2013 IEEE International RF and Microwave Conference  
(RFM 2013)  

Penang, Malaysia  
9-11 December 2013
# TABLE OF CONTENTS

## ABOUT THE CONFERENCE

viii

## FOREWORD

ix

## PROGRAM SCHEDULE

x

## KEYNOTE SPEAKERS

xi

## INVITED SPEAKER

xvi

## TUTORIAL

xvii

## Full Papers

xviii

1. SPDT Discrete Switch Design using Switchable Radial Stub Resonator for WiMAX and LTE in 3.5 GHz Band
2. Limiting and transient performances of a low loss PIN-Schottky limiter
3. Water-holding Capacity Assessment of Meat using an Electromagnetic Sensing Method
4. An Alternative Method for Detection and Categorisation of Embedded Asbestos in Built Environment
5. Square-shaped Phase Shifter Using Multilayer Technology for Ultra Wideband Application
6. 60 GHz High Gain Low Noise Amplifier using Cascade Noise Reduction Technique
7. Compact Dualband Bandpass Filter using Triple-Mode Stub Loaded Resonator
8. Design and Analysis of Wideband 3 and 6 dB Coupled-Line Coupler with different Grounding Technique
9. High Gain 2.4 GHz CMOS Low Noise Amplifier for Wireless Sensor Network Applications
10. Fabrication and Characterization of GNR Transmission Lines for MMIC Applications
11. Si Monolithic Planar Coreless Inductors for High Frequency Signal Transmission
12. Finger-Shaped Antenna Design for Ultra-Wideband Applications
13. Substrate Integrated Waveguide Antennas/Array for 60 GHz Wireless Communication Systems
14. Rectangular Microstrip Antenna Vs Dipole Antenna for Wi-Fi Application
15. Circuit Modeling for UWB-MIMO Antenna Array
16. BCB-Si Based Antenna for Millimeter Wave applications
17. Dual-Polarized Resonant Cavity Antenna using Slotted-Circular Patch FSS
18. Multiband Planar Inverted-F Antenna with Modified Short Arm and Ground Slots
19. Embroidery Wearable Snail Antenna (EWSA) Design
20. Switchable Beam Antenna
21. Compact UWB Wearable Antenna with Improved Bandwidth and Low SAR
22. Specific Absorption Rate Toward Human Body of Multiband Fractal Koch Textile Antenna
23. Enhancing Link Quality in a Multi-hop Relay in LTE-A Employing Directional Antenna
24. User’s Mobility History-based Mobility Prediction in LTE Femtocells Network
27. Designing Halfring Artificial Magnetic Conductor for RFID Application
28. The Investigation of MBMS over Single Frequency Network in Outdoor Urban Area
30. A UWB Planar Antenna Comprising A Single Slot Elliptical Element With Band Notch
Characteristics

31. The Impact of Mobile Speed on Vertical Handover Process Between WiFi and WiMAX Networks
32. Adaptive TXOP Assignment for QoS Support of Video Traffic in IEEE 802.11e Networks
33. Tradeoff Analysis for Vertical Handover Between UMTS-WiFi Enhanced by IEEE802.21
34. Design and Fabrication of 40GHz Hairpin Filter using Printed Circuit Board
35. Design of Highly Selective Ultra-Wideband Bandpass Filter Using Multiple Resonance Resonator
36. Stepped Impedance Dual Mode Coaxial Filter
37. Design of a Ku-Band High Gain Low Noise Amplifier
38. Microwave Bandpass Filter Using QMSIW
39. A Dual-Band Microstrip Filter Topology Based on Quarter-Wavelength Coupled-lines Inter-connections
40. Scintillation Measurement on Ku-band Satellite Path in Tropical Climate
41. Parametric Effect of Defected Ground Structure (DGS) on Frequency of a Bandpass Filter
42. Design of Dielectric Resonator Reflectarray Antenna loaded with C-Slot
43. Beam Scanning Folded Reflectarray Antenna with Shifted Waveguide Positions
44. Sensor-Integrated Low-Profile Antenna Design for Multipath and Blockage Rich Propagation Environment
45. A Study on Aperture Slot Size Effect to Wide Band Open Air Gap RLSA Performance
46. Circular Patch Antenna Design With Switchable Polarization
47. A 4.8GHz Implantable Small Printed Antenna for Wireless Implantable Body Area Network Applications
48. Fractal Microstrip Antenna with Minkowski Island Split Ring Resonator for Broadband Application
49. A Design of Single Patch Antenna with Leucaena Leucocephala Wood Plastic Composite (WPC) Substrate
50. Dual-Wideband G- shaped Slotted Printed Monopole Antenna For WLAN and WiMAX Applications
51. Comparison of Slant Path Rain Attenuation Models using Data from a Tropical Station
52. Differential Evolution Algorithm for Linear Frequency Modulation Radar Signal Denoising
53. MIMO Radio Channel Characterisation for Ultra Wideband Body Centric Wireless Communication
54. Preliminary Investigation of Rain Cells in Equatorial Malaysia for Propagation Applications
55. Modeling of Interferences on Other Satellites in Maritime Satellite Communications
56. Design of Ground Penetrating Radar Antenna for Buried Object Detection
57. Feasibility Study of LTE Signal as a New Illuminators of Opportunity For Passive Radar Applications
58. Observation of Polar Patches Occurrences During Low Solar Activity
59. Three-dimensional ENVISAT Interferometry Phase Unwrapping Using sorting Reliability Algorithm
60. Reproducing Power Hysteresis with Circuit Envelope Simulation
61. Coplanar waveguides on gold-doped high resistivity silicon for 67-GHz microwave application
62. Analysis and Design LC Cross Coupled VCO Regarding Different Phase Noise Approaches
63. Low Complexity Behavioral Model for RF Power Amplifiers’ Linearity and Efficiency Prediction
64. Quantification of Power Amplifiers’ Static and Dynamic Distortions using Frequency Domain Metrics
65. Generic Bandwidth Scalable Behavioral Models for RF Power Amplifiers with Memory Effects
66. Pre-amplifiers for a 15-Tesla magnetic resonance imager
67. Design of a 10 GHz Low Phase Noise Oscillator using Split-Ring Resonator Array
68. Chebyshev Multi-Layer Microwave Absorber Design
69. Spiral Electromagnetic Bandgap Structure for EMI Reduction
70. A Compact Dipole UHF-RFID Tag Antenna
71. Design of A Compact Wearable Single-Arm Spiral Antenna for Satellite Communications
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>72</td>
<td>Bandwidth Enhancement Technique using Ground Slot for Ultra Wideband Coplanar Inverted-F Antenna</td>
<td>322</td>
</tr>
<tr>
<td>73</td>
<td>The Effect of Isolation Loss towards The Beam Steering of A Parasitic Patch Array Antenna</td>
<td>325</td>
</tr>
<tr>
<td>74</td>
<td>A Compact Peano-Type Fractal Based Printed Slot Antenna for Dual-band Wireless Application</td>
<td>329</td>
</tr>
<tr>
<td>75</td>
<td>Microwave Non-Destructing Testing of Rubber at X-Band</td>
<td>333</td>
</tr>
<tr>
<td>76</td>
<td>Cylindrical Dielectric Resonator Antenna with TE 011+ Mode</td>
<td>338</td>
</tr>
<tr>
<td>77</td>
<td>Design of a Cylindrical Parabolic Reflector on Monopole Plasma Antenna</td>
<td>344</td>
</tr>
<tr>
<td>78</td>
<td>Design of a triple band patch antenna on FR4 substrate material</td>
<td>349</td>
</tr>
<tr>
<td>79</td>
<td>Switchable Parasitic Antenna using PIN Diode- and MEMS-Switches</td>
<td>353</td>
</tr>
<tr>
<td>80</td>
<td>A Multilayer Parasitic Patch Antenna using LTCC Technology</td>
<td>356</td>
</tr>
<tr>
<td>81</td>
<td>Evolution and Trends of EMI Receiver</td>
<td>362</td>
</tr>
<tr>
<td>82</td>
<td>Effects of electromagnetic radiations generated by mobile antennas on the human brain</td>
<td>368</td>
</tr>
<tr>
<td>83</td>
<td>An Epsilon Negative Metamaterial Antenna With Extended Bandwidth</td>
<td>372</td>
</tr>
<tr>
<td>84</td>
<td>Energy Harvesting through the Radio Frequency Wireless Power Transfer</td>
<td>376</td>
</tr>
<tr>
<td>85</td>
<td>The Screening of Human Psychological Stress Using Resonant Field Imaging (RFI) Frequency Counter</td>
<td>382</td>
</tr>
<tr>
<td>86</td>
<td>Reduced-Size Witricity Charger Design and Its Parametric Study</td>
<td>387</td>
</tr>
<tr>
<td>87</td>
<td>Investigation on Vinegar as Preservative in Materials for Brain Phantom</td>
<td>391</td>
</tr>
<tr>
<td>88</td>
<td>Investigation of Crumpling Effects on EM Absorption and Antenna Performance at 2.4 GHz</td>
<td>395</td>
</tr>
<tr>
<td>89</td>
<td>Analysis on the Specific Absorption Rate due to the Metallic Objects Exposed to Radiation Source</td>
<td>400</td>
</tr>
<tr>
<td>90</td>
<td>Double Layer Circular Ring Metamaterial Absorber for Dual-Directional Application at 10 GHz</td>
<td>405</td>
</tr>
<tr>
<td>91</td>
<td>Dielectric Spectroscopy of Pharmaceutical Drug (Paracetamol) Dosage in Water</td>
<td>409</td>
</tr>
<tr>
<td>92</td>
<td>Body Of Revolution (BOR) FDTD solver applied to the analysis of lens antennas</td>
<td>414</td>
</tr>
<tr>
<td>93</td>
<td>Dual-Grid BoR-FDTD technique applied for prime feed reflector antenna study</td>
<td>419</td>
</tr>
<tr>
<td>94</td>
<td>Difference Loss Tangent Layer Microwave Absorber Effect Absorption in X-band Frequency</td>
<td>425</td>
</tr>
<tr>
<td>95</td>
<td>Anechoic Characteristics of a Metal Backed Anechoic Agro-Waste for EMC Applications</td>
<td>429</td>
</tr>
<tr>
<td>96</td>
<td>Development of Remote Monitoring (CO) Measurement Based Microcontroller and Electro-Optic Technique</td>
<td>433</td>
</tr>
<tr>
<td>97</td>
<td>Optical Generation of 60-GHz Signal for Millimeter wave Wireless Communication</td>
<td>437</td>
</tr>
<tr>
<td>98</td>
<td>A Slot Dipole Antenna With Wide Tunability Range</td>
<td>441</td>
</tr>
<tr>
<td>99</td>
<td>Frequency Reconfigurable Truncated Rhombus-like Slotted Antenna with Patch Size Reduction</td>
<td>445</td>
</tr>
<tr>
<td>100</td>
<td>Frequency Reconfigurable Circular Patch Antenna</td>
<td>450</td>
</tr>
<tr>
<td>101</td>
<td>Preliminary Studies on the Use of Natural Rubber in the Design of Flexible Microstrip Antennas</td>
<td>454</td>
</tr>
<tr>
<td>102</td>
<td>Circularly Polarized Textile Antenna with Bending Analysis</td>
<td>460</td>
</tr>
<tr>
<td>103</td>
<td>Reconfigurable fractal dipole antenna operating at L-band and S-band</td>
<td>463</td>
</tr>
<tr>
<td>104</td>
<td>Effects of Coupling Sleeve Designs on an RF Charged Plasma Monopole Antenna</td>
<td>467</td>
</tr>
<tr>
<td>105</td>
<td>Electrical Model of Two Element Aperture Coupled Cylindrical Dielectric Resonator Antenna Array</td>
<td>471</td>
</tr>
<tr>
<td>106</td>
<td>Enhancement of bandwidth through I-Shaped Defected Ground Structure</td>
<td>477</td>
</tr>
</tbody>
</table>

**COMMITTEE**

**AUTHORS INDEX**

**LIST OF REVIEWERS**

**ACKNOWLEDGEMENT**

Organizer and Sponsors

Advertisement