

## Midland Student Express 2022 Spring (Live Online by Zoom) 4/23/2022

Ver.1: Apr. 20, 2022

|    |                 |   |   |
|----|-----------------|---|---|
|    | 12:25 - 12:30   | Opening Address   | Prof. Yoshihiko Kuwahara<br>IEEE MTT-S Nagoya Chapter Chair |
|    | <b>Session1</b> | <b>Chair: Takumi Kanamori (Shizuoka University)</b>   |   |
| 1  | 12:30 - 12:45   | A directive antenna consisting of a wire and a sprit ring   | Toshiya Hiramoto<br>Kanazawa Institute of Technology        |
| 2  | 12:45 - 13:00   | Beamforming of a Leaf-Shaped Bowtie Antenna for Microwave Imaging by Parasitic Elements   | Masaki Adachi<br>Shizuoka University                        |
| 3  | 13:00 - 13:15   | Measurement and Characteristic Mode Analysis of H-shaped Slot Patch Antenna for Suppressing 2nd and 3rd Harmonics                           | Koichi Nozawa<br>Nagoya Institute of Technology             |
| 4  | 13:15 - 13:30   | Prototype Design of Compact Quasi-isotropic Planar Antenna for Energy Harvesting  | Hibiki Ito<br>Nagoya Institute of Technology                |
| 5  | 13:30 - 13:45   | A Study of Antenna Impedance and Radiation Characteristics for High-Efficiency Wireless Power Transfer                                      | Takumi Kanamori<br>Shizuoka University                      |
| 6  | 13:45 - 14:00   | Prototype Development of RF-DC Conversion Circuit with Complex MPPT using Transmission Line   | Madoaka Suga<br>Nagoya Institute of Thecnology              |
| 7  | 14:00 - 14:15   | Design of 150MHz band antenna for life jacket   | Taro Kawai<br>Toyama Prefectural University                 |
|    | 14:15 - 14:20   | Short Break   |   |
|    | <b>Session2</b> | <b>Chair: Masaki Adachi (Shizuoka University)</b>   |   |
| 8  | 14:20 - 14:35   | Design of SIW Rotman Lens Beam Forming Network in Terahertz Band  | Shumpei Kishi<br>Nagoya Institute of Technology             |
| 9  | 14:35 - 15:50   | Multi-Beam Performance of Constant-K Spherical Lens Antenna in Terahertz Band   | Takeyuki Tsuchida<br>Nagoya Institute of Technology         |
| 10 | 14:50 - 15:05   | A study on gain fluctuation reduction of beam switching scanning lens antenna   | Takuya Sugiyama<br>Nagoya Institute of Technology           |
| 11 | 15:05 - 15:20   | Design Equation for Class-E Inverters Considering Component Mounted Lines   | Akihiko ISHIWATA<br>Toyohashi University of Technology      |
| 12 | 15:20 - 15:35   | Synthetic Complex Permittivity Measurement of Multi-layerd Biological Tissues   | SEGAWA Takamasa<br>Toyohashi University of Technology       |
| 13 | 15:35 - 15:50   | Imaging Experiment Using millimeter Wave for Concealed Item Detection   | Arie Setiawan<br>Mie University                             |
| 14 | 15:50 - 16:05   | Electro-Optic Sensor for Simultaneously Receiving Two Polarization Components for 5G Wireless   | Shunsuke nakamori<br>Mie University                         |
|    | 16:05 - 16:10   | Short Break   |   |
|    | <b>Session3</b> | <b>Chair: Yuki Takayanagi (Toyama University)</b>   |   |
| 15 | 16:10 - 16:25   | FDTD Analysis of Polarization Characteristics of Anomalous Mountain Diffraction Associated with Earthquakes                                 | Ryunosuke Takada<br>University of Toyama                    |
| 16 | 16:25 - 16:40   | Three-dimensional electromagnetic field analysis of abnormal mountain diffraction phenomenon of electromagnetic waves caused by earthquakes | Tomoki Miyagishi<br>University of Toyama                    |
| 17 | 16:40 - 16:55   | Comparison of Neural Network for the Deep Learning of Preseismic Anomalous Electromagnetic Wave Propagation                                 | Atsuya Ishikuro<br>University of Toyama                     |
| 18 | 16:55 - 17:10   | Deep Learning of Pre-seismic Electromagnetic Anomaly by Residual Network and Spectrogram  | Shuya Takagi<br>University of Toyama                        |
| 19 | 17:10 - 17:25   | Verification of probabilistic statistical relationship between electromagnetic wave anomaly propagation and earthquake occurrence           | Yuki Takayanagi<br>Toyama University                        |
|    | 17:25 - 17:30   | Closing Address   | Prof. Keisuke Noguchi<br>IEEE AP-S Nagoya Chapter Chair     |
|    | 17:30 - 18:30   | 特別講演 "High Efficiency Power Amplifier Design Methodology for Energy Applications"   | Prof. Shinji Hara<br>Nagoya University                      |
|    | Around 18:30    | Award Ceremony  |   |