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Technical Sessions

Friday 11th December 2015

Time: 09:00-10:30

Tech-Session A (FRI1A)

Room 101

SC1: Power Amplifier Technology

Chair: Karun Rawat, IIT Roorkee

Co-chair : VSR Kirthy, AMPL, Hyderabad

FRI1A-1 (Invited)

Microwave and Millimeter Wave Power Amplifiers: Technology, Applications, Benchmarks, Future Trends

J. J. Komiak, BAE Systems, Nashua, United States

FRI1A-2

Multisine Decomposition Algorithm for RF Power Amplifier Characterization

D. Palmisano¹, A. Galasso¹, F. F. Tafuri^{2,3}, C. Guaragnella¹, T. S. Nielsen³, O. K. Jensen², J. H. Mikkelsen²,

- 1.** Polytechnic of Bari, Bari, Italy,
- 2.** Aalborg University, Aalborg, Denmark,
- 3.** Keysight Technologies Denmark, Aalborg, Denmark

FRI1A-3

Digital Predistortion of Power Amplifiers with Diversity Technique in 4G MIMO Transceiver

G. C. Tripathi¹, P. Jaraut¹, M. Rawat¹, L. Reddy²,

- 1.** IIT Roorkee, Roorkee, India,
- 2.** Lekha Wireless Solutions Pvt. Ltd., Bengaluru, India

FRI1A-4

Circuit Level Paralleling of devices using two-way DC block for Efficient Power Combining

S. Srivastava¹, S. Panchal¹, D. Gandhi¹, P. Bharadhwaj¹, S. Singh²,

- 1.** Indian Space Research Organization, Ahmedabad, India,
- 2.** Department Of Space, Chandigarh, India

Tech Session-B (FRI1B)

Room 102

SC9 : Multi-band Antennas

Chair: Alaa Abunjaileh, Airbus DS

Co-chair : Jaleel Akhtar, IIT Kanpur

FRI1B-1

A Meandered Rectangular Monopole Antenna for Quad-Band Applications

D. Sharma, M. S. Hashmi, IIIT Delhi, New Delhi, India

FRI1B-2

A Meander Line Uniplanar EBG based Multiband Antenna using Defected Ground Plane for WLAN and WiMAX Applications

R. Pandey¹, D. K. Vishwakarma²,

1. PDPM IITDM Jabalpur, Jabalpur, India,

2. PDPM IITDM Jabalpur, Jabalpur, India

FRI1B-3

Design of Tri-Band ENZ SIW Sensor for Microwave Testing of Materials in 3G and 4G GSM Bands

A. K. Jha, M. J. Akhtar, Indian Institute of Technology Kanpur, Kanpur, India

FRI1B-4

Chipless RFID Strain Sensors: A Novel Feasibility Analysis in terms of Conventional Patch Antennas

S. Dey, N. C. Karmakar, Monash University, Melbourne, Australia

Tech-Session-C (FRI1C)

Room 103

SC10: CAD Algorithms and Techniques

Chair: Vijay Devabhaktuni, The University of Toledo

Co-Chair: Peter Aaen, The University of Surrey

FRI1C-1

Modeling of Semi-Anechoic Chamber for use in Automotive EMC Simulations

S. Vedicherla¹, P. Kralicek²,

1. Robert Bosch Engineering and Business Solutions Private Limited, Bangalore, India,

2. Robert Bosch GmbH, Abstatt, Germany

FRI1C-2

Computationally Efficient Microwave Imaging of Human Breast Model using Group Theory

H. N. Patel¹, D. Ghodgaonkar²,

1. Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar, India,

2. Dhirubhai Ambani Institute of Information and Communication Technology, Gandhinagar, India

FRI1C-3

Phase based sector resolution in a five element circular array for Angle of Arrival (AoA) computation

A. K. Singh, C. Viswanadham, Bharat Electronics Limited, Hyderabad, India

FRI1C-4

Estimation of Emission Frequencies of rolling stock in running condition using Doppler shift of Emission frequencies found during Stationary Condition

M. Y. Joshi, G. Verma, S. H. Solanki, S. R. Ranade, Society for Applied Microwave Electronics Engineering & Research, Mumbai, India

Friday 11th December 2015
Time: 11:10-12:40

Poster session-1 (FRIPA)

Room 204

Chair: Akhilesh Jain RRCAT Indore

Co-Chair : Prashant Mishra, RCI

FRIPA-2

Double-Layered SIW Filter With Enhanced Electric Coupling Structure Using Three Short-Ended Striplines

A. R. Azad¹, A. Mohan¹, D. Jhariya², Indian Institute of Technology Kharagpur, Kharagpur, India,

FRIPA-3

Implementation of DPSK Demodulation Using Quadrants Method in FPGA for IFF MKXII Digital Receiver.

V. Papanaboina¹, L. K. Thota², Hindustan Aeronautics Limited, Hyderabad, India,

FRIPA-4

A Novel Approach to Design of a Squared Cosine (Cos²O) Pulse Modulated Power Amplifier Used for Airborne Navigational Applications

V. Papanaboina¹, R. Avala², Hindustan Aeronautics Limited, Hyderabad, India,

FRIPA-5

Bone Mineral Density Analysis using Ultra Wideband Microwave Measurements

R. Augustine¹, D. G. Kurup², S. Raman¹, D. Lee^{3,1}, K. Kim^{1,3}, A. Rydberg¹,

1. Uppsala University, Uppsala, Sweden,

2. Amrita Vishva Vidyapeetham University, Bangalore, India,

3. Gwangju Institute of Science and Technology, Gwangju, Republic of Korea,

FRIPA-7

RF Multi-Function Chip at Ku-Band

M. Chakravarti¹, S. K. Reddy², K. Vsr²,

1. Defence Research and Development Organisation, Hyderabad, India,

2. Astra Microwave Pvt Ltd, Hyderabad, India

FRIPA-8

Design of Wideband Tunable Dispersive Delay using Cascaded All Pass Networks

R. Kumar, K. P., K. J. Vinoy, Indian Institute of Science, Bangalore, India

Tech Session-B (FRI2B)

Room 102

SC5: Nonplanar Filters and Absorbers

Chair: Minkyu Je, DGIST Information and Communication Engineering

Co-chair : MK Mondal, IIT Kharagpur

FRI2B-1

Virtual Negative Coupling in Folded Waveguide Cavity Filter for Space Applications

1100-1120

S. R. D., G. B., V. K. V., S. A. Venkata Guru, S. V. V., Y. Mehta, ISRO Satellite Centre, Bangalore, India

FRI2B-2

Compact Iris-Coupled Evanescent-Mode Filter for Spacecraft S-band Data Transmitters

1120-1140

A. V. Subramanyam, D. Sivareddy, V. K. Velidi, V. V. Srinivasan, Y. Mehta, ISRO, Bangalore, India

FRI2B-3

X-band Metamaterial Absorber with Dual band/Broadband Absorption Characteristics

1140-1200

M. Agarwal, M. K. Meshram, Indian Institute of Technology (BHU), Varanasi, Varanasi, India

FRI2B-4

A Flexible,Ultra thin, Frequency-Selective-Surface Based Absorber Film for the Radar Cross Section Reduction of a Cubical Object

1200-1220

H. B. Baskey¹, B. Ghai², M. Akhtar^{1,2},

1. Indian Institute of technology, Kanpur, India,

2. Indian Institute of technology, Kanpur, India

Tech-Session-C (FRI2C)

Room 103

SC9: MIMO /Active Antennas

Chair: Madhumita Chakravarthy, Research Center Imarat

Co-chair : Ramakrishna, Osmania University Hyderabad

FRI2C-1 (Invited)

Direct RF Undersampling Receiver for High-SHF Band Digital Beam Forming

N. Suematsu, S. Kameda, M. Motoyoshi, Tohoku University, Sendai, Japan

FRI2C-2

Mutual Coupling Reduction using Variable Length SRR like Structure in Ultra Wideband MIMO Antennas

S. U. Kharche¹, G. S. Reddy¹, R. K. Gupta², J. Mukherjee¹,

1. Indian Institute of Technology, Bombay, Powai, Mumbai, India,

2. Terna Engineering College, Nerul, Navi Mumbai, India

FRI2C-3

MIMO Antenna using Castor Leaf-shaped Quasi-Self-Complementary Elements for Broadband Applications

S. R. Patre, S. P. Singh, Indian Institute of Technology (Banaras Hindu University), Varanasi, India

FRI2C-4

Design and Development of Multiple Antenna based System for RADAR Applications

J. Das^{1,2}, P. Venkateswaran²,

1. SAMEER Kolkata Centre, Kolkata, India,

2. Jadavpur University, Kolkata, India

Friday 11th December 2015
Time: 13:50-15:20

Tech-Session A (FRI3A)

Room 101

SC4 :Transceiver/Transmitter/ Receiver IC and Package Design Techniques

Chair: Kenjiro Nishikawa, Kagoshima University
Co-Chair: Minoru Fujishima, Hiroshima University

FRI3A-1 (Invited)

Smart RFIC: Millimeter-wave Gigabit Transceivers with Digitally-enabled Built-in Self-calibration and Auto-switching Functions: The Challenge of Phase Control Modeling in Phase Shifter Design.

T. Huang, National Taiwan University, Taipei, Taiwan

FRI3A-2

An Integrated X-band FMCW Radar Transceiver in 130nm CMOS Technology

A. C. Tella^{1,2}, G. Banerjee¹,
1. Indian Institute of Science, Bangalore, India,
2. Cypress Semiconductor, Bangalore, India

FRI3A-3

GaN Based L-Band High Power and High Efficiency Pulsed Transmitter

S. Garg, S. Aich, J. Dhar, Space Applications Centre, ISRO, Ahmedabad, India

FRI3A-4

A compact C-band down converter SiP with integrated LO in a metal ceramic package

S. K. Chaturvedi¹, M. Raj¹, S. V. Bhalke¹, V. Arora², S. L. Badnikar², B. K. Sehgal²,
1. Gallium Arsenide Enabling Technology Centre (GAETEC), Hyderabad, India,
2. Solid State Physics Laboratory, Delhi, India

Special Session: Microwaves in India
Room 102

Chair: Lakshminarayana Merugu, Defence Electronics Research Lab Hyderabad
Co-chair : Goutam Chattopadhyay, JPL, USA

Speakers :

- 1)** Mathematically correct Microwave product design leads to increased manufacturing output

TSN Murthy, Core-EL India

- 2)** Microwave Systems in Defense : Requirements & Manufacturing Facilities - Indian Perspective

Dr A T Kalghatgi, Director R&D, BELBangalore

- 3)** Challenges in Manufacture of Microwave Super Components

Pravin Mandrupkar, AMPL Hyderabad

- 4)** Surface Acoustic Wave Signal Processing Devices and Sensors

A.T. Nimal, SAW group, Solid State Physics Laboratory, DRDO, Delhi

Tech Session-B (FRI3B)

Room 103

SC6: Transmission lines and couplers

Chair: Mahesh Abegaonkar , IIT Delhi

Co-chair: KC James Raju, UoH

FRI3B-1

Optimized Launching Pads for Investigating Transmission Line Losses for Different Surface Finishes of RF-PCBs up to 110 GHz

1330-1350

O. Huber¹, T. Faseth¹, H. Arthaber¹, E. Schlaffer²,

1. Vienna University of Technology, Vienna, Austria,

2. AT&S, Leoben, Austria

FRI3B-2

Design of Reconfigurable Concurrent Dual-Band Quarter-Wave Transformer with Application of Power Combiner/Divider

1350-1410

R. Kalyan¹, K. Rawat², S. K. Koul¹,

1. Indian Institute of Technology, Delhi, India,

2. Indian Institute of Technology, Roorkee, India

FRI3B-3

Substrate Integrated Waveguide miniaturization using Slow Wave and Half Mode techniques

1410-1430

M. Khalil^{1,2}, M. Kamarei¹, J. Jomaah², H. Ayad²,

1. University of Tehran, Tehran, Iran,

2. Lebanese University, Beirut, Lebanon

FRI3B-4

Implementation of Broadband Unequal Power Divider using Substrate Integrated Waveguide (SIW) Technology

1430-1450

S. Mukherjee, A. Biswas, Indian Institute of Technology Kanpur, Kanpur, India

Friday 11th December 2015
Time: 16:00-17:30

Tech-Session A (FRI4A)

Room 101

SC7: Microwave/Millimeter-wave Systems.

Chair: Ramesh Gupta, Light squared

Co-Chair: Kamal Samanta, Milmega/AMETEK

FRI4A-1 (Invited)

Wireless Data Communication and Power Transfer for Biomedical Microsystems

1530-1600

M. Je, DGIST, Daegu, Republic of Korea

FRI4A-2

Adaptive Communication System using Software Defined Radio

1600-1620

M. Darmetko¹, S. Kozlowski¹, K. Kurek¹, J. Skarzynski¹, J. Modelski¹, K. Szczygieska², M. Stolarski²,

1. Warsaw University of Technology, Warsaw, Poland,

2. Polish Academy of Sciences, Warsaw, Poland

FRI4A-3

AC/DC Coupling Effects on Low-IF Tag-Assisted Mobile Doppler Radar Life Sign Detection

1620-1640

A. Rahman, E. Yavari, V. M. Lubecke, O. B. Lubecke, University of Hawaii at Manoa, Honolulu, United States

FRI4A-4

Design and Development of Microwave Based Moisture Measurement System

1640-1700

T. K. Bhuiya, T. S. Upadhyay, S. N. Thakur, R. Harsh, Society for Applied Microwave Electronics Engineering and Research, IIT Campus, Powai, Mumbai, India

Tech Session-B (FRI4B)

Room 102

SC8: Microwave Devices and components

Chair: Kenjiro Nishikawa, Kagoshima University

Co-chair : SL Badnikar, GaETec

FRI4B-1

Pulse Characterisation of AlGa_N/Ga_N HEMTs.

R. Reeta, S. Kumar, R. Chaubey, S. K. Tomar, M. Mishra, D. S. Rawal, A. A. Naik, S. Vinayak, Defence Research and Development Organization, New Delhi, India

FRI4B-2

Active enhanced tunable high-Q on-chip E-band resonators in 130nm SiGeBiCMOS

N. Singh, T. Stander, Carl and Emily Fuchs Institute for Microelectronics, Pretoria, South Africa

FRI4B-3

Scaling of Current Collapse in Ga_N/AlGa_N HEMT for Microwave Power Applications

D. S. Rawal, S. Sharma, S. Mahajan, M. Mishra, R. K. Khatri, A. A. Naik, B. K. Sehgal, Solid State Physics Laboratory, Delhi, India

FRI4B-4

A flexible Pcell-driven design flow for mm-wave on-chip passives

T. Stander, University of Pretoria, Pretoria, South Africa

Poster session-2 (FRIPB)

Room 204

Chair: Dr Seema Vinayak, SSPL

Co-Chair : Dr Tapas Pal, RCI

FRIPB-4

Cross-Correlation PN Measurements: Pros & Cons

A. K. Poddar^{1,2}, U. L. Rohde^{2,1}, E. Rubiola⁴, S. K. Koul³, M. A. Silaghi²,
1. Synergy Microwave Corp, Paterson, United States, 2. University of Cottbus, Oradea, Romania,
3. Indian Institute of Technology Delhi, HauzKhas, India,
4. Femto-ST Institute, Dept Time and Frequency 26 chemin de l'Epitaphe, Besancon, France

FRIPB-5

Assessment of Burn Injuries using Terahertz Reflectometry Technique

S. P. Singh, Z. Akhter, M. J. Akhtar, Indian Institute of Technology Kanpur, Kanpur, India

FRIPB-6

Optimizing Performance of Phase Locked Oscillator for High Vibration Environment

N. Sood, P. Sen, Defence Research and Development Organization (D.R.D.O), Dehradun, India

FRIPB-7

Design and Simulation of Transition Waveguide to Connect Vircator to Mode Converter

A. Chittora¹, J. Mukherjee¹, S. Singh², A. Roy², A. Sharma²,
1. Indian Institute of Technology Bombay, Mumbai, India,
2. Bhabha Atomic Research Centre, Mumbai, India

FRIPB-8

A Novel Power Divider Structure using the Gysel and Wilkinson Power Dividers with only one Grounded Resistor

M. A. Maktoomi, M. S. Hashmi, Indraprastha Institute of Information Technology- Delhi, India

FRIPB-9

Neural Network based System for RF Testing of Thin Samples

Satyajit Panda, Nilesh Kumar Tiwari and M. Jaleel Akhtar, IIT Kanpur

FRIPB-10

Online monitoring of moving objects on conveyer belts using RF time domain imaging technique.

Zubair Akhter and M. Jaleel Akhtar IIT Kanpur

Panel Discussion: Women in Microwave Eng.

Room 201

Panel Members: Panel Members: 1) Dr Seema Vinayak, SSPL Delhi 2) Mrs Pramila, AMPL 3).
Ms Joly Dhar, SAC, Ahmedabad 4) Swarna Bai, Chair, WIE AG, IEEE Hyderabad Section
Coordinator : Madhumita Chakravarthy RCI

Saturday 12th December 2015
Time: 09:00-10:30

Tech-Session A (SAT1A)

Room 101

SC2: RF building Blocks, circuits, components-I

Chair: James J. Komiak, BAE Systems

Co-Chair : Ajay Poddar, Synergy Microwave systems

SAT1A-1 (Invited)

Review of CMOS Millimeter-wave Radio Frequency Integrated Circuits
0900-0930
H. Wang, National Taiwan University, Taipei, Taiwan

SAT1A-2

Chipless RF Liquid Sensor
0930-0950
A. J. Cole, C. C. Ng, F. A. Almalki, P. R. Young, University of Kent, Canterbury, United Kingdom

SAT1A-3

A Compact and Wideband SMA Connector to Empty Substrate Integrated Waveguide (ESIW) Transition
0950-1010
A. A. Khan, M. K. Mandal, R. Shaw, Indian Institute of Technology, Kharagpur, Kharagpur, India
SAT1A-4

Design of Coplanar Dual Band Resonator Sensor for Microwave Characterization of Dispersive Liquids
1010-1030
H. Samant, A. K. Jha, M. J. Akhtar, Indian Institute of Technology Kanpur, Kanpur, India

Tech Session-B (SAT1B)

Room 102

SC1 : Low Noise Amp Techniques

Chair : M. V. Kartikeyan, IIT Roorkee

Co-Chair: Meena Mishra, DRDO

SAT1B-1

Computer-Aided-Design of an 18-40 GHz MMIC Low Noise Amplifier using RLC and series inductive feedback

0900-0920

P. Banerjee, A. Majumder, SAMEER Kolkata Centre, Kolkata, India

SAT1B-2

Performance Investigation of dual band millimetre wave SiGe Low Noise Amplifier (LNA)

0920-0940

M. S. Alam^{1,1}, A. Mukherjee^{2,2}, M. Schröter^{2,2},

1. Aligarh Muslim University Aligarh, Aligarh, India,

2. Technische Universität Dresden, Germany, Helmholtzstraße, Germany

SAT1B-3

Coupled Stepped-Impedance Resonator (CSIR) Based Concurrent Dual Band Filtering LNA for Wireless Applications

0940-1000

A. Kumar, N. P. Pathak, Indian Institute of Technology Roorkee, Roorkee, India

SAT1B-4

Packaging and characterization of GaAs MMIC C-Band Amplifier as per MIL-STD 883

1000-1020

R. Gugulothu, S. Bhalke, S. Chaturvedi, Gallium Arsenide Enabling Technology Center, Hyderabad, India

Tech-Session-C (SAT1C)

Room 103

SC9: Dual-band and Broadband Antennas

Chair: Shibani Koul, IIT Delhi

Co-Chair : C Vishwanatham, BEL

SAT1C-1

Broadband U-Slot Cut Microstrip Reflectarray Antenna with Microstrip Antenna Feed

0900-0920

A. Deshmukh¹, K. Lele¹, A. Desai¹, S. Shaikh¹, S. Agrawal¹, K. Ray²,

1. D.J. Sanghvi College of Engineering, Mumbai University, Mumbai, India,

2. SAMEER, Mumbai, India

SAT1C-2

Dual And Wideband Design of CPW fed Rectangular Slot Backed Inverted Triangular Microstrip Antenna

0920-0940

A. Deshmukh, S. Agrawal, K. Lele, A. Desai, S. Shaikh, DJSCOE, Mumbai, India

SAT1C-3

Dual Band Circularly Polarized Microstrip Antenna for IRNSS Reference Receiver

0940-1000

B. Sandhya Reddy, V. Senthil Kumar, V. Srinivasan, Y. Mehta, ISRO Satellite centre, Bangalore, India

SAT1C-4

Wideband Broad Beamwidth Circularly Polarized Stacked Microstrip Patch Antenna with RF Switch for Data Link Application

1000-1020

S. Varanasi¹, V. W. Paradkar¹, D. R. Jahagirdar¹, G. Kumar²,

1. Research Centre Imarat, Hyderabad, India,

2. IIT Bombay, Mumbai, India

Saturday 12th December 2015
Time: 11:10-12:40

Tech-Session A (SAT2A)

Room 101

SC4: Advanced Wireless Technologies

Chair: Tian-Wei Huang, National Taiwan Univ.

Co-Chair: Kenjiro Nishikawa, Kagoshima Univ.

SAT2A-1 (Invited)

Impact of Modulation Scheme on Rectifier RF-DC Efficiency and Optimal Input Signal Control Technique

1100-1130

K. Nishikawa¹, H. Sakaki²,

1. Kagoshima University, Kagoshima, Japan,

2. Mitsubishi Electric Corporation, Ofuna, Japan

SAT2A-2

Ultra-Wideband Pulse-Based Directional Modulation

1130-1150

H. Aggrawal, R. Puhl, A. Babakhani, Rice University, Houston, United States

SAT2A-3

Characterization of 94 GHz and 183 GHz Planar Schottky Diode based Radiometer Modules

1150-1210

C. Viegas¹, B. Alderman^{2,3}, J. Powell², H. Liu², H. Wang³, R. Sloan¹,

1. University of Manchester, Manchester, United Kingdom,

2. Teratech Components Limited, Oxfordshire, United Kingdom,

3. STFC-Rutherford Appleton Laboratory, Oxfordshire, United Kingdom

SAT2A-4

On nonlinear memory effects in all digital RF-transmitters

1210-1230

N. Leder, B. Pichler, H. A. Ruotsalainen, T. I. Fäse, H. Arthaber, Vienna University of Technology, Vienna, Austria

Tech Session-B (SAT2B)

Room 102

SC3: Signal generation and freq conversion circuits and systems

Chair: Minoru Fujishima, Hiroshima University

Co-Chair: Ramesh Pokharel, Kyushu University

SAT2B-1 (Invited)

Comparative Design of Extremely Low Phase Noise Oscillator in Class-B and Class-C by Integrating Film Bulk Acoustic Resonator (FBAR) on CMOS Wafer for Low Power Applications

1100-1130

R. K. Pokharel, S. Enche Ab Rahim, Kyushu University, Motoooka, Japan

SAT2B-2

A Fast-switching Low-spurious 6-18 GHz Hybrid Frequency Synthesizer

1130-1150

S. Biswas, R. Vakulabharanam, Defence Electronics Research Laboratory, Defence Research and Development Organization, Hyderabad, India

SAT2B-3

A 47 GHz Power Efficient MMIC Tripler with Low Conversion Loss

1150-1210

B. Biswas, A. K. Gande, SAMEER, Kolkata, India

SAT2B-4

A very wideband FET Resistive MMIC Double Balanced Mixer Based on Empirical Non-Linear Cold FET Model

1210-1230

M. Raj¹, S. K. Chaturvedi¹, S. Mohd. ², S. L. Badnikar², B. K. Sehgal²,

1. Gallium Arsenide Enabling Technology Centre (GAETEC), Hyderabad, India,

2. Solid State Physics Laboratory, Delhi, India

Poster session-3 (SATPA)

Room 204

Chair: Dhananjay Jahagirdar, Research Center Imarat Hyderabad

Co-Chair : N. Srinivas Rao, Osmania University Hyderabad

SATPA-1

Design and Implementation of Broadband Whip Monopole Antenna for Vehicular application

T. Khumanthem¹, S. Chandana¹, S. Bandaru², A. Pogaku², V. Mucharla²,

1. Defence Electronics Research Laboratory, Hyderabad, India,

2. MVSR Engineering College, Nadargul, India

SATPA-2

A Circular Monopole Antenna with Two Steps and an Offset Circular Slot for Passive UWB-RFID Tag Localization Applications

M. R. AlShareef¹, H. M. Behairy¹, O. M. Haraz², M. Ashraf², S. Alshebeili²,

1. King Abdulaziz City for Science and Technology , Riyadh, Saudi Arabia,

2. King Saud University, Riyadh, Saudi Arabia

SATPA-3

A Dual-Band Printed Monopole Antenna Using Multiple Rectangular and Cricket-Bat Shaped Defected Ground Structures

S. Kumar^{1,3}, R. S. Tomar¹, P. Bhartia²,

1. The LNM Institute of Information Technology, Jaipur, India,

2. NATEL Engineering Co., Inc., Chatsworth, United States,

3. Pratap Institute of Technology and Science, Sikar, India

SATPA-4

CPW fed Triple Band Antenna for Sensor Application

H. Prasad, M. J. Akhtar, Indian Institute of Technology Kanpur, Kanpur, India

SATPA-5

Novel Design Methodology for The Generation of Deterministic Fractal Antenna Arrays

V. Ponnappalli, P. Jayasree, GITAM University, Visakhapatnam, India

SATPA-6

Fabrication & Measurement of a Highly Effective Beam Scanning Horn Antenna

M. Jain¹, A. K. Jain², R. P. Agarwal³,

1. Vidya College of Engineering, Meerut, India,

2. Vidya College of Engineering, Meerut, India,

3. Shobhit University, Meerut, India

SATPA-7

Compact UWB MIMO Antenna with WiMAX and WLAN Rejection

S. Joseph¹, S. A. P1, A. K. A1, A. K. Mondal², R. R3,

1. TKMCE, Kollam, India,

2. Defence Electronics Research Laboratory, Hyderabad, India,

3. Centre for Materials for Electronics Technology, Thrissur, India

SATPA-8

Compact Two-Element UWB Fractal Monopole MIMO Antenna Using T- Shaped Reflecting Stub for High Isolation

R. S1, K. T. Selvan1, H. P. Rao2,

1. SSN college of Engineering, Kalavakkam, India,

2. Sameer, Chennai, India

SATPA-9

Integrated 23-Cm and UWB Antenna with Dual Notched Characteristics

K. Srivastava 1, A. Kumar1, B. K. Kanaujia2,

1. Sri Aurobindo College, University of Delhi, New Delhi, India,

2. Ambedkar Institute of Advanced Communication and Research, New Delhi, India

SATPA-10

A CPW fed MIMO antenna for UWB Applications

D. Gurram1, S. Chilukuri2, A. Lokam3,

1. National Institute of Technology, Warangal, India,

2. National Institute of Technology, Warangal, India,

3. National Institute of Technology, Warangal, India

Saturday 12th December 2015
Time: 13:50-15:20

Tech-Session A (SAT3A)

Room 101

SC8: Microwave Device Design

Chair: Minoru Fujishima, Hiroshima University
Co-Chair : Jolly Dhar, SAC, Ahmedabad

SAT3A-1 (Invited)

Device Characterization and Modeling for Terahertz CMOS Design
1330-1400
M. Fujishima, Hiroshima University, Higashi-hiroshima, Japan

SAT3A-2

Multi-Cascode Cell Design for Increased Broadband Power 0.1 μ m GaAs pHEMT MMICs up to V-Band
1400-1420
P. Shinghal¹, C. I. Duff¹, R. Sloan¹, S. Cochran²,
1.The University of Manchester, Manchester, United Kingdom,
2. Keysight Technologies, Santa Rosa, United States

SAT3A-3

Effects of Contact Roughness and Trapped Free Space on Characteristics of RF-MEMS Capacitive Shunt Switches
1420-1440
A. GhaffariNejad, J. YavandHasani, Iran University of Science and Technology (IUST), Tehran, Iran

SAT3A-4

Domain Patterned Permalloy Incorporated Above and Below On-Chip RF Spiral Inductors
1440-1500
V. Pulijala, S. Azeemuddin, International Institute of Information Technology, Hyderabad, India

Special Session: Microwaves in China

Room 102

Chair: Mohammad Madihian, Drexel University

Co-Chair : Ke Wu, University of Montreal

Speakers:

- 1) Lirong Zheng, Zhuo Zou, YuxiangHuan, Jia Mao, Jie Shen, Haitao Liu, “Wireless Sensing and Identification with Compressive Sampling and Energy Autonomy”

Fudan University

- 2) Jianguo Ma, “Challenging of Internet-of-things and Industrial 4.0”

Tianjin University

- 3) Qing-Xin Chu, Zhi-Han Chen and Shi-Xuan Zhang, “Multi-Band Reconfigurable Bandpass Filters”

South China University of Technology

- 4) Kai Kang, “CMOS mm-Wave circuits and systems”

University of Electronic Science and Technology of China

Tech-Session-C (SAT3C)

Room 103

SC9: New Antenna Technologies

Chair: Yogesh Verma, Research Center Imarat Hyderabad

Co-chair: L Anjaneyulu, NIT Warangal

SAT3C-1

On the Gain Enhancement of a wideband CPW-Fed Circularly Polarized Antenna Using FSS

1330-1350

N. Kushwaha¹, R. Kumar²,

1. Defence Institute of Advanced Technology , Pune, India,

2. Armament Research and Development Establishment , Pune, India

SAT3C-2

Side Lobe Level Suppression in Randomly Spaced Linear Array Using Genetic Algorithm

1350-1410

V. S. Gangwar¹, A. K. Singh¹, S. P. Singh²,

1. Defence Research and Development Organization (DRDO), Bangalore, India,

2. Indian Institute of Technology (IIT-BHU), Varanasi, India

SAT3C-3

A Slot Antenna Designed in Ridge Gap Waveguide Technology for V-band Applications

1410-1430

A. Sahu¹, V. Devabhaktuni¹, P. H. Aen², ¹University of Toledo, Toledo, United States, ²University of Surrey , Guildford, United Kingdom

SAT3C-4

Single Aperture Multiple Beams of Array Antenna Using Radial Basis Function Neural Network

1430-1450

R. S. Reddy, V. Damera, National Institute Of Technology , Warangal, India

Saturday 12th December 2015

Time: 16:00-17:40

Tech-Session A (SAT4A)

Room 101

SC2: RF building Blocks, circuits, components-II

Chair : KJ Vinoy, IISc Bangalore

Co-Chair : Pummy Ratna, ASL Hyderabad

SAT4A-1 (Invited)

Multilayer Thick-Film and Next Generation Cost-effective Millimetre-wave SoP Circuit and System Integration Techniques

1530-1600

K. K. Samanta, Milmega UK, Ryde, United Kingdom

SAT4A-2

Switching Circuit for RF Coil Ring-down Time Reduction in Pulsed EPR Spectrometer

1600-1620

P. Duraiswamy¹, J. Vandewege²,

1. M.S.Ramaiah University of Applied Sciences, Bangalore, India,

2. Ghent University, Ghent, Belgium

SAT4A-3

Ultra Wide Band BALUN Using Broadband Microstrip – Slotline –Microstrip Transition

1620-1640

U. L. Rohde^{1,2}, A. K. Poddar^{2,1}, S. Pegwal³, V. Madhavan², S. K. Koul³, M. Abegaonkar³, M. A. Silaghi¹,

1. Oradea University, Oradea, Romania,

2. Synergy Microwave Corporation, Paterson, United States,

3. Indian Institute of Technology Delhi, HauzKhas, India

SAT4A-4

A Ku-Band 6-bit Digital Phase Shifter MMIC for Phased Array Antenna Systems

1640-1700

A. Sharma, A. Kumar, A. N. Bhattacharya, Space Applications Centre, Ahmedabad, India

Tech Session-B (SAT4B)

Room 102

SC5: Planar and integrated Filters

Chair: Ananjan Basu, IIT Delhi

Co-chair : Mohammad Hashmi, IIT Delhi

SAT4B-1

Simulation Study of Modified Compact Microstrip Interdigital Bandpass Filter with Wide Stopband for L-band Applications

1530-1550

B. Sahu¹, P. Tripathi^{2,2}, M. K. Meshram¹, S. Singh¹,

1. Indian Institute of Technology (Banaras Hindu University) Varanasi, Varanasi, India,

2. Indian Institute of Technology (Banaras Hindu University) Varanasi, Varanasi, India

SAT4B-2

Microstrip Coupled Line Bandpass Filter using Quasi Minkowski Fractal Shape for Suppression of Second Harmonic

1550-1610

A. K. Agrawal^{2,1}, K. J. Vinoy^{2,1},

1. Indian Institute of Science, Bangalore, India,

2. Indian Institute of Science, Bangalore, India

SAT4B-3

Critical Analysis of Fractal FSS with Heterogeneous Composite to Enhance Microwave Absorption for Stealth Application

1610-1630

R. Panwar, S. Puthucheri, A. Singh, D. Singh, V. Agarwala, Indian Institute of Technology Roorkee, Roorkee, India

SAT4B-4

Dual Mode Bandpass Filter Using Trefoil Torus Knot Resonator

1630-1650

S. V. Kumar, A. R. Harish, Indian Institute of Technology Kanpur, Kanpur, India