

Wednesday Morning, May 30, 1984

MAIN ARENA (CIVIC AUDITORIUM) PLENARY SESSION		LARKIN HALL (A)		POLK HALL	
		10:30 am Chairman: J. Knorr, Naval Postgraduate School, Monterey, CA	FIELD THEORY OF GUIDING STRUCTURES	10:30 am Chairman: T. Lukaszek, U.S. Army Electronics Command, Fort Monmouth, NJ	ACOUSTIC AND MAGNETIC DEVICES
8:30 am	Conference Chairman Stephen Adam, Hewlett-Packard Co., Palo Alto, CA	10:40 am 2-1	Space Domain Decoupling of LSE and LSM Fields in Generalized Planar Guiding Structures A.S. Omar, K. Schünemann Technische Universität Hamburg-Harburg	10:40 am 3-1	YIG Oscillators: Is a Planar Geometry Better? R.L. Carter, J.M. Owens, D.K. De University of Texas, Arlington, TX
8:40 am	MTT-S President H.G. Oltman, Jr., Hughes Aircraft Co., Canoga Park, CA	11:00 am 2-2	Simple and Accurate Expressions for the Dominant Mode Properties of Open Groove Guide A.A. Oliner, P. Lampariello Polytechnic Institute of New York, Brooklyn, NY	11:00 am 3-2	A 94 GHz Suspended Stripline Circulator M.H. Atain, Hughes Aircraft Co., Torrance, CA
8:50 am	Technical Program Committee Chairman F. Ivanek, Harris Corp., San Carlos, CA	11:20 am 2-3	Fourier Transformed Matrix Method of Finding Propagation Characteristics of Complex Anisotropic Layered Media C.M. Krowne, Naval Research Lab, Washington, D.C.	11:10 am 3-3	Recent Developments in SAW Device Applications K. Lau, TRW, Redondo Beach, CA
9:00 am	Keynote Address John A. Young, President and Chief Executive Officer, Hewlett-Packard Co., Palo Alto, CA	11:40 am 2-4	Theory and Experiment Predicting the Cutoff Frequencies for a Rectangular Stripline R. Lampe, P. Klock, D. Tanner, P. Mayes University of Illinois, Urbana, IL	11:30 3-4	Fundamental-Mode Pierce Oscillators Utilizing Bulk-Acoustic-Wave Resonators in the 250-300 MHz Range S.G. Burns, R.S. Ketcham Iowa State University, Ames, IA
		11:50 am 2-5	The Simulation of Three-Dimensional Wave Propagation by a Scalar TLM-Model D. Choi, W.J.R. Hofer University of Ottawa, Ottawa, Ontario, Canada	11:40 am 3-5	Passive Magnetostatic Wave Pulse Compression Loop K.W. Chang, L.R. Carter, J.M. Owens University of Texas, Arlington, TX
				11:50 am 3-6	Magnetostatic Volume Wave Delay Lines with Stepped Ground Planes J.D. Adam Westinghouse Electric Corp., Pittsburgh, PA

10:30 am	MONOLITHIC MILLIMETER-WAVE CIRCUITS Co-Chairmen: B. E. Spielman, NRL, Washington, DC R.W. Sudbury, MIT, Lincoln Laboratory, Lexington, MA
10:40 am	A 68 GHz MONOLITHIC FET OSCILLATOR D.W. Maki, J.M. Schellenberg, H. Yamasaki, L.C.T. Liu Hughes Aircraft Co., Torrance, CA
11:00 am	A W-BAND MONOLITHIC GaAs CROSSBAR MIXER L.T. Yuan Hughes Aircraft Co., Torrance, CA
11:20 am	94 GHz PLANAR GaAs MONOLITHIC BALANCED MIXER P. Bauhahn, T. Contolatis, J. Abrokwhah, C. Chao, C. Seashore Honeywell, Bloomington, MN.
11:40 am	GaAs MONOLITHIC FREQUENCY DOUBLERS WITH SERIES CONNECTED VARACTOR DIODES A. Chu, W.E. Courtney, L.J. Mahoney, H.A. Atwater, R.W. McClelland MIT Lincoln Laboratory, Lexington, MA.

Wednesday Afternoon, May 30, 1984

LARKIN HALL (A)		POLK HALL	
1:30 pm Chairman: E.J. Denlinger, RCA Laboratories, Princeton, NJ	COMPONENT APPLICATIONS OF FIELD THEORY	1:30 pm Chairman: A. Rosen, RCA Laboratories, Princeton NJ	BIOMEDICAL ASPECTS OF MICROWAVES
1:40 pm 5-1	Coupling Between a Dielectric Resonator and a Dielectric Image Guide P. Guillon, F. Farzaneh Lab de Communications Microondes et Optiques Limoges, France	1:40 pm 6-1	Microstrip Spiral Antenna for Local Hyperthermia T. Tanabe, A.H. McEuen, S. Caslow, C.S. Norris Varian Associates, Inc. Palo Alto, CA
2:00 pm 5-2	Microwave Network Analysis of a Leaky-Wave Structure in Non-Radiative Dielectric Waveguide A. Sanchez, A.A. Oliner Polytechnic Institute of New York, Brooklyn, NY	1:50 pm 6-2	An Approach of the Slot Antenna Radiating in Muscle P. Pribetich, P. Kennis, C. Seguinot, P. Garnand; Centre Hyperfréquences et Semiconducteurs, Villeneuve d'Ascq, Cedex, France
2:20 pm 5-3	Mode Propagation Through a Step Discontinuity in Dielectric Planar Waveguide H. Shigesawa, T. Tsuji Doshisha University, Kyoto, Japan	2:00 pm 6-3	Enhancing the Efficacy of Thermotherapy by Monitoring Changes in Tumor Blood Flow F. Sterzer, R.W. Paglione; RCA Laboratories, Princeton, NJ
2:40 pm 5-4	Planar Circuit Analysis of Microstrip Radial Stub F. Giannini, R. Sorrentino, J. Vrba University of Rome, Rome, Italy		A Winter, J. Laing; The Hospital Center at Orange, Orange, NJ
2:50 pm 5-5	Scattering Parameters of Axial Inductive Strips in Rectangular Waveguide Y. Shih Naval Postgraduate School, Monterey, CA	2:10 pm 6-4	Specific Absorption Rate Distribution in a Model of Man at Various Polarizations A. Kraszewski, M.A. Stuchly, S.S. Stuchly, G. Hartsgrove University of Ottawa, Ottawa, Canada
LARKIN HALL B		2:30 pm 6-5	A Three-Band Microwave Radiometer for Noninvasive Temperature Measurement S. Mizushima, H. Oh-i-shi, Y. Hamamura Shizuoka University, Hamamatsu, Japan
1:30 pm	DEVICES AND MONOLITHIC CIRCUIT ELEMENTS Co-Chairmen: D.R. Chen, Microwave Monolithics Inc., Simi Valley, CA M. N. Yoder, ONR, Arlington, VA	2:50 pm 6-6	Microwave and Infrared Thermograms of Hot Spots in Tissue G. Schaller Universitaet Erlangen - Nuernberg, Erlangen, F.R. Germany
1:40 pm	CALIBRATION METHODS FOR MICROWAVE WAFER PROBING E.W. Strid, E.R. Gleason Tektronix Inc., Beaverton, OR		
2:00 pm	LOW NOISE HIGH ELECTRON MOBILITY TRANSISTORS J. Berenz, K. Nakano, K. Weller TRW, Redondo Beach, CA		
2:20 pm	HIGH EFFICIENCY GaAs MBE POWER FET FOR Ka-BAND J. Geddes, V. Sokolov, T. Contolatis, J. Abrokwhah, W. Larson Honeywell, Bloomington, MN		
2:40 pm	HIGHLY ACCURATE DESIGN OF SPIRAL INDUCTORS FOR MMIC'S WITH SMALL SIZE AND HIGH CUT-OFF FREQUENCY CHARACTERISTICS M. Parisot, Y. Archambault, D. Pavlidis, J. Magarshack Thompson-CSF, France		

Wednesday Late Afternoon, May 30, 1984
3:30 pm to 5:00 pm — Main Arena

OPEN FORUM I			
7-1 An Ultra Low Transient GaAs VHF Switch D.W. White, MIT Lincoln Lab, Lexington, MA 7-2 Large Signal Upper-Sideband Varactor Upconverter Linearization E. Loeser, Technical University Braunschweig, Braunschweig, F.R. Germany 7-3 A Solid State, X-Band, Exciter/Local Oscillator/Down Converter Subsystem For An Airborne, Coherent Radar Fire Control System J.B. Vuong, A.M. Madni, L.A. Wan, Systron Donner Corp., Van Nuys, CA, G. Keogh, Emerson Electric Co. 7-4 Distributed GaAs FET Circuit Model for Broadband and Millimeter Wave Applications R. LaRue, C. Yuen, G. Zsasiuk, Varian Associates, Palo Alto, CA 7-5 V-Band Double-Drift Read Silicon IMPATTs Y.E. E.M. Nakaji, W.F. Turner, Hughes Aircraft Co., Torrance, CA 7-6 Field Analysis of Millimeter-Wave GaAs Double-Drift IMPATT Diode in the Travelling-Wave Mode Y. Fukuoka, T. Itoh, University of Texas, Austin, TX 7-7 W-Band GaAs Gunn Diode Harmonic Power Combiner Z. Sun, S. Li, Nanjing Institute of Technology, Nanjing, China 7-8 A Wideband 60 GHz 16-Way Power Divider/Combiner Network T. Hsu, M. Simonutti, TRW ESG, Redondo Beach, CA 7-9 A Two-Frequency Method for Impedance Measurement in Frequency-Halving Networks R.G. Harrison, G.A. Kalivas, Carleton University, Ottawa, Ontario, Canada	7-10 Parallel Feedback FET DRQ Design Using 3-Port S-Parameters APS Khanna, Loral Advanced Technology Labs, Lanham, MD 7-11 Optimum Design of Shielded Dielectric Rod and Ring Resonators for Obtaining the Best Mode Separation Y. Kobayashi, M. Miura, Saitama University, Urawa, Saitama, Japan 7-12 Inhomogeneous Open-Ended Resonators As Microwave Sensor Elements H. Moschuring, Ingo Wolff, Duisburg University, Duisburg, F.R. Germany 7-13 A Composite, Multilayered Cylindrical Dielectric Resonator M. Dospieszalski, University of Virginia, Charlottesville, VA 7-14 Computed Modal Field Distributions of Isolated Dielectric Resonators D. Kalfetz, A.W. Glisson, J. James, University of Mississippi, University, MS 7-15 Disc-Type Resonator Mount in Rectangular Waveguide M.E. Blakowski, University of Queensland, St. Lucia, Brisbane, Australia 7-16 Miniaturized Channel Dropping Filter Using TM₀₁₀ Mode Dielectric Resonator K. Wakino, T. Nishikawa, Y. Ishikawa, Murata Mfg. Co. Ltd., Kyoto, Japan 7-17 Dielectric Waveguide Grating Design for Band-Stop and Band-Pass Filter Applications D.C. Park, G.L. Matthaei, M.S. Wei, University of California, Santa Barbara, CA 7-18 Lossy Hybrid Coupled Amplitude Equalizers for Narrow Band Filters R.V. Snyder, R.S. Microwave Co., Inc., Butler, NJ		
Wednesday Evening, May 30, 1984 <table> <tr> <td> SAN FRANCISCO A (HYATT REGENCY) 8:00pm-10:00pm PANEL I. MILLIMETER-WAVE MEASUREMENTS Moderator: William H. Prather, Electromagnetic Sciences Inc., Atlanta, GA </td><td> SAN FRANCISCO B (HYATT REGENCY) 8:00pm-10:00pm PANEL II. MMICS, A PROGNOSIS UPDATE Moderator: Marvin Cohn, Westinghouse Electric Corp., Baltimore, MD </td></tr> </table>		SAN FRANCISCO A (HYATT REGENCY) 8:00pm-10:00pm PANEL I. MILLIMETER-WAVE MEASUREMENTS Moderator: William H. Prather, Electromagnetic Sciences Inc., Atlanta, GA	SAN FRANCISCO B (HYATT REGENCY) 8:00pm-10:00pm PANEL II. MMICS, A PROGNOSIS UPDATE Moderator: Marvin Cohn, Westinghouse Electric Corp., Baltimore, MD
SAN FRANCISCO A (HYATT REGENCY) 8:00pm-10:00pm PANEL I. MILLIMETER-WAVE MEASUREMENTS Moderator: William H. Prather, Electromagnetic Sciences Inc., Atlanta, GA	SAN FRANCISCO B (HYATT REGENCY) 8:00pm-10:00pm PANEL II. MMICS, A PROGNOSIS UPDATE Moderator: Marvin Cohn, Westinghouse Electric Corp., Baltimore, MD		

Thursday, Early Morning, May 31, 1984

LARKIN HALL (B)		LARKIN HALL (A)		POLK HALL	
8:30 am	FET AMPLIFIERS Chairman: S. Temple, Raytheon Company, Bedford, MA	8:30 am	FILTERS Chairman: R.V. Snyder, R.S. Microwave, Butler, NJ	8:30 am	SYSTEMS Chairman: G. Heiter, AT & T Bell Laboratories, North Andover, MA
8:40 am 8-1	Reflective Match, Lossy Match, Feedback and Distributed Amplifiers: A Comparison of Multioctave Performance Characteristics K.B. Nicks, Watkins Johnson Co., Palo Alto, CA	8:40 am 9-1	Millimeter-Wave Multiplexer with Printed Circuit Elements for the 88-100 GHz Frequency Range L.D. Cohen, N. Worontoff, J. Levy, A. Harvey	8:40 am 10-1	24 GHz FM-CW Radar for Detection of Information for Traffic Purposes G. Seehausen
9:00 am 8-2	A 1 Watt, 8-17 GHz FET Power Amplifier T. Dao, W.C. Tsai, R. Healy, B. Liles	9:00 am 9-2	Broadband Millimeter-Wave E-Plane Bandpass Filters L.Q. Bui, D. Ball	9:00 am 10-2	A 26 GHz High Performance MIC Transmitter/Receiver for Digital Radio Subscriber Systems H. Ogawa, K. Yamamoto, N. Imai
9:20 am 8-3	A Solid-State 2-10 GHz 1 Watt TWT Replacement Amplifier A.M. Pavio, D.L. Allen, S.D. Thompson, S.J. Goldman	9:10 am 9-3	Analysis and Design of Evanescent-Mode Waveguide Dielectric Resonator Filters Y.C. Shih, K.G. Gray	9:20 am 10-3	17/12 GHz Communication Receiver for Direct Broadcast Satellites S.S. Dhillon, P. Goldgeier, R. Sudarsanam, H. Goldberg
9:30 am 8-4	Third-Order Nonlinearity of GaAs MESFETs J.H. Abeles, S.H. Wemple, W.D.S. Schlosser, J.P. Beccone	9:20 am 9-4	Dielectric Resonator Bandpass Filter with High Attenuation Rate P. Guillon, M.P. Chong	9:40 am 10-4	A Circularly Polarized Active Antenna Array Using Miniature GaAs FET Amplifiers H.C. Johnson, R.E. Marx, A. Sanchez, E. Mykietyn
9:50 am 8-5	A 1.5 Watt, 28 GHz Band Amplifier T. Takagi, K. Seino, Y. Ikeda, O. Ishihara, F. Takeda	9:40 am 9-5	Design of Non-Radiative Dielectric Waveguide Filter T. Yoneyama, F. Kuroki, S. Nishida		
	Mitsubishi Electric Corp., Kamakura City, Japan	9:50 am 9-6	Miniature Band Reject Filters for Satellite Applications J. Bowes, S.J. Fiedziuszko, J. Redd, C. Ziegler		
			Ford Aerospace & Communications Corp., Palo Alto, CA		

Thursday, Late Morning, May 31, 1984

LARKIN HALL (B)		LARKIN HALL (A)		POLK HALL	
10:30 am	NOISE AND FREQUENCY STABILIZATION OF FET OSCILLATORS Chairman: F. N. Sechi, RCA Laboratories, Princeton, NJ	10:30 am	COMMUNICATIONS FILTERS Chairman: H. C. Bell, Wavecom Div. of Loral Corp., Northridge, CA	10:30 am	SYSTEMS TOPICS Chairman: J. B. Horton, TRW, Redondo Beach, CA
10:40 am 11-1	Relation Between Device LF Noise and Oscillator Phase Noise for GaAs MESFETs H. Rohdin, C. Y. Su, C. Stolte Hewlett-Packard Laboratories, Palo Alto, CA	10:40 am 12-1	"Engine-Block" Dual Mode Dielectric Resonator Loaded Cavity Filter with Nonadjacent Cavity Couplings S. J. Fedziusko Ford Aerospace & Communications Corp., Palo Alto, CA	10:40 am 13-1	A Planar 4.0 GHz Reactively Steered Adaptive Array R. J. Dinger Naval Weapons Center, China Lake, CA
11:00 am 11-2	A Single-Resonator GaAs FET Oscillator with Noise Degeneration M. J. Bianchini, J. B. Cole, R. DiBaise, Z. Galani, R. W. Laton, R. C. Waterman Jr. Raytheon Co., Bedford, MA	11:00 am 12-2	Narrow Bandpass Filters Using the High Q Cylindrical TE_{01d} Resonator Modes R. R. Bonetti, A. E. Williams Comsat Laboratories, Clarksburg, MD	11:00 am 13-2	Thermal Noise and RF Spectrum of a Microwave Cavity-Oscillator B. Villeneuve, P. Tremblay, M. Tetu Laval University, Quebec, Canada
11:20 am 11-3	A New Method of Reducing Phase Noise in GaAs FET Oscillators A. N. Riddle, R. J. Trew North Carolina State University, Raleigh, NC	11:10 am 12-3	Predistortion Techniques for Multiple-Coupled Resonator Filters A. E. Williams, W. G. Bush, R. R. Bonetti Comsat Laboratories, Clarksburg, MD	11:20 am 13-3	TWTA Linearizer Using Dual-Gate MESFETs M. Kumar, J. C. Whartenby RCA Laboratories, Princeton, NJ
11:40 am 11-4	Digital and Analog Frequency-Temperature Compensation of Dielectric Resonator Oscillators J. Lee, J. E. Andrews, K. W. Lee, W. R. Day Varian Associates, Santa Clara, CA	11:20 am 12-4	Novel Lowpass Harmonic Filters for Satellite Application A. M. K. Saad Com Dev Limited, Cambridge, Ontario, Canada		
		11:40 am 12-5	A 12 GHz 12 Channel Contiguous Multiplexer for Satellite Applications S. C. Holme Ford Aerospace & Communications Corp., Palo Alto, CA		
		11:50 am 12-6	A 12-Channel Contiguous Band Multiplexer for Satellite Application R. Tong, D. Smith Com Dev Limited, Cambridge, Ontario, Canada		

Thursday Early Afternoon, May 31, 1984
1:30 pm to 3:00 pm – Main Arena

OPEN FORUM II	
14-1	Scattering by Dielectric Obstacles Inside Guiding Structures A.S. Omar, K. Schuenemann, Technische Universität Hamburg-Harburg, Hamburg, F.R. Germany A Useful Equivalence for the Input Reactance Seen by the Coaxial Line in a Broadwall Coaxial-Microstrip Launcher C.D. Gupta, R.S. Tomar, Indian Institute of Technology, Kanpur, India Generalized Spectral Domain Analysis of Planar Structures Having Semi-Infinite Ground Planes H. Lee, V.K. Tripathi, Oregon State University, Corvallis, OR An Improved Model for Short- and Open-Circuited Series Stub in Fin-Lines M. Burton, W.J.R. Hoeler, University of Ottawa, Ottawa, Ontario, Canada Accurate and Simple Formulas for Dispersion in Fin-Lines J.K. Piotrowski, Technical University of Warsaw, Warsaw, Poland Analysis and Synthesis of Tapered Fin-Lines P. Pramanick, University of Ottawa, Ottawa, Canada P. Bhartia, Defence Research Establishment Ottawa, Ottawa, Canada Transmission-Matrix Representation of Fin-Line Discontinuities A.S. Omar, K. Schuenemann, Technische Universität Hamburg-Harburg, Hamburg, F.R. Germany Power Density Distribution Analysis of Ferrite Loaded Fin-Lines for the Development of Integrated Nonreciprocal Millimeter-Wave Elements A. Beyer, I. Wolff, Duisburg University, Duisburg, F.R. Germany
14-2	
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14-9	An Automatic Material Parameter Measurement System A. Beyer, W. Mueller-Gronau, I. Wolff, Duisburg University, Duisburg, F.R. Germany The Method of Lines for the Analysis of Planar Waveguides with Magnetized Ferrite Substrate R. Pregla, Fern Universität, Hagen, F.R. Germany Magnetostatic Wave Delay Lines Using the Non-Uniformly Magnetized YIG Films M. Tsutsumi, T. Sakurai, N. Kumagai, Osaka University, Osaka, Japan Edge-Guided Magnetoplasmons on Curved Interfaces in Submillimeter-Wave Devices D.M. Bolle, J.F. Wagen, Lehigh University, Bethlehem, PA Coherent Transmitter Considerations Utilizing Injection Locked Magnetrans W.S. Best, Naval Weapons Center, China Lake, CA R.W. Laton, Raytheon Co., Bedford, MA V.H. Smith, M-O Valve Co., Ltd., London, England, U.K. High-Harmonic Gyrotron Oscillators and Gyro-Klystron Amplifiers D.B. McDermott, D.S. Furuno, N.C. Luhmann, Jr., University of California, Los Angeles, CA A Feasibility Study to Monitor Soil Moisture Content Using Microwave Signals E. Bahar, J.D. Saylor, University of Nebraska, Lincoln, NE Performance Characteristics of the Thin-Film, Etched-Circuit Rectenna W.C. Brown, Raytheon Co., Waltham, MA A Stabilized Broadband Correlator for Medical Microwave Thermography J.C. Hill, Enron Microwave Inc., Topsfield, MA R. Goldner, Tufts University, Medford, MA
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Thursday Late Afternoon, May 31, 1984 3:30 pm to 5:00 pm – Main Arena (Civic Auditorium) PANEL III: JAPAN/USA COMPETITION IN TECHNOLOGY Moderator: Leo Young, Office of the Undersecretary of Defense for Research and Engineering, Washington D.C. Panel Members: John Arnold, Vice President, Harris Corp., San Carlos, CA William Finan, U.S. Department of Commerce, Washington, D.C. H. William Tanaka, Counselor at Law, Washington, D.C. Keisuke Yawata, President, NEC Electronics, San Mateo, CA	

Friday, Early Morning, June 1, 1984

LARKIN HALL (B)		LARKIN HALL (A)		POLK HALL	
8:30 am	SEMICONDUCTOR CONTROL AND FREQUENCY CONVERSION Chairman: J. F. White, MACOM Inc., Burlington, MA	8:30 am	MILLIMETER-WAVE APPLICATIONS Chairman: J. E. Raue, TRW, Redondo Beach, CA	8:30 am	MIC TECHNIQUES Chairman: R. L. Camisa, RCA Laboratories, Princeton, NJ
8:40 am 15-1	Octave-Band High Precision Balanced Modulator Z. Adler, B. Smilowitz General Microwave Corp., Farmingdale, NY	8:40 am 16-1	Fundamental Wave Injection Locked Second Harmonic Gunn Oscillators H. Barth AEG-Telefunken, Ulm, F.R. Germany	8:40 am 17-1	Quasi Lumped-Element 3- and 4-Port Networks for MIC and MMIC Applications R. Gupta, W.J. Getsinger COMSAT Laboratories, Clarksburg, MD
9:00 am 15-2	Multi-Octave Phase Modulators T. Tadeusz, J. Zborowska, P. Miazga Technical University of Warsaw, Warsaw, Poland	9:00 am 16-2	Efficient, Broadband Circuit Performance of Millimeter-Wave IMPATT-Diode Power Amplifiers D.F. Peterson, Steinbrecher Corp., Woburn, MA	9:00 am 17-2	An MMIC/MIC-to-Waveguide Transition for Single- and Dual-Polarization Systems B.D. Geller, A.I. Zaghloul COMSAT Laboratories, Clarksburg, MD
9:20 am 15-3	Novel GaAs FET Phase Detector Operable to Ka Band T. Takano, Y. Tozawa, T. Shima, T. Kato, H. Komizo, H. Yatsuka Fujitsu Ltd., Kawasaki, Japan	9:20 am 16-3	Active Phase Shifters for the Millimeter and Microwave Bands L.D. Cohen, Eaton Corp., All Div., Deer Park, NY	9:10 am 17-3	Transverse Resonance Analysis of Fin-Line Discontinuities R. Sorrentino, T. Itoh University of Texas, Austin, TX
9:40 am 15-4	A FET L Band Phase/Amplitude Control Module A. Presser RCA Laboratories, Princeton, NJ	9:40 am 16-4	High Power Broadband 35 GHz Waveguide Switch Using a Monolithic Diode Array A.L. Armstrong, D.E. Wheeler, J. Goodrich M/A-COM Millimeter Co., Burlington, MA	9:30 am 17-4	Quarter Wave Transformers for Matching Transitions Between Waveguides and Fin-Lines C.J. Verver Communications Research Center, Ottawa, Ontario, Canada
		9:50 am 16-5	Large Signal Analysis of Nonlinear Microwave Systems M.B. Steer, P.J. Khan North Carolina State University, Raleigh, NC	9:50 am 17-5	Synthesis of Optimum Fin-Line Tapers C. Schieblach, J.H. Hinken Technische Universität Hamburg-Harburg Hamburg, F.R. Germany

Friday, Late Morning, June 1, 1984

LARKIN HALL (B)		LARKIN HALL (A)		POLK HALL	
10:30 am 18-1	FET MODELING AND NOVEL STRUCTURES Chairman: M. Kumar, RCA Laboratories, Princeton, NJ	10:30 am 19-1	MILLIMETER-WAVE TECHNIQUES Chairman: M. Dydyk, Motorola Inc., Scottsdale, AZ	10:30 am 20-1	PLANAR TRANSMISSION LINE STRUCTURES Chairman: J.M. Owens, University of Texas at Arlington, Arlington, TX
11:00 am 18-2	Self-Consistent FET Models for Amplifier Design and Device Diagnostics W.R. Curtice, R.L. Camisa RCA Laboratories, Princeton, NJ	11:00 am 19-2	60 GHz Integrated Circuit Quadriphase Exciter and Modulator A. Grote, K. Chang TRWESG, Redondo Beach, CA	11:00 am 20-2	Spectral Iterative Technique for Analyzing Multiconductor Microstrip Lines C. Chan, R. Mittra University of Illinois, Urbana, IL
11:10 am 18-3	Modeling of Nonlinear Distortion in GaAs MESFETs R.J. Gilmore, F.J. Rosenbaum Central Microwave Co., St. Louis, MO	11:20 am 19-3	Silicon Millimeter-Wave Integrated Circuits Technology P.J. Stabile, A. Rosen, W.M. Janton, A. Gombar, B.S. Yarman, M. Kolan RCA Laboratories, Princeton, NJ	11:20 am 20-3	A Spectral Domain Hybrid Field Analysis of Periodically Inhomogeneous Microstrip Lines F.-J. Glandorf, I. Wolff Duisburg University, Duisburg, F.R. Germany
11:20 am 18-4	Analysis and Design of GaAs MESFET Mixers S.A. Maas University of California, Los Angeles, CA	11:30 am 19-4	Monolithic Antennas for Millimeter-Wave GaAs Integrated Circuits F.C. Jain, University of Connecticut, Storrs, CT R. Bansal, Harvard University, Cambridge, MA	11:30 am 20-4	Theoretical and Experimental Investigation of Asymmetric Coplanar Waveguides V. Foud Hanna, D. Thebault Centre National d'Etudes des Télécommunications Issy Les Moulineaux, France
11:40 am 18-5	A Low Noise AlGaAs/GaAs FET with P+ Gate and Selectively Doped Structure K. Ohata, H. Hida, H. Miyamoto NEC Corp., Kawasaki, Japan	11:40 am 19-5	Reduction of Propagation Losses in Coplanar Waveguide at Millimeter-Wavelengths D.F. Williams, S.E. Schwarz University of California, Berkeley, CA	11:50 am 20-5	Optimized Microstrip Ring-Star 5-Ports for Broadband 6-Port Measurement Application M. Malkomes, G. Kadisch, H.J. Schmitt Rheinisch-Westfälische Technische Hochschule Aachen Aachen, F.R. Germany
11:50 am 18-6	A 6 Watt 6 GHz GaAs FET Power Module with GaAs Matching Circuits F.M. Magalhaes, J.P. Beccone, J.C. Irvin, S.J. Perelli, W.O. Schlusser Bell Laboratories, Murray Hill, NJ	11:50 am 19-6	W-Band Broadband Integrated Circuit Receiver K. Chang, G.M. Hayashibara, R.S. Tahim, A. Grote, T. Pham, C. Sun, TRWESG, Redondo Beach, CA		Fundamental Superstrate Effects on Printed Circuit Antenna Efficiency N.G. Alexopoulos, D.R. Jackson University of California Los Angeles, Los Angeles, CA

Friday, Late Afternoon, June 1, 1984

LARKIN HALL (B)		LARKIN HALL (A)	POLK HALL
3:30 pm Chairman: W. S. C. Chang, University of California at San Diego, La Jolla, CA	OPTICAL AND SUBMILLIMETER WAVE TECHNOLOGY	3:30 pm Chairman: S. Dixon, Jr., ERADCOM, Fort Monmouth, NJ	3:30 pm Chairman: G. F. Engen, National Bureau of Standards, Boulder, CO
3:40 pm 24-1	Analog Microwave Fiber Optic Communication Links W. E. Stephens, T. R. Joseph, B. U. Chen TRW, Redondo Beach, CA	3:40 pm 25-1	A Dual Six-Port Automatic Network Analyzer and Its Performance Tests N. S. Chung, J. H. Kim, J. Shin Korea Standards Research Institute Dae Deog Science Town, Republic of Korea
3:50 pm 24-2	A New Method for Modal Analysis of Optical Fibers Having Symmetrically Distributed Multiple Cores E. Yamashita, S. Ozeki, K. Atsuki University of Electro-Communications, Tokyo, Japan	4:00 pm 25-2	Evaluation of a 94 GHz Diode-Based Dual Six-Port Network Analyzer R. A. Fong-Tom Sperry Defense Electronics, Waltham, MA
4:00 pm 24-3	2.24 Gb/s Direct Modulation of Injection Laser by Monolithic Silicon Multiplexer B. G. Bosch, V. Langmann, D. Daniel Ruhr-Universitaet Bochum, Bochum, F. R. Germany	4:20 pm 25-3	A New Real-Time Six-Port ANA Method L. Kallouby, R. G. Bosio University of Montreal, Montreal, Quebec, Canada
4:20 pm 24-4	Direct DC to RF Conversion by Picosecond Optoelectronic Switching C. S. Chang, M. Jeng, M. J. Rhee, C. H. Lee University of Maryland, College Park, MD	4:30 pm 25-4	A Calibration Method for a Six-Port Reflectometer Which Minimizes the Effect of Power Measurement Errors J. A. Dobrowolski, E. Bridges, L. Shafai University of Manitoba, Winnipeg, Manitoba, Canada
4:30 pm 24-5	Polarization-Sensitive Imaging Arrays P. P. Tong, D. B. Rutledge California Institute of Technology, Pasadena, CA D. P. Neikirk University of Texas, Austin, TX		Theoretical Comparison of Six-Port Reflectometer Junction Designs E. J. Griffin, T. E. Hodgetts Royal Signals and Radar Establishment Malvern, Worcestershire, England

Friday, Early Afternoon, June 1, 1984

LARKIN HALL (B)		LARKIN HALL (A)		POLK HALL	
IMPATT AND BIPOLAR OSCILLATORS Chairman: N.W. Cox, Georgia Institute of Technology, Atlanta, GA		DIELECTRIC WAVEGUIDES Chairman: D. Kafiez, University of Mississippi, University, MS		MICROWAVE AND MILLIMETER-WAVE MEASUREMENTS Chairman: B.S. Perlman, RCA, Princeton, NJ	
1:30 pm 21-1	GaAs IMPATT Diodes Pulsed at 40 GHz M.G. Adlerstein, S.L. 6. Chu Raytheon Research Division, Lexington, MA	1:30 pm 22-1	Powder Core Dielectric Waveguides W.M. Bruno, W.B. Bridges California Institute of Technology, Pasadena, CA	1:30 pm 23-1	An Analysis of the A.C. Bandwidth of Transmission Line Discriminators for FM Noise Measurement R.S. Brozovich, J.R. Ashley Sperry Defense Systems, Clearwater, Florida
2:00 pm 21-2	Analysis of a J-Band Pulsed Read IMPATT Oscillator J.E. Curran, J.P. Bridge, J.L.B. Walker GEC Research Laboratories, Wembley, UK	2:00 pm 22-2	Directly-Connected Image Guide 3dB Couplers with Very Flat Couplings D.E. Kim, D. Kawabe, K. Araki, Y. Naito Tokyo Institute of Technology, Tokyo, Japan	1:40 pm 23-2	Optimising an Electromagnetic Field Sensor for Microwave Amplitude and Phase Detection Via Fiber Optic Transmission Link M.T. Avalos, R.M. Segal University of Colorado, Colorado Springs, CO
2:20 pm 21-3	Broadband Injection-Locked or Stable IMPATT Amplifier C.S. Ward, R.W. Lalor, J.A. Spada Raytheon Missile Systems Division, Bedford, MA	2:20 pm 22-3	Phase-Matched Waveguide Using the Artificial Anisotropic Structure and Its Application to Mode Converter T. Mizumoto, H. Yanazaki, Y. Naito Tokyo Institute of Technology, Tokyo, Japan	1:50 pm 23-3	Large Signal Pulsed Network Analyzer Operation T.R. Apel, Acran, Inc., Cupertino, CA
2:40 pm 21-4	8 GHz Low Noise Bias Tuned VCO M.E. Znojnikiewicz Northern Telecom, Montreal, Canada	2:40 pm 22-4	A Transition to Non-Radiating Dielectric Waveguide J.A.G. Malherbe, J.H. Cloete, I.E. Loesch University of Pretoria, Pretoria, South Africa	2:10 pm 23-4	Measurement of the Complex Dielectric Constant at Millimeter Wavelengths F.I. Shimabukuro, S. Lazar The Aerospace Corp., El Segundo, CA
				2:20 pm 23-5	Dielectric Properties of Millimeter Wave Materials M.N. Afsar, K.J. Button Massachusetts Institute of Technology, Cambridge, MA
				2:40 pm 23-6	Application of a Dielectric Resonator on Microstrip Line for a Measurement of Complex Permittivity S. Maj, J. Modalski Warsaw Technical University, Warszawa, Poland

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