

Table of Contents

Volume 1

Table of Contents	iii
Welcome from the 2002 Symposium Chair	vii
2002 Steering Committee	ix
Message from the 2002 Technical Program Chair	xxi
Technical Program Committee	xxii
MTT-S Administrative Committee	xxxviii
Elected ADCOM Members	xxxviii
MTT-S Elected ADCOM Members and Past Presidents	xxxix
Radio Frequency Integrated Circuits (RFIC) Symposium Committees	xliv
Automatic RF Techniques Group (ARFTG) Conference Steering and Executive Committee	xlvi
2002 Awards	xliv
IEEE Fellows: Class of 2002	lxi
Future IEEE MTT-S International Microwave Symposia	lxv
Historical Exhibit	lxvii
2002 Microwave Symposium Technical Program Schedule	lxix
Technical Sessions	
TU1 Plenary Session	3
TU2A Joint RFIC/IMS2002 Special Session on Radio Frequency Integrated Circuits for 3G	7
TU2B Joint IMS-RFIC Session: MMIC Technology	25
TU2C Phased Arrays and Beam Steering Techniques	47
TU2D Integrated Circuits for 40 Gb/s Fiber Systems	73
TU2E Couplers, Dividers, and Baluns	95
TU2F Nonlinear CAD Techniques for Circuits and Systems	121
TU3A Joint IMS-RFIC Session: Silicon Substrate and Inductor Modeling	147
TU3B Joint IMS-RFIC Session: SiGe RFIC Process Technologies	169
TU3C Integrated Passives for RF and Millimeter Wave Applications	191
TU3D RF MEMS Switch Design and Modeling	217
TU3E Frequency Conversion Circuits	243
TU4A Joint IMS-RFIC Session: Active Device Modeling and Characterization	261
TU4B Joint IMS-RFIC Session: RFIC Power Amplifier Technologies	283
TU4C Smart Antennas and Digital Beam Forming Techniques	305
TU4D Application of RF MEMS	327
TU4E Frequency and Phase Control Circuits	349
IF-TU Tuesday Interactive Forum (Joint IMS—RFIC Session)	371
Tutorials/Workshops: Sunday, Monday, and Friday	V
Student Paper Competition	XVI
RFIC Program	XVII
ARFTG Conference	XX
μAPS – Microwave Application and Products Seminar	XXI
Seattle Information	XXIII
Guest Program	XXIV
Author Index	XXVII
Exhibition Guide	XXXIX
Convention Center Layouts and Area Map	LXVII
Conference Hotels	LXVIII

Table of Contents

Volume 2

Table of Contents	iii
2002 Microwave Symposium Technical Program Schedule	ix
Technical Sessions	
WE1A High Power Amplifiers WATTS UP?	611
WE1B Microwave and Millimeter-Wave Sensor Applications	637
WE1C Transmission Line Structures	659
WE1D Advances in Microwave Oscillators	689
WE1E Linear Modeling	711
WE1F Advances in Time-Domain Techniques for EM Field Modeling	737
WE2A Distortion Correction Techniques for High Power Amplifiers	763
WE2B Evolving Communication and Radar Systems	785
WE2C Transitions, Polarizers, and Coupling Characteristics in LTCC	807
WE2D Microwave and Millimeter Wave Signal Generation	829
WE2E Nonlinear Device Modeling I	851
WE2F Applications of the Finite-Difference Time-Domain Method	869
WE3A Power Amplifier Technologies for Broadband, High Efficiency Applications	895
WE3B Direct Conversion Techniques for Wireless Systems	925
WE3C New Leakage Effects on Printed-Circuit Transmission Lines	943
WE3D Efficient Modeling Techniques for Circuit Simulation	965
WE3E Nonlinear Device Modeling II	991
WE4A RF Power Amplifiers for Wireless Applications	1013
WE4B New Technologies for Communications Systems	1043
WE4C New Periodic Structures and Effects	1065
WE4D CAD Techniques Using Computational Intelligence	1095
WE4E Applications of Time Domain Methods	1121
IF-WE Wednesday Interactive Forum	1147
Tutorials/Workshops: Sunday, Monday, and Friday	V
Student Paper Competition	XVI
RFIC Program	XVII
ARFTG Conference	XX
μAPS – Microwave Application and Products Seminar	XXI
Seattle Information	XXIII
Guest Program	XXIV
Author Index	XXVII
Exhibition Guide	XXXIX
Convention Center Layouts and Area Map	LXVII
Conference Hotels	LXVIII

Table of Contents

Volume 3

Table of Contents	iii
2002 Microwave Symposium Technical Program Schedule	ix
Technical Sessions	
TH1A Flip-Chip Techniques and Novel Application of Organic Materials in Packaging	1383
TH1B Low Noise Devices and Applications	1413
TH1C Synthesis and Multi-mode Techniques	1435
TH1D Ferroelectric, Ferrite, and Acoustic Components	1465
TH1E Joint ARFTG/IMS2002 Special Session on High-Speed/Non- contacting Electrical Probing	1491
TH1F Spatial Power Combining and Quasi-Optical Techniques	1517
TH2A Packaging	1543
TH2B Special Session on THz Technology and Applications	1573
TH2C Novel Filter Structures	1595
TH2D High Efficiency Amplifier Techniques	1625
TH2E Microwave Measurements I	1655
TH2F Microwave Photonics	1685
TH3A Advanced V-Band Transceiver Technology	1715
TH3B Biological Effects and Medical Applications	1741
TH3C Waveguide and Planar Filter Structures	1775
TH3D Special Session on Wide Bandgap Devices and their Application in High Power Circuits	1809
TH3E Microwave Measurements II	1827
TH4A W-Band Transceiver Components and Applications	1849
TH4B Frequency Domain Techniques	1875
TH4C Active, Periodic and Planar Filters	1905
TH4D Special Session on Optical Processing of Antenna Signals	1935
TH4E Superconducting Components and Technology	1957
IF-TH Thursday Interactive Forum	1983
Tutorials/Workshops: Sunday, Monday, and Friday	V
Student Paper Competition	XVI
RFIC Program	XVII
ARFTG Conference	XX
μ APS – Microwave Application and Products Seminar	XXI
Seattle Information	XXIII
Guest Program	XXIV
Author Index	XXVII
Exhibition Guide	XXXIX
Convention Center Layouts and Area Map	LXVII
Conference Hotels	LXVIII