



EDITOR: Nat Pelnar

Hughes Aircraft Co., Missile Engineering Labs, Canoga Park, California 91304

Number 84, Fall 1976

1976 MTT AWARDS ANNOUNCED

During the September ADCOM meeting G. P. Rodrigue, President of MTT ADCOM, announced the 1976 MTT Awards recipients. Presentations of the awards will be at the annual Awards Banquet at the 1977 International Microwave Symposium. Full information on the recipients will appear in the Symposium issue of the NEWSLETTER.

MICROWAVE CAREER AWARD

Dr. John R. Whinnery was named 1976 recipient of the MTT Microwave Career Award for "a career of meritorious achievement and outstanding technical contribution in the field of microwave theory and techniques". Dr. Whinnery has been one of the most influential contributors to the microwave field, both as an inventor and author, and as an educator. He began his career at the General Electric Company in 1937. In 1948 he joined the faculty of the University of California, Berkeley and is presently Professor at UC, Berkeley. He has been a constant contributor to the microwave field through his many publications, patents and as co-author of the classic book "Fields and Waves in Modern Radio" (Ramo and Whinnery, John Wiley and Sons, N.Y., 1944, 1953).

MICROWAVE PRIZE

Robert A. Pucel, Daniel Masse and Richard Bera received the Microwave Prize for their paper "Performance of GaAs MESFET Mixers at X-Band", published in the IEEE Transactions on MTT, Vol. MTT-24, No. 6, June 1976, pp. 351-360. The authors are with the Research Division, the Raytheon Company, Waltham, Mass.

MICROWAVE APPLICATION AWARD

Martin A. Walker received the Microwave Application Award "for application of microwave circuit synthesis in the development of practical GaAs Field Effect Transistor Amplifiers currently being produced at C, X, and Ku-band frequencies". He is a graduate of MIT (BSEE, 1973) and Stanford University (MSEE, 1976). He is with the Watkins-Johnson Company, Palo Alto, Calif.

1976 - 1977 MTTS NATIONAL LECTURER MICROWAVE SOLID STATE DEVICES

Remarkable progress is being made in improving the performance of microwave solid-state devices used for signal processing and power generation. This progress will be reviewed, with emphasis on practical applications.



FRED STERZER

Fred Sterzer received his Ph.D. degree in Physics from New York University in 1955. He joined RCA in 1954 and is now Director of the Microwave Technology Center of the RCA Laboratories in Princeton, New Jersey. His work has been in the field of microwave spectroscopy, Microwave tubes, high modulators and demodulators, and microwave solid state devices.

Dr. Sterzer is the author of over 55 technical papers. He is a member of Phi Beta Kappa, Sigma Xi, the American Physical Society, and is a Fellow of the IEEE. He holds 26 patents in the microwave field.

The National Lecturer may be scheduled by writing or calling:

F. Sterzer
RCA Corporation
David Sarnoff Research Laboratory
Princeton, NJ 08540
(609) 452-2700 X2633

UPDATE YOUR DIRECTORY

D. Parker — Hughes Aircraft Company
Bldg 268/A54 Canoga Park, CA 91304
(213) 883-2400 X1483



PRESIDENT'S MESSAGE

by Pete Rodrique

The September meeting of the ADCOM is defined in the Bylaws as the "Annual" meeting, and at this meeting elections of ADCOM officers and of new ADCOM members are made. In addition, the recommendations of the Awards Committee are considered. The results of all these matters are reported elsewhere in this issue. I'd like to use this space to say a few words about the procedures for election of ADCOM members. It is clear to all that the MTT Society does not operate as a democracy, in that membership wide voting is not employed in elections. Present procedures are more along the line of an aristocracy, and I suppose that these sentences might be interpreted as a defense of that form.

First of all, it should be recognized that ADCOM members are true volunteers; Society budgets preclude reimbursement of members for any travel expenses. In fact, the only monetary fringe benefit is that ADCOM utilizes Society funds to pay for meals served during meetings.

A primary consideration in selection of ADCOM members is the question of whether or not the prospective member will have the time and inclination (as well as the talent) to work actively on Society matters. Since MTT membership is spread across North America and the globe, it is obviously impossible for the membership to effectively know one another. Usually we are familiar with each other's technical activities, and on that basis one might assume a popular vote would produce as winners those of the most laudible technical reputation. It is often true, however, that those with the most outstanding technical ability lack the time or the motivation to pursue administrative matters of technical societies. In its deliberations at election time ADCOM members attempt to take into account a prospective member's past activities as evidence of their interests and potential contributions to the Society.

MTT-S Bylaws also state that a reasonably even distribution by region and affiliation (industry, government, education) be sought. Such a distribution would be difficult (but not impossible) to achieve in a democratic election. It can be noted that present ADCOM membership is weighted relatively heavily toward industry and toward Regions 1, 2, and 6. This distribution by and large reflects locations of members as well.

It is unfortunately true that the travel required of ADCOM members tends to discourage representation from small businesses and universities, and to tilt representation in favor of the larger industries. ADCOM attempts to avoid multiple representation, and in elections there is often perceived to be an unwritten constraint on the number of members from a given institution. As a result of the September election, ADCOM representation changed only slightly with the election of 2 new members and the reelection of 5 members.

Membership input is sought in establishing a list of nominees for ADCOM membership, and chapter nominating petitions are given considerable weight. It is certainly not the intent to conduct ADCOM elections on the basis of cronyism, but simply to elect those considered most likely to carry on Society business in a diligent and conscientious manner. There has been more discussion of possible modification of election procedures to include membership wide election of some of all ADCOM members, and of officers. To date, however, no strong expressions of membership opinion on this matter have been heard. If you have some suggestions in this area, please let me or this NEWSLETTER Editor know of them.

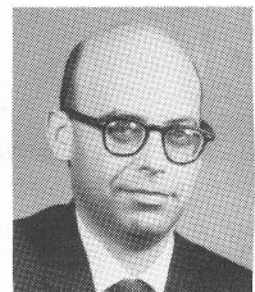
1977 ADCOM

PRESIDENT ELECT



Larry Whicker

VICE-PRESIDENT ELECT



Hal Sobol



ADCOM HIGHLIGHTS

by Larry Whicker

The September 13 ADCOM meeting was held at the Ambassador Hotel in Los Angeles, CA. The highlights of this particular meeting included election of officers for 1977, election of new ADCOM members, approving award recipients and a review of the status of the Transactions. Newly elected ADCOM officers and new members include:

Larry Whicker	.....	President
Hal Sobol	.....	Vice-President
Lamar Allen	.....	Three Year ADCOM Term
Jerry Auckland	.....	Three Year ADCOM Term
John Horton	.....	Three Year ADCOM Term
Ernie Komarek	.....	Three Year ADCOM Term
Charley Rucker	.....	Three Year ADCOM Term
Dick Sparks	.....	Three Year ADCOM Term
Fred Rosenbaum	.....	Two Year ADCOM Term

Pete Rodrigue, ADCOM President, presided over the 9:00 AM-5:30 PM meeting. President Rodrigue reported that an Albuquerque, New Mexico group has petitioned for a MTT Chapter joint with other Division 4 groups. Other items reported by President Rodrigue include:

a. The Zaborsky Plan for reorganizing the IEEE will be reviewed at the September 21, TAB Op. Com. meeting in New York. The comments on the Plan by MTTs ADCOM members have been submitted.

b. The \$8.00 fee schedule for the MTT Transactions approved at the June ADCOM meeting have been approved at IEEE Headquarters.

MEETINGS AND SYMPOSIA – Larry Whicker for Ken Button

1976 Symposium – Dick Snyder and John Horton

Dick Snyder reported for Bernie DeMarinis and Marty Caulton that the MTT Symposium in Cherry Hill had been quite a success with an overall net income in excess of \$30,000. The ADCOM expressed its thanks for a job well done.

1977 Symposium

Dave Rubin reported that plans for the 1977 Symposium in San Diego, CA are well underway. He indicated that a lot of thought is going into the selection of a banquet speaker.

Dave reported that there will be no evening sessions at the 1977 Symposium. He indicated that the possibility of a

late evening harbor cruise is being investigated. Exhibits only registrations for this meeting were discussed. After discussion, it was decided that Horizon House be allowed to set these fees.

1978 Symposium

Larry Whicker reported that Ken Button and Howard Ellowitz (Exhibits Manager) will visit Ottawa to review the meeting and exhibit facilities.

1979 Symposium

Lamar Allan indicated that Rudy Hehning and Howard Ellowitz met in Florida, reviewed candidate sites, and selected a symposium location.

1980 Symposium

The supplementary material from Washington Chapter concerning meeting details was submitted.

1981 Symposium

George Oltman led a tour of the Ambassador Hotel. (The 1981 symposium cite will be chosen at the June 1977 ADCOM meeting).

Exhibits Contract—Larry Whicker reported that the contract with Horizon House is being rewritten at IEEE Headquarters by Dr. Emberson and the IEEE legal staff.

OPERATIONS – H. W. Cooper

Awards – John Horton

John Horton reported that the Awards Committee had the following recommendations:

– Microwave Career Award – John Roy Whinnery

–Microwave Prize – Robert A. Pucel, Daniel Masse and Richard Bera "Performance of GaAs MESFET Mixers at X-Band," IEEE Transactions MTT, Vol. MTT-24, No. 6, June 1976, pp. 351-360.

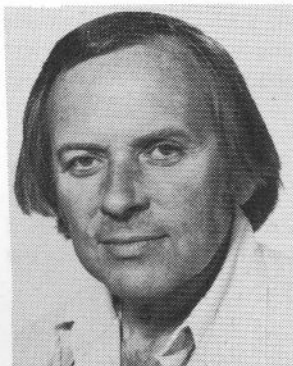
–Microwave Applications Award – Martin G. Walker for "Application of Microwave Circuit Synthesis in the Development of Practical GaAs Field Effect Transistor Amplifiers Currently Being Produced at C, X, and Ku-Band Frequencies."

After discussion, the recommendations of the Awards Committee were approved unanimously.

Elections – Hal Sobol

Hal Sobol reported that the Nominations Committee had done an outstanding job in selecting candidates for the vacancies to be filled on ADCOM. Names of fourteen (14) outstanding candidates were presented for consideration. The results of the election are indicated above.

(Continued on page 4)



EDITOR'S NOTES

by Nat Pelner

On a corner of page 24 of the Oct 1 L.A. Times was a small news item announcing that Congress has sent the Copyright Revision bill on to the President for signature. It appeared more like a space filler than a news flash. The item had a cryptic comment that the bill will "strictly limit the photocopying of copyrighted written works in libraries (see Summer 1975 NEWSLETTER, Editor's Notes). The impact on us, the scientific community is still unknown. At any rate, it will limit or possibly prohibit our access to scientific information not in our libraries.

Rumor has it that two companies are in the process of acquiring the rights from publishers as sole agents for the distribution and/or photocopying of technical journal articles. The prices are rumored to be about \$7.50 per article and about 25 cents per photocopy page. This means we will pay these prices for technical articles, where in our field, most of the technical content was paid for by our tax dollars and, in many cases, the author's employer has paid the publication expenses in the form of page charges. Apparently the publisher's had a very effective lobby. Who was there to lobby for us ??????????

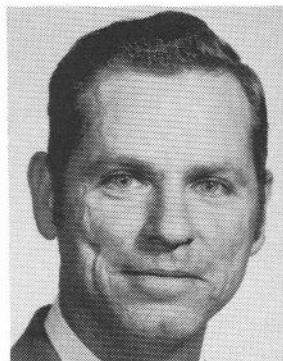
(Continued from page 3)

TRANSACTIONS – Don Parker

Don Parker Submitted a comprehensive report on the Transactions status. He reported that since he has been Transactions Editor, some five hundred and eighty (580) new papers have been received for review, three hundred and ten (310) have been accepted, one hundred and twenty-eight (128) rejected, and one hundred and forty-two (142) are presently in the review cycle. Don reported that the presently scheduled special issues include:

<u>Date</u>		<u>Editor</u>
Nov. 1976	– Millimeter Waves	H. J. Kuno
Dec. 1976	– Symposium Issue	J. Horton
Apr. 1977	– Low Noise Technology	J. J. Taub
June 1977	– Submillimeter Conference	K. Button
May 1978	– High Power Techniques (Proposed)	K. Tomiyasu
July 1978	– Biological Effects	A. Guy

(Continued on page 9)



CHAPTER ACTIVITIES

by Dick Sparks

Activities within local chapters should be at full throttle by now with monthly speakers scheduled through May. Speakers Lists have been sent out to all Chapter Chairmen and planned program schedules have been requested to be sent to Steve Temple, Chapter Records Chairman.

Bob Beatty, the 1975 National Lecturer, has submitted his detailed report on last year's lecture tour and the statistics indicate nearly 400 attendees heard his presentation in 15 cities. Bob has offered a number of recommendations based on his experience, several of which currently are being implemented. On behalf of ADCOM and the MTTs membership, I would like to thank Bob again for his contributions as 1975 MTTs National Lecturer.

This year's National Lecturer, Dr. Fred Sterzer, has a preliminary schedule as shown below. If you haven't already contacted him for a visit to your chapter please do so immediately. It would be extremely helpful to let him know of your intent so that he can coordinate his travel plans with visits to other chapters in your region. An announcement concerning his talk and his address appear elsewhere in this Newsletter.

FY 1977 NATIONAL LECTURER SCHEDULE

12 October	Washington, D.C.
13 October	Baltimore, MD
9 November	Montreal, Canada
16 November	Phoenix, AZ
13 January	Philadelphia, PA
22 March*	Boston, MA
20 April*	St. Louis, MO
End of November* or April	Long Island, NY
May*	Milwaukee, WI
Sometime*	Seattle, WA
	*Tentative

IEEE-INDIA Council EDD/MTT Chapter held a workshop on Solid State Devices and Circuits in Microwave Systems.

Held in New Delhi on Sept 24-25, 1976. We regret not announcing this event in our last NEWSLETTER.

**MEET THE NEW
ADCOM
MEMBERS**



J. C. Aukland



E. L. Komarek

BIOGRAPHICAL SKETCH — Ernest L. Komarek

Ernest L. Komarek (M'71) was born in Chicago, Ill., on March 3, 1926. He received the B.S. degree in engineering physics from the University of Colorado, Boulder, in 1965. Upon completing his undergraduate studies, he joined the Central Radio Propagation Laboratory, National Bureau of Standards, Boulder, Colorado, where he was engaged in the instrumentation of radio propagation experiments. In 1964 he transferred to the Radio Standards Laboratory, currently known as the Electromagnetics Division of the Institute for Basic Standards, and is engaged in CW rf power measurements. He is currently concerned with automated measurement techniques in the microwave spectrum and measurement assurance programs as a technique for dissemination of rf standards.

BIOGRAPHICAL SKETCH — J. C. Aukland

Jerry C. Aukland, (SM'68, M'59) was born near Macedonia, Iowa, on October 7, 1931. He received his BS degree in electrical engineering at Iowa State University at Ames in 1959.

Mr. Aukland has been at Rockwell International, Anaheim, California, since 1971 where he is a Group Leader of the Signal Processing Devices and Circuits Group. The Group is engaged in research on surface acoustic wave devices, microwave and millimeter wave ferrite devices, and high speed digital logic. He was also at Rockwell from 1959 to 1966 as a microwave research specialist in parametric interaction. From 1966 to 1971, he held several management positions in the fields of microwave, IR, and UV passive sensors at Aerojet-General of El Monte, California, and Spectran, Inc. of Los Angeles, California.

Mr. Aukland is active in both the Los Angeles and Orange County IEEE Groups. He is presently Chairman of the Orange County MTT and a past Chairman of the Los Angeles MTT Group. He was a member of the Steering Committee for both the 1963 and 1970 MTT Symposiums.

**INTERNATIONAL CONFERENCE ON
INTEGRATED OPTICS AND OPTICAL
FIBER COMMUNICATION**

July 18-20, 1977, Tokyo

The International Conference on Integrated Optics and Optical Fiber Communication (IOOC'77) will be held on July 18-20, 1977, in Tokyo, Japan. A post-conference meeting on some related topics will also be held in Osaka on July 22, 1977.

The Conference is sponsored jointly by the Institute of Electronics and Communication Engineers of Japan and the Institute of Electrical Engineers of Japan. It is cosponsored by the Japan Society of Applied Physics and the Institute of Television Engineers of Japan. Cosponsorship is under negotiation with the Institute of Electrical and Electronics Engineers (USA), the Optical Society of America (USA), the Institution of Electrical Engineers (United Kingdom), Nachrichtentechnische Gesellschaft im Verband Deutscher Elektrotechniker (Germany), and Societe des Electriciens, des Electroniciens et des Radioelectriciens (France).

The technical program will consist of both invited and contributed papers on integrated optics and optical fiber communication. About 100 twenty-minute contributed papers can be accommodated; they will be selected upon the basis of 50-word abstracts and 4-page summaries typed in double spacing. The Second Announcement (Call for Papers) will appear in July 1976.

Further information may be obtained from

Professor H. YANAI, Chairman, IOOC'77
Department of Electronic Engineering
University of Tokyo
7-3-1, Hongo, Bunkyo-Ku,
Tokyo, 113 Japan

**ELECTRON DEVICES/MICROWAVE
THEORY AND TECHNIQUES CHAPTER
FORMED IN PRINCETON**

A joint Electron Devices (E.D.)/Microwave Theory and Techniques (MTT) Chapter was established May 27, 1976 in the Princeton Section. The first presentation will be "Planar GaAs Devices" by Dr. S. Yegna Narayan. The presentation consists of a review of state of the art, future potential and technical challenges of Planar GaAs devices. Specifically GaAs FET's and Planar GaAs devices for use in Multi Gigabit rate logic will be discussed.

At this meeting Bernard DeMarinis (interim Princeton ED/MTT Chairman) will present for approval the following slate of officers:

- Dr. R. Camisa Chairman
- Dr. F. Sechi Vice Chairman
- Dr. M. Caulton Treasurer
- Dr. N. Anderson Secretary
- B. D. DeMarinis Program Chairman
- J. Nelson Facilities Chairman
- R. Snyder Publicity Chairman

1977 International Microwave Symposium

"ACCENT ON APPLICATIONS"



21 - 23 JUNE 1977

SAN DIEGO, CALIFORNIA

FINAL CALL FOR PAPERS

The 1977 IEEE MTT-S International Microwave Symposium will be held at the Sheraton Harbor Island Hotel, San Diego, California on a beautiful site overlooking San Diego Bay.

The 1977 MTT-S Symposium will feature "Accent on Applications" to help expand the horizons for Microwave use. Both tutorial and contributed papers will be utilized in appropriate areas.

Papers are solicited describing original work, not published or presented previously, which can be theoretical, technological, or application oriented. Although any papers concerned with Microwave techniques, devices, systems and applications will be considered the following subject areas are regarded as particularly appropriate for this conference.

- Computer Oriented Microwave Practices
- Microwave Oriented Optical Techniques
- Microwave High Power
- Microwave and Millimeter Wave Solid State Devices
- Applications of Electromagnetics to Cancer Treatment and other Medical Applications
- Microwave Components and Networks
- Microwave Low Noise
- Microwave Acoustics
- Microwave Systems including Communications Systems
- Submillimeter Waves
- Microwave and Millimeter Wave Integrated Circuits
- Digital Microwave Systems
- Microwave Measurements
- Microwave Ferrites
- Microwave Field Theory

Authors are requested to submit both a 35 word abstract and a preliminary paper up to 1000 words (up to six illustrations), clearly explaining their contribution, its originality, and its relative importance. Abstracts and papers must be received on or before January 15, 1977 by:

Dr. Gerald Schaffner
TPC 1977 MTT-S Symposium
Teledyne Ryan Aeronautical
2701 Harbor Drive
San Diego, California 92112 USA

Papers will be sent to reviewers with the names of author(s) withheld. Notices of acceptance or rejection will be mailed to authors by March 1, 1977. At that time, authors of accepted papers will receive forms and instructions for preparing material to be printed in the Symposium Digest.

BOOK REVIEWS

INTERMEDIATE MATHEMATICS OF ELECTROMAGNETICS

by D. C. Stinson
Prentice Hall, 1976

This well-written text has the goal, as the author states in his preface, to introduce much of the mathematics relevant to electromagnetics and then show how the mathematics can be applied to typical problems. The developments are invariably rigorous, without being pedantic. Dr. Stinson writes with clarity and authority, and his experience with the subject matter results in many valuable insights as to why certain techniques will work in some situations and not in others.

The early chapters treat orthogonal functions, Green's functions, and Fourier transforms. In places the development is terse and precipitous, such as the almost axiomatic introduction of the generating functions for Bessel and Legendre functions to launch the discussions of those two important families. However, the discussion of Green's functions and their uses proceeds smoothly and logically and the problems seem extensive and cover the material thoroughly. The chapter on Fourier transforms is a tour de force and provides a unified approach to the establishment of many of the formulas commonly encountered in electromagnetic boundary value problems.

Chapter Four treats Maxwell's equations and the potential functions under increasingly difficult circumstances, including inhomogeneous and anisotropic media. Normal modes and the Green's functions for the wave equation and its static (Laplace) reduction are established for rectangular, cylindrical, and spherical geometries in Chapter Five. This is an exceptionally clear exposition and contains results of wide applicability to engineering designs involving waveguides and antennas. Mastery of all the problems at the end of this chapter would be quite an accomplishment.

The sixth chapter contains a thorough treatment of wave propagation in simple and non-simple media and the book closes with a chapter on radiation into a half space; the coverage is confined to electric and magnetic line sources and dipoles. Several useful appendices are included on vector identities, vector formulations in the three principal coordinate systems, and Bessel and Legendre functions.

Like space and time, adjectives are relative, and some readers might question Dr. Stinson's inclusion of the work "intermediate" in his title. It seems to this reviewer that "Intermediate Mathematics of Electromagnetics" would be fine for self-study for someone who already had a substantial exposure to the subject. For others, it would make an

excellent classroom textbook were the instructor to flesh out some of the terser developments. It should have appeal in both situations.

Reviewed by
R. S. Elliott
Professor of Electrical Sciences
University of California
Los Angeles

A PRACTICAL INTRODUCTION TO IMPEDANCE MATCHING

by R. L. Thomas
Artech House, 1976

The author has chosen his title well as the book is definitely a practical treatise, and it is strictly an introduction. The book is well suited for those who want practical examples with a minimum of extraneous details. The type is large and easily read. The text fills approximately 50 of the 160 pages.

The first four chapters discuss basic radio frequency relationships, transmission charts, and impedance measuring methods. The following three chapters enter into the main thesis of the book discussing narrow band matching, broadband matching using line transformers and broadband matching using four element networks. The last chapter, which is the most illustrative of those on matching techniques, discusses several examples of matching in detail.

On starting the first chapter the reader quickly realizes that the book was carelessly written and the manuscripts were carelessly corrected. The book has numerous typographical errors, errors in dimensional units, unexplained numerical factors, subscripts on the same level as the variable, and statements that are mostly, but not always, correct. After the reader becomes accustomed to these deficiencies, however, the book becomes quite readable.

The first three chapters on microwave relationships and charts serve to refresh the reader's knowledge and acquaint him with the author's nomenclature. Readers desiring a deeper knowledge of the subject matter can make use of the adequate references and bibliography following each chapter. The methods of measurement discussed in the fourth chapter are those historically used by antenna designers - the slotted line, the standing wave detector (PRD-219), and the VHF bridge (HP-803A). Examples using the more recent network analyzers are not included (nor in this reviewer's opinion is discussion necessary since the network analyzers' output is already the impedance

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ANNOUNCEMENT

SPECIAL ISSUE OF IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES

Because of strong interest shown in a recent survey, a Special Issue of IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES featuring microwave high power components has been scheduled for publication in May 1978.

Papers are solicited which describe original work concerned with high levels of microwave power. The papers may deal with theory or application, and the topics of interest are:

- | | |
|--|---|
| <ul style="list-style-type: none"> a) 2-port ferrite isolators b) 3- and 4-port circulators (passive or switched) c) plasma, ferrite and diode duplexers (passive or switched) d) multipactor control devices e) PIN diodes f) ferrite and YIG materials g) flanges, connectors, contacts h) seals, gaskets, shields i) arcing, discharges, nonlinearities, intermodulation effects j) thermal considerations of transmission lines k) filters, cavities, diplexers, and triplexers | <ul style="list-style-type: none"> l) frequency-selective ferrite limiters m) transitions, hybrids, couplers, power dividers/combiners n) phase shifters of diode and ferrite types o) pressure windows p) orthomode transducers, polarizers q) antenna feeds, reflectors, antennas, radomes r) high power solid state sources s) high power tubes t) high power microwave systems |
|--|---|

Authors are requested to submit three copies of the manuscript by May 15, 1977 to:

K. Tomiyasu, Guest Editor
IEEE TRANSACTIONS ON MTT, Special Issue
on Microwave High Power Components
General Electric Company
Valley Forge Space Center
P. O. Box 8555
Philadelphia, PA 19101

The papers will be reviewed in accordance with the normal procedures of the TRANSACTIONS.

1977 INTERNATIONAL MICROWAVE SYMPOSIUM

21-23 JUNE 1977, SAN DIEGO, CALIFORNIA
ADVANCE ANNOUNCEMENT OF SYMPOSIUM
INFORMATION

In response to many requests for information about the 77 IEEE Microwave Symposium, the following preliminary information may be of some help.

The Symposium will be held Tuesday June 21st – Thursday June 23rd with the likelihood of small workshop meetings on Friday 24th.

The meetings will be at the Sheraton Harbor Island Hotel, located very close to Lindbergh Airport. Transportation will be provided by the hotel.

Hotel rates: \$26 single, \$32 double. No additional charge for families with children under 18.

Registration:	IEEE Members	Non Members
Advance:	\$40	\$50
At Conference:	\$50	\$60

Exhibits: Microwave Journal will be handling exhibits for the first time this year and may also host a session for microwave business people one day before the Symposium begins. For non-registrants there will be an exhibit fee.

Etc. Etc.: This is Southern California. Expect 72°F. weather, no rain, but a possibility of coastal fog. Feel free to leave your suits and ties at home. Come to learn, relax, and enjoy!

NEW AUTHORS SOUGHT

According to Maurice W. Long, an extensive series of books of importance to electrical engineers is being developed by the Lexington Books Division of D. C. Heath and Company. Interested authors should send a table of contents and introductory material to Dr. M. W. Long, Consulting Editor, 1036 Somerset D Drive, N. W., Atlanta, Georgia 30327.

SUMMARY OF CHAPTER MEETING RECORDS 1976 - 77

Chapter	Date	Attendance	Speaker	Topic
Columbus	2/24/76	26	A. K. Guthrie	Living with Lightning
	4/6/76	31	Ralph D. Kodis	Some Applications of Technology to Transportation Systems
	4/22/76	62	Dr. Edward F. Miller	Communications Satellites in the 70's
Los Angeles	2/19/76	48	Robert J. Wenzel	Realization of Exact RF or IF Filters
	4/8/76	32	Dr. Marshal H. Cohen	Recent Implementation of VLBI
Philadelphia	3/23/76	22	Dr. H. P. Schwan	Microwave Hazards to Man
	5/13/76	11	Dr. Robert W. Beatty	The Development of Modern Automatic Systems for the Measurement of Network Parameters
Phoenix	2/17/76	56	I. A. Lesk	Solar Cell Devices
	3/16/76	21	Dr. R. S. Elliott	Antenna Patterns with Arbitrary Sidelobe Topography
	4/13/76	13	Dr. L. R. Whicker	Status of Ferrite Phase Shifters
	5/4/76	24	Dr. Irving Kaufman	Electronic Displays: Principles and Practice
New York/ Long Island	12/10/75	25	Dr. Martin Grace	Microwave GaAs FET Amplifiers
	3/10/76	21	Harlen Howe	Microwave Subsystem Packaging
	5/12/76	—	Bernard S. Glance	Millimeter Integrated Circuits
Israel	4/28/76	—	Joseph Burnsweig	Unknown

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Jim Degenford indicated that the statistics from the "mandatory page charge experiment" are still sparse and more time is required to obtain a better evaluation.

President Rodrigue indicated that the MTT Transactions are being reviewed this year by a committee appointed by TAB. The reviewers are Marion Hines and Bud Crystal. Marion Hines' review has been received. His review was generally good with some particular critical points. Marion's comments will be passed on to other ADCOM members. A committee of D. Parker, H. Sobol, L. Allen, G. Oltman and H. Stinehelfer was set up to review M. Hines' comments.

FINANCE — G. Oltman

George pointed out that our financial picture has improved and the success of the Cherry Hill Symposium will make things look even better.

MEMBERSHIP SERVICES — Dick Sparks

Dick Sparks reported that a very good Chapter Chairman's meeting was held in Cherry Hill. He reported also that Fred Sterzer has started his tour as National Lecturer. Chapters should contact Fred to schedule his lecture. G. R. Thoren reported that efforts are underway to stimulate membership and to improve communication between ADCOM and the Chapters. Steve Temple reported that a new MTTS Speakers List has been prepared and distributed.

TECHNICAL COMMITTEES — Hal Sobol

Hal Submitted a report dealing with the reorganization of technical program committees for MTT Symposia. He proposed combining inputs from various similar MTT Technical Committees. This is intended to help in the reduction of the number of parallel sessions at our meetings. After discussion, Hal's proposal was adopted for 1978 and 1979. The Program Committee for 1977 was encouraged to use Hal's recommendation where possible.

IEEE COUNCILS AND COMMITTEES

Solid State Circuits Council

Don Parker and Hal Sobol reported that the Solid State Circuits meeting will change its meeting place in the future — possibly alternating between Philadelphia and San Francisco.

NEW BUSINESS

Support of ADCOM Travel

After discussion, it was decided that the MTT budget would not allow for even partial support of ADCOM members travel to and from ADCOM meetings.

The meeting adjourned at 5:30 PM.

PUBLICATIONS INFORMATION FROM IEE (LONDON)

THREE NEW IEE JOURNALS

The Institution of Electrical Engineers is planning to produce, over the next few years, a range of high-quality specialist technical journals. These will be particularly aimed at covering rapidly developing fields.

The programme will start in September 1976 with a wide circulation of the first issues of three IEE Journals on

'*Microwaves, Optics & Acoustics*' (MOA) Editors: J. D. Rhodes (Leeds University) W. J. Stewart (Plessey Company)

'*Electronic Circuits & Systems*' (ECS) Editors: R. Spence (Imperial College) M. J. Withers (British Aircraft Corporation)

'*Solid-State & Electron Devices*' (SSED) Editors: J. E. Carroll (Cambridge University) J. Mavor (Edinburgh University)

The journals will be published quarterly from September 1976 bringing together the work of authors and the interests of readers active in the appropriate fields. This will be achieved by publishing topical papers of high standard giving special emphasis to practical relevance and applications. The Journals will also contain review and tutorial papers, correspondence, book reviews, important news, editorials etc.

It is expected that special issues of the Journals on various subject areas will be published from time to time.

An attraction to authors will be the speed of publication of material in the Journals. For instance, a paper accepted without revision could be in print within 12 weeks.

A wide international authorship and readership of the Journals is foreseen, and it is hoped that a significant number of European contributions will be attracted. It has been decided that papers will be published in English, as a widely understood language, but an additional abstract in a language of the author's choice can be included, if supplied by the author.

(Continued from page 7)

data to be calculated from the data measured by the other instruments).

Chapter five begins exposition of matching techniques with single element series or shunt networks, and a description of Smith Chart regions that can be matched using such elements. This is followed by procedures for using two element networks. The chapter is closed with a discussion of quarter wave transformers and a few laboratory tuning devices useful in the author's line of work. Not mentioned are E/H tuners and line stretchers.

The broadband matching techniques discussed in Chapter six utilize the line transformer. The author provides a convenient set of design charts cataloged in the appendix which greatly speed up the matching procedure using the line transformer.

The most complex matching problems are tackled in Chapter seven using four element matching networks. The procedure for determining the value of the individual elements is not as clear as a reader might hope, but they become somewhat more clear after carefully following the better explained examples in Chapter eight.

The book is best suited for readers with some familiarity with matching techniques. For that reader the book serves as a good reference to suggest a matching procedure or to clarify a procedure. The book does not often answer the question "why" — why use a certain procedure, why a line transformer has "limited effectiveness in matching high 'Q' structures," or why "network should never be selected to provide a perfect match for any one portion of a given impedance curve" in a broadband application. For this reason, the book is not recommended for self-study.

With supplementary material and an instructor the book can become a good text and subsequent reference book.

Reviewed by:

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REVIEWS IN PROCESS

Microwave Diode Control Devices by R. Garver
The Technology of Compound Semiconductor Materials and Devices by D. Colliver

Conference on Computer-Aided-Design of Electronic and Microwave Circuits and Systems

Hull, 12 – 14th July, 1977

Conference Committee:	General Chairman J. I. Sewell	Publicity A. G. Martin	Local Arrangements R. Clarke	Finance K. A. Welsh
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CALL FOR PAPERS

A conference on Computer-Aided Design of Electronic and Microwave Circuits and Systems is to be held at the University of Hull, England, from 12th-14th July, 1977. It is sponsored by the IEEE (United Kingdom and Republic of Ireland Section) and the University of Hull, in co-operation with the IEEE Circuits and Systems Society.

AREA OF INTEREST

It is felt that there are many common computational techniques being employed in circuit design and microwave applications and a forum for exchange of ideas has long been needed. It is intended that the conference will not just be a gathering of academics, but that good industrial participation will be achieved. Hence subjects of immediate engineering relevance such as lay-out problems, practical circuit and system design, tolerance problems, microwave circuits, microwave integrated circuits, antenna design; together with numerical methods, design automation and optimisation techniques are within the scope of the conference. Papers in these and related areas are solicited.

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An International Technical Committee will co-ordinate the technical programme, and refereeing of papers will be carried out in the normal manner. The deadline for submission of papers is the **15th DECEMBER, 1976**, and authors should send three copies to the Conference Secretariat, address shown below. The format of the papers should be in accordance with the "Information for Authors" which is printed on the back cover of each issue of the IEEE Transactions on Circuits and Systems. Authors of accepted papers will be asked to prepare a shortened version for publication in the Proceedings of the Conference.

(Note: The date of 12-14th July, 1977 replaces a previously announced date of April, 1977, given on some preliminary publicity).

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