## Technical Program

### 21AM1A  Inversion Methods for Electromagnetic Imaging and Applications-I

**Tuesday, May 21, 9:00-10:40 (Room A)**

**Chairs:** Matteo Pastorino, *Italy*
Andrea Randazzo, *Italy*

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   M. Dalarsson¹, M. Norgren¹
   ¹ Royal Institute of Technology, Sweden

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   ² Tamkang University, Taiwan, ³ Electrical Engineering Department Tamkang University Taiwan, Taiwan

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   C. Ponti¹, F. Frezza¹, L. Papewski¹, G. Schentini¹
   ¹ Roma Tre University, Italy, ² Sapienza University of Rome, Italy, ³ Roma Tre, Italy

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   ¹ Nihon University, Japan

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   ¹ Kyoto University, Japan, ² Delft University of Technology, The Netherlands

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**Chairs:** Donald R. Wilton, USA
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   ¹ Aalto University, Finland, ² University of Kentucky, USA, ³ Aalto University of Science and Technology, Finland

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   ¹ Aalto University, Finland, ² University of Jyväskylä, Finland

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   ¹ Institute of Radio-Physics and Electronics, Ukraine, ² EPFL, Switzerland, ³ Ecole Polytechnique Fédérale de Lausanne, Switzerland, ⁴ Ecole Polytechnique Federale de Lausanne, Switzerland, ⁵ IRE NASU, Ukraine

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   ¹ Ecole Nationale Supérieure des Télécommunications de Bretagne, France, ² Ghent University, Belgium, ³ University of Michigan, USA

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   ¹ Ecole Polytechnique de Montreal, Canada, ² Polytechnique Montreal, Canada

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   ¹ Microwave Engineering Corporation, USA, ² Virginia Polytechnic Institute and State University, USA

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   ¹ Nagoya Institute of Technology, Japan, ² KOJIMA PRESS INDUSTRY CO., LTD., Japan, ³ Kojima Press Industry Co. Ltd., Japan

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H. Le1, T. Hirano1, J. Hirokawa1, M. Ando1
1 Tokyo Institute of Technology, Japan

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Y. Tu1, W. Luo1, Y. Shih1, G. Huang1, Y. Shiao1
1 National Taiwan University of Science and Technology, Taiwan, 2 National Nano Device Laboratories, Taiwan

4. Prototype of 3-GHz 60-GHz Millimeter-wave-based Wireless File-Transfer System (invited)
Y. Asakura1, K. Kondou1, M. Shinagawa1, S. Tamanoski1, M. Noda1
1 Sony Corporation, Japan

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M. Inoue1, M. Hodo1, S. Horiguchi1, K. Arakawa1, M. Fujita1, T. Nagatsuma1
1 Nitto Denko Corp., Japan, 1 University of Osaka, Japan, 3 University, Japan, 4 Osaka University, Japan

6. A 60GHz Gigabit Access Transponder Equipment for Short Range and Short-time File Transfer (invited)
M. Ando1, M. Zhang1, J. Hirokawa1, T. Tunguchi1
1 Tokyo Institute of Technology, Japan, 2 Japan Radio Co., Ltd., Japan
**21PM2A Inversion Methods for Electromagnetic Imaging and Applications-3**

**Tuesday, May 21, 16:00-17:40 (Room A)**

**Chairs:** Andrea Randazzo, Italy
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   1 Kyushu University, Japan, 2 Fukuoka Institute of Physics, Japan, 3 Tohoku University, Japan, 4 National Institute for Fusion Science, Japan, 5 National Institute for Fusion Science, Japan, 6 Konan University, Japan

2. Goniopolarimetry: Space-borne Radio Astronomy with Imaging Capabilities N/A
   B. Cecconi
   1 Observatoire de Paris, France

3. Goniopolarimetry with Coupled Electric and Magnetic Measurements N/A
   B. Cecconi, A. Gautier, J. Bergman, T. Chsl4, A. Marchaudon, C. Cavoit, O. Sanlloki
   1 Observatoire de Paris, France, 2 LESIA, Observatoire de Paris - CNRS - UPMC - Université Paris-Diderot, France, 3 IRFU, CNRS - École Polytechnique - UPMC - Université Paris-Sud, France, 4 IRAP, CNRS - Université Paul Sabatier, France, 5 LPC2E, CNRS - Université d’Orléans, France, 6 Institute of Atmospheric Physics AS CR, Czech Republic

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**Chairs:** Nader Engheta, USA
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   1 Waseda University, Japan

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**Chairs:** Alexander Yarovoy, The Netherlands
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   1 University of Maryland, USA, 2 Center for Nanophysics and Advanced Materials, USA

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   1 University of Maryland, USA, 2 University of Nottingham, United Kingdom

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   1 Irkutsk State University, Russia

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   1 Kansai University, Turkey

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Piergiorgio Uslenghi, USA

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   1 King Abdullah University of Science and Technology, Saudi Arabia

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   1 German Aerospace Center

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**Chairs:** Yasuyuki Maekawa, Japan
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   1 National Institute of Advanced Industrial Science and Technology, Japan

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A. Gamier', B. Cecconi2, P. Zarka1
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1 NHK, Japan. 2 NHK Science & Technology Research Laboratory, Japan. 3 NHK Science and Technical Research Laboratories, Japan

Tuesday, May 21, 16:00-17:40 (Room F)
Chairs: Jin-Fa Lee, USA
Zhen Peng, USA

21PM2F Advanced Computational Techniques for Multi-Scale and/or Multi-Physics Engineering Applications

Z. Peng1, K. Lim3, J. Lee1
1 ElectroScience Lab, The Ohio State University, USA. 2 The Ohio State University, USA. 3 Ohio State University, USA

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1 Nihon University, Japan. 2 Singapore University of Technology and Design, Singapore. 3 University of Illinois at Urbana-Champaign, USA

Y. Shao1, Z. Peng2, J. Lee1
1 The Ohio State University, USA. 2 ElectroScience Lab, The Ohio State University, USA. 3 Ohio State University, USA

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1 Japan Broadcasting Corporation. 2 Japan Broadcasting Corporation, Japan

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1 Hiroshima University, Japan

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1 Lanzhou Jiaotong University, Lanzhou, P.R. China. 2 Kyushu University, Japan
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Chairs: Sergei A. Tretyakov, Finland
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   1 Universidade de Coimbra - Instituto de Telecomunicações, Portugal, 2 The University of Mississippi, USA, 3 University of Mississippi, USA, 4 University of Wisconsin-Milwaukee, USA, 5 National Research University of Information Technologies, Mechanics and Optics, Russia, 6 Nokia Research Center, Finland, 7 Aalto University, Finland

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   1 Aalto University School of Electrical Engineering, Finland, 2 Aalto University, Finland

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   1 Lund University, Sweden

23AM1D  Near-Field Coupling and Focusing: Theory, Techniques and Applications

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Chairs: Paolo Nepa, Italy
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   1 University of Pisa, Italy, 2 University of Pisa, Italy

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   1 Advanced Radar Research Center, USA, 2 Concordia University, Canada

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   F. D’Agostino1, F. Ferrara2, C. Gennarelli2, R. Guerrieri2, M. Migliorozzi1, G. Rincic1
   1 University of Salerno, Italy

4. Radiarion Pattern Synthesis of Phased Array Antennas Based on a Domain Transformation of Field Basis Functions (invited)
   H. Chou1
   1 Yuan Ze University, Taiwan

5. Reconstruction of MMW Near-field Image with Antenna-radiation-pattern Deconvolution Processing
   T. Toyoda
   1 NTT Microsensor Integration Laboratories, Japan

6. Circular Antenna Arrays for Near-Field Focused or Multi-Focused Beams (invited)
   F. Lemaitre-Augé1, R. Sinigaglia2, C. Caloz1, D. Kaddour4
   1 Institut Polytechnique de Grenoble, France, 2 Grenoble INP, France, 3 Ecole Polytechnique de Montreal, Canada, 4 LCIS, Grenoble INP, France

23AM1E  Cognitive Radio and Software Controlled Antennas

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Chairs: Sembiam Rengarajan, USA
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   1 University of Pisa, Italy

2. Reconfigurable RF Circuits for Future Multi-Mode Multi-Band Mobile Terminals
   H. Okazaki1, T. Furuta1, K. Kawai1, Y. Takagi1, A. Fukuda1, S. Narahashi1
   1 NTT DOCOMO, INC., Japan

3. Fixed-Frequency Beam Steering from a Stub-Loaded Microstrip Leaky-Wave Antenna
   D. K. Karmokar1, D. Thajakoluna1, K. Esselle2, M. Heimlich1, L. Matekovits3
   1 Macquarie University, Australia, 2 Politecnico di Torino, Italy
23AM1E Smart Antennas

Thursday, May 23, 10:10-11:50 (Room E)
Chairs: Sembiam Rengarajan, USA
Lotfollah Shafai, Canada

4. Multivariate Regression Analysis for Estimating the Channel Capacity of Small MIMO Antennas Regarding Correlation, Power Imbalance, and SNR
T. Kitanaka1, K. Honda1, K. Ogawa1
1 Toyama University, Japan, 2 University of Toyama, Japan

5. Mutual Interactions Between Holding Angle and Broadcasting Waves Polarization on the Sensitivity of a Portable DTV MRC Array
M. Yamazaki1, K. Honda1, K. Ogawa1
1 Toyama University, Japan, 2 University of Toyama, Japan

6. Photonic Approach to Beam Steering of Phased Array Antenna
P. Darvishi1, A. B. Gorji1, B. Zakeri1
1 Babol Nasirian University of Technology, Babol, Iran

23AM1F Ultrawideband Antennas

Thursday, May 23, 8:50-11:30 (Room F)
Chairs: John Volakis, USA
Akira Hirose, Japan

1. Complementary Triangular SRR and inverted U-slot loaded UWB printed Monopole Antenna with Dual band notch characteristics (invited) N/A
M. Qai1, S. Kumar2, V. M. Ravi1, P. H. Rao1
1 TIF-.Trichy, India, 2 National Institute of Technology, Trichirappalli, India,

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1 The University of Tokyo, Japan

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D. Sarkar1, K. V. Srivastava1
1 Indian Institute of Technology, Kanpur, India

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1 Jadavpur University, India, 2 National Institute of Technology Durgapur, India

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