

TUESDAY 28 JUNE

8.30-9.00 Registration

9.00-9.20 Opening Ceremony

9.20 – 10.00 MEMS S1 Invited Speaker

Chairman: R. Sorrentino

A lightweight X-band phased array using RF MEMS and SiGe Circuits - Who will win the circuit battle?

J. Papapolymerou

10.00-10.30 Coffee Break

10.30 – 13.00 *MEMS S2: MEMS based filters and shifters*

Chairmen: R. Sorrentino and F. Coccetti

10.00-10.20 ***Reconfigurable RF-MEMS Circuits and Low Noise Amplifiers***

R. Malmqvist, C. Samuelsson, A. Gustafsson, D. Smith, T. Vähä-Heikkilä, and R. Bagg

10.20-10.40 ***Tunable Via-free Microstrip Composite Right/Left-Handed Transmission lines using MEMS technology***

Taeyoung Kim, L. Vietzorreck

10.40-11.00 ***Waveguide-Mounted RF MEMS for Tunable W-band Analog Type Phase Shifter***

D. Psychogiou, J. Hesselbarth, Y. Li, S. Kühne, C. Hierold,

11.00-11.20 ***MEMS-Based Frequency-Tunable Reflect-Line Phase Shifter***

F. Congedo, G. Monti, L. Tarricone, P. Farinelli, R. Sorrentino, J. Iannacci, V. Mulloni, B. Margesin

11.20-11.40 ***9.6-11.7 GHz Analogically Tuned Band Stop Filter based on RF-MEMS Varactors***

D. Mardivirin, F. Barrière, A. Pothier, A. Crunteanu and P. Blondy

11.40-12.00 ***Design of Ultra-Wideband Filter with Embedded***

L. Pelliccia, F. Casini, F. Cacciamani, P. Farinelli, R. Sorrentino

12.00-12.20 ***Low-Loss Distributed 2-bit RF MEMS Phase Shifter for 60GHz Applications***

Cheikh Ndiaye, Arnaud Pothier, Cyril Guines, Pierre Blondy

12.20-12.40 ***Optimization of a High-Power Ka-Band RF MEMS 2-Bit Phase Shifter on Sapphire Substrate***

B. Espana, B. Belenger, S. Courrèges, P. Blondy, O. Vendier, D. Langrez, J.-L. Cazaux

12.40-13.00 ***Design of selectable-band patch filter for WiMax applications using MEMS varactor***

G. Rehder, A. L. C. Serrano, F. S. Correra and M. N. P. Carreño

13.00 – 14.30 - Lunch

12.00 – 15.00 Poster Session

14.30 – 16.50 *MEMS S3: MEMS Components*

Chairmen: P. Blondy and G. Konstantinidis

14.30-15.10 *Invited Speaker*

New Directions in MEMS for Wireless Harsh-Environment Sensors

D. Peroulis

15.10-15.30 Tunable Metamaterial Devices by means of Two-Hot-Arm Electrothermal Actuators

A. X. Lalas, N. V. Kantartzis, and T. D. Tsibou

15.30-15.50 Design of ohmic miniature MEMS components for fast reconfiguration

A. Verger, A. Pothier, C. Guines, A. Crunteanu, P. Blondy, J.-C. Orlianges, J. Dhennin, F. Courtade, O. Vendier

15.50-16.10 Capacitance Tuning Behavior of a BiCMOS Embedded RF-MEMS Switch

M. Kaynak, M. Wietstruck, W. Zhang, R. Scholz and B. Tillack

16.10-16.30 Floating electrode microelectromechanical system capacitive switches: A different actuation mechanism

E. Papandreou, S. Colpo, M. Koutsourelis, F. Giacomozzi, G. Papaioannou and B. Margesin

16.30-16.50 A highly-repeatable, broadband 180° phase switch for integrated MEMS processes

M. A. Llamas, D. Girbau, M. Ribó, L. Pradell, F. Giacomozzi, S. Colpo, F. Coccetti, S. Aouba

16.50 - 17.10 Coffee Break

17.10 – 18.00 – *MEMS S4: MEMS FBAR-BAW resonators*

Chairman: H. Tilmans

17.10-17.40 *Invited Speaker*

Progresses in manufacturing of acoustic devices for GHz applications based on GaN/Si using micromachining and nano-lithographic technologies

A. Muller, G. Konstantinidis, D. Neculoiu, A. Dinescu, T. Kostopoulos, A. Stavriniadis, C. Anton, D. Dascalu

17.40-18.00 *Large Fractional Bandwidth BAW Filter*

M. Chatras, L. Catherinot, S. Bila, P. Blondy, D. Cros, T. Baron, S. Ballandras, P. Monfraix, L. Estagerie

18.00 – 19.30 – *Poster Session*

18.00 – 19.30 – *Liquidation of AMICOM Forum-General Assembly*

20.30 *MEMSWAVE Social Dinner*

WEDNESDAY 30 JUNE

9.00 - 10.50 *MEMS S5: MEMS Components*

Chairmen: L. Pradel and G. Papaioannou

9.00-9.30 Invited Speaker

RF MEMS Switches – The Status Compared to its Solid-State Competitor Technologies

B. Schoenlinner

9.30-9.50 ***An Analogically Tuned Capacitor with RF MEMS Structure***

F. Barriere, D. Mardivirin, A. Pothier, A. Crunteanu and P. Blondy

9.50-10.10 ***Quasi-Analog Multi-Step Tuning of Laterally-Moving Capacitive Elements***

U. Shah, M. Sterner, J. Oberhammer

10.10-10.30 ***Terahertz Diode on AlGaIn Microcathode***

N. M. Goncharuk

10.30-10.50 ***High frequency CNT based resonator for DNA detection***

A. Cismaru, M. Dragoman, A. Radoi, M. Voicu, A. Bunea, M. Carp, A. Dinescu

10.50 – 11.20 Coffee Break

11.20 – 13.00 *MEMS S6: MEMS Components, Reliability and Packaging*

Chairmen: F. Giacomozzi and A. Muller

11.20-11.40 ***Design of RF Feedthroughs in Zero-Level Packaging for RF MEMS Implementing TSVs***

H. El Ghannudi, N. P. Pham, V. Cherman, P. Farinelli,

H. A.C. Tilmans, R. Sorrentino

11.40-12.00 ***Material Properties Characterization of BiCMOS BEOL Metal Stacks for RF-MEMS Applications***

M. Wietstruck, M. Kaynak, W. Zhang, S. Kurth, B. Erler, and B. Tillack

12.00-12.20 ***Charge trap investigation methodology on RF-MEMS switches***

M. Barbato, V. Giliberto, A. Massenz, F. Di Maggio, M. Dispenza,

P. Farinelli, B. Margesin, E. Carpentieri, U.D'Elia, I. Pomona, M. Tului,

F. Casini, R. Sorrentino, E. Zanoni, G. Meneghesso

12.20-12.40 ***Dielectric Charging in Capacitive RF MEMS Switches: The Effect of Dielectric Film Leakage***

N. Tavasolian, M. Koutsourelis, G. Papaioannou and John Papapolymerou

12.40-13.00 ***Low Temperature Photosensitive Film-Type PERMX Polymer Zero-Level Packaging Technique for RF Applications***

S. Seok, J. Kim, N. Rolland, P.A. Rolland

13.00-14.30 Lunch

14.30 - 16.30 *MEMS S7: MEMS based filters, shifters and Antennas*

Chairmen: J. Oberhammer and R. Malmqvist

14.30 – 15.10 *Invited speaker*

Micromachining and MEMS for millimeterwave and beyond – A review

S. Demir

15.10-15.30 ***Controllable Artificial Micro-Transmission Lines***

J. Perruisseau-Carrier, F. Bongard

15.30-15.50 ***MEMS and combined MEMS/LC technology for mm-wave Electronic Scanning Reflectarrays***

S. Montori, C. Fritzsche, E. Chiuppesi, P. Farinelli, L. Marcaccioli,

F. Giacomozzi, R. Sorrentino, R. Jacoby

15.50-16.10 *Silicon Supported Millimeter Wave CRLH Antenna Microprocessed by Laser Ablation*

A.-C. Bunea, F. Craciunoiu, M. Zamfirescu, R. Dabu, G. Sajin

16.10-16.30 *Frequency-reconfigurable E-plane Filters using MEMS Switches*

L. Pelliccia, P. Farinelli, R. Sorrentino

16.30-16.50 *5-bit MEMS Phase Shifter*

F. Casini, P. Farinelli, E. Chiuppesi

16.50 *Closing ceremony*

MEMS Poster Session

P1. *Improved Insertion Loss for a WR-3 Waveguide Using Fully Linked Two-layer SU8 Processing Technology*

Maolong Ke, Xiaobang Shang, Yi Wang, M. J. Lancaster

P2. *A new approach to wafer level thin-film encapsulation for RF-MEMS Switches*

V. Mulloni, S. Colpo, H. El Ghannudi, F. Giacomozzi, B. Margesin

P3. *Improving controllability in RF-MEMS switches using resistive damping*

M. Spasos, N. Charalampidis, K. Tsiakmakis, R. Nilavalan

P4. *Millimeter Wave CRLH CPW Band-Pass Filter*

G. Sajin, F. Craciunoiu, A.-C. Bunea, A. A. Muller, A. Dinescu, M. Zamfirescu, R. Dabu

P5. *Tapered walls via holes manufactured using DRIE variable isotropy process*

D. Vasilache, S. Ronchin, S. Colpo, B. Margesin, F. Giacomozzi, S. Gennaro

P6. *Magneto-Mechanical Modeling and Simulation of MEMS Sensors Based on Electroactive Polymers*

F. J. O. Rodrigues, L. M. Gonçalves, J. H. Correia and P. M. Mendes

P7. *Near Millimeter-Wave Building Blocks Based on Novel Coaxial to SIW Transition*

V. Buiculescu, A. Cismaru

P8. *Distributed MEMS tunable phase shifters on CMOS technology for millimeter wave frequencies*

G. Rehder, B. Blampey, T. Vo, P. Ferrari

P9. *Design and Modeling of Membrane Supported FBAR Filter*

A. Stefanescu, D. Neculoiu, A.-C. Bunea

P10. *Characteristics of Smooth-Walled Spline-Profile Horns for Tightly Packed Feed-Array of RATAN*

N. Popenko, R. Chernobrovkin, I. Ivanchenko, C. Granet, V. Khaikin

P11. *Compact planar dielectric disk antennas for X- and KU- bands*

N. Popenko, R. Chernobrovkin, I. Ivanchenko, C. Granet, V. Khaikin

P12. *Effect of working environment on stiction mechanisms in electrostatic RF-MEMS switches*

U. Zaghloul, G. Papaioannou, B. Bhushan, P. Pons, F. Coccetti and R. Plana

P13. *The Discharge Current Through the Dielectric Film in MEMS Capacitive Switches*

M. Koutsourelis, L. Michalas and G. Papaioannou