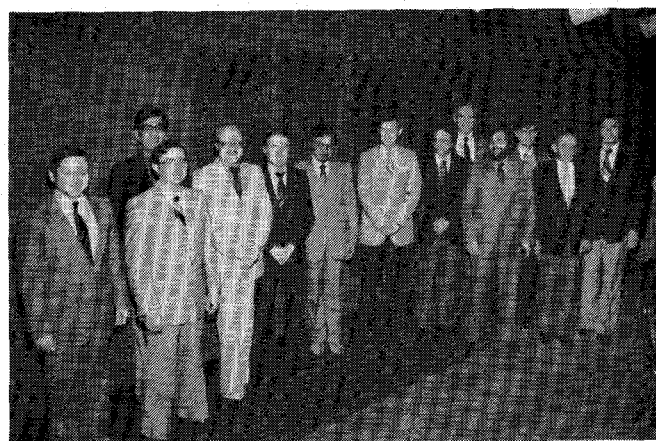
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 1979 President: D. Parker, Hughes Aircraft Company
 1980 President: S. Adam, Hewlett-Packard Company

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 S. B. Cohn
 D. D. King
 W. W. Mumford
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 K. Tomiyasu
 T. S. Saad

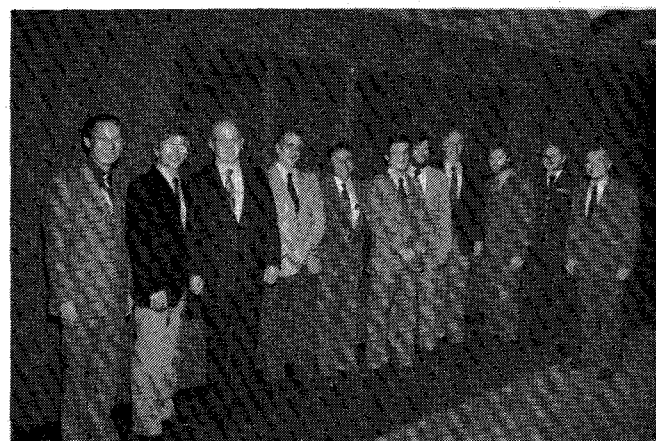
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Technical Program Committee

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(Left to right): C. Chao, P. T. Greiling, D. Anderson, J. Butler, W. Chang, G. Chao, G. Lindgren, J. Horton, F. J. Rosenbaum, T. Lane, M. Caulton.

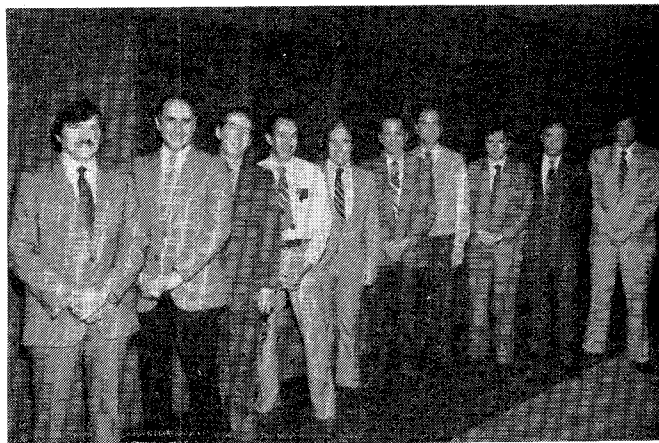


Technical Program Committee

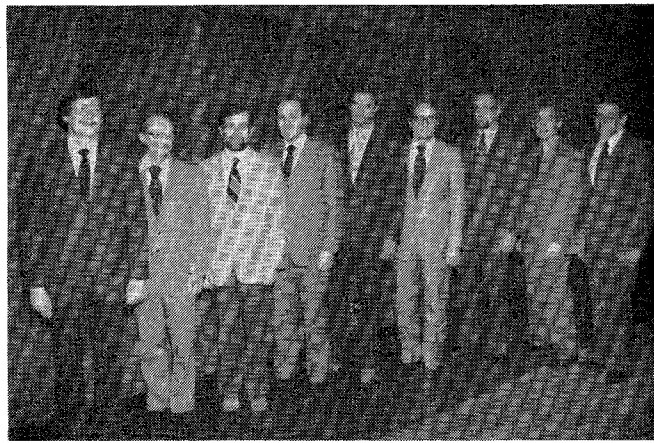
(Left to right): W. Ku, S. Adam, G. Engen, R. Levy, C. Bell, Jr., S. Cohn, C. Boyd, T. S. Saad, T. Itoh, R. Hicks, H. Sobol, S. L. March.

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