

2021 IEEE USNC-URSI Radio Science Meeting (Joint with AP-S Symposium)

**Singapore
4 – 10 December 2021**



**IEEE Catalog Number: CFP2101W-POD
ISBN: 978-1-6654-4657-0**

**Copyright © 2021, U.S. National Committee-International Union of Radio Science
(USNC-URSI) under licence to authors
All Rights Reserved**

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP2101W-POD
ISBN (Print-On-Demand):	978-1-6654-4657-0
ISBN (Online):	978-1-946815-10-1

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

MO-SP.1A: HIGH SENSITIVITY PHASED ARRAY RECEIVERS FOR LOCATION SERVICES, 5G, RADIO ASTRONOMY, AND SATELLITE COMMUNICATIONS

MO-SP.1A.2: REAL-TIME SIGNAL PROCESSING WITH FPGAS AND GPUS FOR1 WIDEBAND INTERFERENCE-RESILIENT COMMUNICATIONS

Mark Ruzindana, Mitchell C. Burnett, Jakob Kunzler, David Marsh, Kayla Lyman, Kyle Evans, Adam Whipple, Karl Warnick, Brian Jeffs, Brigham Young University, United States

MO-UB.1P: ANTENNA ARRAYS

MO-UB.1P.6: DOA TRACKING BASED ON MULTI-BERNOULLI FILTER FOR PLANAR3 ARRAY

Zhao Jun, Gui Renzhou, Tongji University, China; Dong Xudong, Nanjing University of Aeronautics and Astronautics, China

MO-UB.1P.7: COMPACT AND BROADBAND LPDA WITH CURVED BOW-TIE5 ELEMENTS FOR TVWS BAND

Rajbala Solanki, Indian Institute of Technology Bombay, India

MO-SP.1P.4: DUAL BAND SLOT ANTENNA WITH SUPPRESSED HIGHER ORDER7 HARMONICS FOR WIRELESS POWER TRANSMISSION

Neeta Singh, Vikrant Kaim, Binod Kumar Kanaujia, Jawaharlal Nehru University, India

TU-UB.1A: ELECTROMAGNETIC INTERACTION AND COUPLING

TU-UB.1A.1: EFFICIENT WIRELESS POWER TRANSFER (WPT) AND FIELD9 CONTAINMENT THROUGH CHIRAL ORDERING OF A FOUR-TIER WPT SYSTEM

Saeed Khan, Chad Bailey, Kansas State University, United States

TU-UB.1A.2: WIRELESS CHARGING SHIELDING STRUCTURE WITH PERIODIC SLOTS11 IN UAVS FOR WEIGH REDUCTION

Zuming Wang, Xin Cao, Yuying Zhu, Yuyu Zhu, Qiangming Cai, Jun Fan, School of Information Engineering, Southwest University of Science and Technology, China

TU-UB.1A.3: PLANAR WGM RESONATOR WITH HIGH DIELECTRIC-CONSTANT13 CERAMIC SLAB FOR SENSING APPLICATIONS

Afsaneh Hojjati Firoozabadi, Ala Eldin Omer, Suren Gigoyan, Safieddin Safavi-Naeini, University of Waterloo, Canada

TU-UB.1A.5: FREQUENCY DEPENDENCE OF ELECTROMAGNETIC COUPLING IN15 MARS SOIL SIMULANTS

Shanti Garman, Yasuo Kuga, Oliver Ruo, Salma Hassanain, University of Washington, United States

TU-A2.1A: ELECTROMAGNETIC THEORY, MATERIAL PROPERTIES AND MEASUREMENTS I

TU-A2.1A.3: PROPAGATION PHASE ABERRATION CHARACTERIZATION OF17 AUTOMOTIVE RADAR COVERS

Adib Nashashibi, Kamal Sarabandi, University of Michigan, United States; Stephen Decker, General Motors, United States

TU-UE.1A: ELECTROMAGNETIC ENVIRONMENT AND INTERFERENCE

TU-UE.1A.1: ELECTROMAGNETIC IMPACT OF PARASITIC EFFECTS ON THE STDP19 CHARACTERISTICS IN NEUROMORPHIC MEMRISTOR CROSSBAR ARRAYS

*Tuomin Tao, Hanzhi Ma, Quankun Chen, Shurun Tan, Er-Ping Li, Zhejiang University, China; En-Xiao Liu, A*STAR Institute of High Performance Computing, Singapore*

TU-UE.1A.2: USING SQUARE CROSS STRUCTURE FOR FAR-END CROSSTALK21 REDUCTION ON MICROSTRIP SIGNAL LINES IN DDR5

Qiang-Ming Cai, Xiao-Bo Yu, Liang Zhang, Chao Zhang, Lin Zhu, Xin Cao, Jun Fan, Southwest University of Science and Technology, China; Yinglei Ren, Xiaoning Ye, Intel Corporation, China

TU-UE.1A.3: FAR-END CROSSTALK MITIGATION FOR TRANSMISSION LINES IN DDR523 USING GLASS-WEAVE COATING STRUCTURE

Xiao-Bo Yu, Qiang-Ming Cai, Liang Zhang, Chao Zhang, Lin Zhu, Xin Cao, Jun Fan, Southwest University of Science and Technology, China; Yinglei Ren, Xiaoning Ye, Intel Corporation, China

WE-A1.3A: PHASED ARRAY ANTENNAS III

WE-A1.3A.7: A 4×4 K/KA-BAND SEQUENTIALLY ROTATED WIDEBAND CIRCULARLY25 POLARIZED MICROSTRIP PHASED ARRAY ANTENNA WITH STABLE GAIN PERFORMANCE

Sanghamitro Das, Satish Sharma, Rudraishwarya Banerjee, San Diego State University, United States

WE-UF.1A: PROPAGATION EFFECTS, MODELS AND MEASUREMENTS

WE-UF.1A.5: DIFFRACTION EFFECTS OF ISLANDS ON THE OVER-THE-HORIZON27 PROPAGATION OF A LOW-POWER WIDE-AREA SYSTEM

Yuji Ito, Hiroki Ichiba, Toshihiko Hamasaki, Hiroshima Institute of Technology, Japan

WE-A4.1P: SCATTERING, DIFFRACTION AND RCS

WE-A4.1P.8: RADAR CROSS SECTION ESTIMATION FOR ENTOMOLOGICAL29 APPLICATIONS: TARGET DIELECTRIC CHARACTERIZATION AND ITS IMPACTS

Omar Alzaabi, Khalifa University, United Arab Emirates; Mohammad Al-Khaldi, University Corporation for Atmospheric Research, United States; Mohamed Alkhatib, Diego Peñaloza, Julio Urbina, James Breakall, Michael Lanagan, Pennsylvania State University, United States

TH-UB.1A: FREQUENCY-DOMAIN METHODS

TH-UB.1A.4: A NEW APPROACH TO PROVIDING MATCHED TERMINATION FOR THE31 COMPUTATION OF S-PARAMETERS OF ANTENNAS AND MICROWAVE CIRCUITS VIA EM SIMULATION

Chao Li, Mohammad Sharawi, Polytechnique Montreal, Canada; Raj Mittra, University of Central Florida, United States

TH-UB.2A: TIME-DOMAIN METHODS I

TH-UB.2A.5: MODELING FREQUENCY-DEPENDENT DISPERSION IN A33 ONE-DIMENSIONAL ELECTRODYNAMIC LATTICE-BOLTZMANN METHOD

Cael Warner, Loïc Markley, Kenneth Chau, University of British Columbia, Canada

TH-UB.3A: PROPAGATION, SCATTERING, IMAGING AND REMOTE SENSING I

TH-UB.3A.2: POLARIMETRIC BACKSCATTER MEASUREMENTS OF ROAD SURFACES35 AT J-BAND FREQUENCIES FOR STANDOFF ROAD CONDITION ASSESSMENT

Tanner Douglas, Adib Nashashibi, Mani Kashanianfard, Kamal Sarabandi, University of Michigan, United States

TH-UB.3A.7: EXPERIMENTAL DETECTION OF BURIED SUB-MM DIAMETER WIRES37 USING MICROWAVE GROUND-PENETRATING RADAR

Samuel Wagner, Stephen Pancrazio, Ababil Hossain, Anh-Vu Pham, University of California, Davis, United States

TH-A5.1P: PRINTED AND CHIP ANTENNAS

TH-A5.1P.3: A 4-ELEMENT WIDEBAND MIMO ANTENNA USING QUARTER-MODE SIW39 AND 90-DEGREE BENT PLANAR DIPOLE

Mahesh Kumar Busineni, Ayaz Ahmad, Jayanta Mukherjee, Indian Institute of Technology Bombay, India

TH-UK.1P: ELECTROMAGNETICS IN BIOLOGY AND MEDICINE II

TH-UK.1P.2: PARTIAL DIFFERENTIAL EQUATION MODELING OF BLOOD OXYGEN41 TRANSMISSION

Renzhou Gui, Xiaohong Ji, Juan Li, Huilin Zheng, Jun Zhao, Xiaomeng Zhao, Tianyu Tang, Wei Wu, Hehua Zhu, Tongji University, China

TH-UK.1P.3: CLINICAL TEST OF SURFACE REJECTION METHOD FOR MICROWAVE43 BREAST CANCER IMAGING

Haiyang Ma, Shouhei Kidera, University of Electro-Communications, Japan; Shinsuke Sasada, Morihito Okada, Takamaro Kikkawa, Hiroshima University, Japan

TH-UK.1P.4: RETINAL DISEASE DETECTION BASED ON OPTICAL COHERENCE45 TOMOGRAPHY IMAGES USING IMPROVED YOLOV5

Xiaojun Bi, Minzu University of China, China; Lu Han, Harbin Engineering University, China

TH-UK.1P.5: ATTENTION-AUGMENTED ELECTROMAGNETIC REPRESENTATION OF47 SIGN LANGUAGE FOR HUMAN-COMPUTER INTERACTION IN DEAF-AND-MUTE COMMUNITY

Shengchang Lan, Linting Ye, Harbin Institute of Technology, China; Kang Zhang, Korea Advanced Institute of Science and Technology, Korea (South)

TH-UK.1P.6: E-FIELD STRENGTH MEASUREMENTS OF A 5G BASE STATION IN 28 GHZ49 BAND FOR EMF EXPOSURE ASSESSMENT

Sen Liu, Teruo Onishi, Masao Taki, Miwa Ikuyo, Kazuhiro Tobita, Soichi Watanabe, National Institute of Information and Communications Technology, Japan; Yukihiya Suzuki, Tokyo Metropolitan University, Japan

TH-UK.1P.9: A GRAPHENE-BASED MICROSTRIP ANTENNA ARRAY FOR51 NEURODEGENERATIVE DISEASE MONITORING

Minghui Zhao, Tughrul Arslan, Imran Saied, University of Edinburgh, United Kingdom

TH-UK.1P.10: MICROWAVE TOMOGRAPHIC IMAGING OF EXPERIMENTAL BONE53 PHANTOMS FOR BONE IMAGING APPLICATION

Bilal Amin, Martin O'Halloran, Muhammad Adnan Elahi, National University of Ireland Galway, Ireland; Atif Shahzad, Institute of Metabolism and Systems Research, University of Birmingham, United Kingdom

TH-UB.2P: WIRELESS COMMUNICATIONS AND SENSING NETWORKS

TH-UB.2P.3: EARLY DETECTION AND PREVENTION OF RED PALM WEEVIL ALONG56 WITH IRRIGATION MANAGEMENT SYSTEM

Osama M. Haraz, Assiut university, Egypt; Waleed Saad, Menoufia University, Egypt; Mohamed Ali, Tayeb A. Denidni, Universite du Quebec, Canada

TH-UB.2P.5: PERFORMANCE OF RECONFIGURABLE INTELLIGENT SURFACES VS.58 RELAYING FOR UAV-ASSISTED COMMUNICATIONS

Mohammad Abualhayja'a, Anthony Centeno, Lina Mohjazi, Qammer Abbasi, Muhammad Imran, University of Glasgow, United Kingdom; Majid Butt, Philippe Sehier, Nokia Bell Labs, France

TH-UC.1P: RADIO COMMUNICATION AND SIGNAL PROCESSING SYSTEMS I

TH-UC.1P.1: AN ULTRAWIDE BAND UNIFORM DIFFRACTION TOMOGRAPHY60 ALGORITHM FOR GROUND PENETRATING RADAR

Mehdi Mousavi, Sajjad Sadeghi, Alireza Madannejad, University of Tehran, Iran; Robert Burkholder, The Ohio State University, United States

TH-UC.1P.2: DETECTING BLURRED GROUND-BASED SKY/CLOUD IMAGES.....62

Mayank Jain, Soumyabrata Dev, University College Dublin, Ireland; Navya Jain, Ram Lal Anand College, University of Delhi, India; Yee Hui Lee, Nanyang Technological University, Singapore; Stefan Winkler, National University of Singapore, Singapore

TH-UC.1P.3: MULTI-SENSING DATA FUSION FOR HUMAN ACTIVITY RECOGNITION64 BASED ON NEUROMORPHIC COMPUTING

Zheqi Yu, William Taylor, Hadi Heidari, Muhammad Imran, Qammer Abbasi, University of Glasgow, United Kingdom; Adnan Zahid, Heriot Watt University, United Kingdom

TH-UC.1P.5: REALIZATION OF EFFICIENT CHANNEL ESTIMATION USING66 PROGRAMMABLE METASURFACE

Yueheng Li, Xueyun Long, Eisenbeis Joerg, Sven Bettinga, Thomas Zwick, Karlsruhe Institute of Technology, Germany; Wan Xiang, Tiejun Cui, Southeast University, China

FR-UB.1A: MICROSTRIP ANTENNAS AND PRINTED DEVICES

FR-UB.1A.6: EFFECTIVE PERMITTIVITY AND DIELECTRIC LOSS IN A MICROSTRIP68 TRANSMISSION LINE WITH ANISOTROPIC SUBSTRATE AND ISOTROPIC SUPERSTRATE

Andrey Kobaykov, Aramais Zakharian, Corning Inc., United States

FR-UB.1A.10: AN ADVANTAGE OF SENSITIVITY TO IDENTIFY CIRCULATING TUMOR70 CELL DERIVED BY PRIMARY LESION FROM USING RING RESONATOR TYPE OF ELECTRODE WITH OSCILLATOR DEVICE

Masaya Sakamoto, Futoshi Kuroki, National Institute of Technology, Kure College, Japan; Shota Sora, Tohoku University, Japan

FR-SP.2A: NOVEL METHODS AND ALGORITHMS FOR MICROWAVE BIOMEDICAL APPLICATIONS

FR-SP.2A.10: MACHINE LEARNING-BASED APPROACHES FOR BREAST CANCER72 DETECTION IN MICROWAVE IMAGING

Humza Sami, Mahnoor Sagheer, Kashif Riaz, Muhammad Qasim Mehmood, Muhammad Zubair, Information Technology University (ITU), Pakistan

FR-UB.3A: PROPAGATION, SCATTERING, IMAGING AND REMOTE SENSING II

FR-UB.3A.7: CONTRAST SOURCE INVERSION BASED OBJECT RECONSTRUCTION74 BURIED IN MULTI-LAYERD BACKGROUND FOR MICROWAVE SUBSURFACE IMAGING

Yoshihiro Yamauchi, Shouhei Kidera, University of Electro-Communications, Japan

FR-UB.3A.8: POLARIMETRY EFFECT IN THREE-DIMENSIONAL CONTRAST SOURCE76 INVERSION FOR MICROWAVE BREAST IMAGING

Peixian Zhu, Hayatomomaru Morimoto, Shouhei Kidera, University of Electro-Communications, Japan

FR-UA.1P: ELECTROMAGNETIC METROLOGY AND ANTENNA APPLICATIONS

FR-UA.1P.5: COMPUTATIONAL INVESTIGATION OF THE DTU-ESA 12 GHZ VAST1278 VALIDATION STANDARD ANTENNA TO IDENTIFY FEATURES CONTRIBUTING TO THE RADIATED FIELD

Mustafa Murat Bilgic, Andreas Ericsson, Per Heighwood Nielsen, Tonny Rubæk, TICRA, Denmark; Javier Fernandez Alvarez, Jeppe Majlund Bjørstorp, Kyriakos Kaslis, Olav Breinbjerg, Technical University of Denmark, Denmark

FR-UA.1P.6: DOA ESTIMATION FOR CO-PRIME ARRAY WITH MIXED NOISE VIA A80 NORMALIZED COVARIANCE MATRIX

Zhao Jun, Gui Renzhou, Tongji University, China; Dong Xudong, Nanjing University of Aeronautics and Astronautics, China

FR-UA.1P.8: IMPROVEMENT IN VERTICAL POSITIONING WITH GPS RECEIVER CLOCK82 STEERED BY PRECISE TIME REFERENCE

*Shilpa Manandhar, Yu Song Meng, Agency for Science, Technology and Research (A*STAR), Singapore*

FR-UB.1P: METAMATERIALS AND WAVE-GUIDING STRUCTURES

FR-UB.1P.3: SYMMETRIC 8- CHANNEL POWER DIVIDER/COMBINER BASED ON A 90°84 SECTOR WAVEGUIDE

Ning Li, Xin Cao, Qiangming Cai, Yuyu Zhu, Jun Fan, Southwest University of Science and Technology, China

FR-UB.1P.4: THE DESIGN OF A C-BAND BAND PASS CAVITY FILTER86

Yuepeng Yu, Yanfei Li, Communication University of China, China

FR-UB.1P.8: COMPLEMENTARY SPLIT RING RESONATOR BASED FLUIDIC88 MICROWAVE SENSOR

Zsolt Szabó, Incze Denissza, Adrienn Lilla Márton, Kristóf Iván, Pázmány Péter Catholic University, Hungary

FR-UB.1P.9: NUMERICAL STUDY OF TE-WAVE PROPAGATION IN WAVEGUIDES90 WITH GRADED PLASMONIC OBSTACLES

Brage B Svendsen, Mariana Dalarsson, KTH Royal Institute of Technology, Sweden

FR-UF.1P: MICROWAVE REMOTE SENSING

FR-UF.1P.1: INVESTIGATION ON THE RELATION BETWEEN ZENITH TOTAL DELAY92 AND ATMOSPHERIC PARTICULATE MATTER (PM2.5)

*Shilpa Manandhar, Yu Song Meng, Agency for Science, Technology and Research (A*STAR), Singapore; Yee Hui Lee, Nanyang Technological University, Singapore*

FR-UF.1P.2: DAY-AHEAD FORECASTS OF AIR TEMPERATURE.....94

Hewei Wang, Beijing University of Technology, China; Muhammad Salman Pathan, The ADAPT Centre, Ireland; Yee Hui Lee, Nanyang Technological University, Singapore; Soumyabrata Dev, University College Dublin, Ireland

FR-UF.1P.3: A SIMPLE METHOD FOR VISUALIZING THE NVIS OPEN CHANNEL BASED ON IONOGRAM	96
<i>Varuliantor Dear, Prayitno Abadi, National Institute of Aeronautics and Space of Indonesia, Indonesia; Iskandar Iskandar, Adit Kurniawan, Institute Technology of Bandung, Indonesia; Rezy Pradipta, Boston College, United States</i>	
FR-UF.1P.6: MONITORING ATMOSPHERIC POLLUTANTS FROM GROUND-BASED OBSERVATIONS	98
<i>Nicholas Danesi, Mayank Jain, Soumyabrata Dev, University College Dublin, Ireland; Yee Hui Lee, Nanyang Technological University, Singapore</i>	
FR-UF.1P.7: ANALYZING THE IMPACT OF METEOROLOGICAL PARAMETERS ON RAINFALL PREDICTION	100
<i>Muhammad Salman Pathan, The ADAPT Centre, Ireland; Jiantao Wu, Soumyabrata Dev, University College Dublin, Ireland; Yee Hui Lee, Nanyang Technological University, Singapore; Jianzhuo Yan, Beijing University of Technology, China</i>	
FR-UF.1P.8: EMBEDDING CYCLICAL INFORMATION IN SOLAR IRRADIANCE FORECASTING	102
<i>T. A. Fathima, Independent Researcher, Ireland; Vasudevan Nedumpozhimana, The ADAPT Centre, Ireland; Yee Hui Lee, Nanyang Technological University, Singapore; Soumyabrata Dev, University College Dublin, Ireland</i>	
FR-UF.1P.9: AN INTEROPERABLE OPEN DATA PORTAL FOR CLIMATE ANALYSIS	104
<i>Jiantao Wu, Huan Chen, Soumyabrata Dev, University College Dublin, Ireland; Fabrizio Orlandi, Declan O'Sullivan, The ADAPT Centre, Ireland; Yee Hui Lee, Nanyang Technological University, Singapore</i>	
FR-UF.1P.10: AUTOMATED CLIMATE ANALYSES USING KNOWLEDGE GRAPH	106
<i>Jiantao Wu, Huan Chen, Soumyabrata Dev, University College Dublin, Ireland; Fabrizio Orlandi, Declan O'Sullivan, The ADAPT Centre, Ireland; Yee Hui Lee, Nanyang Technological University, Singapore</i>	
 FR-UB.2P: MODELING, OPTIMIZATION AND MACHINE LEARNING II	
FR-UB.2P.3: OPTIMAL BASE STATION DEPLOYMENT OF TDOA-BASED POSITIONING SYSTEM	108
<i>Ziqi Liu, Siyu Lin, Beijing Jiaotong University, China</i>	
FR-UB.2P.6: METHODOLOGY FOR THE DEVELOPMENT OF BROADBAND MULTILAYER MICROWAVE ABSORBERS	110
<i>Varsha Mishra, Eliana Canicatti, Agostino Monorchio, University of Pisa, Italy</i>	
 FR-UC.1P: RADIO COMMUNICATION AND SIGNAL PROCESSING SYSTEMS II	
FR-UC.1P.2: DIRECTION FINDING AND SELF-CALIBRATION FOR BISTATIC MIMO RADAR IN THE PRESENCE OF DIRECTION-DEPENDENT MUTUAL COUPLING	112
<i>Shuai Luo, Yuexian Wang, Jianying Li, Northwestern Polytechnical University, China</i>	
FR-UC.1P.3: PADDED SPARSE ARRAY FOR DOA ESTIMATION OF NONCIRCULAR SIGNALS IN THE PRESENCE OF UNKNOWN MUTUAL COUPLING	114
<i>Hangqi Yan, Yuexian Wang, Ling Wang, Northwestern Polytechnical University, China</i>	
FR-UC.1P.4: SPARSE BAYESIAN LEARNING FOR DIRECT POSITION DETERMINATION WITH MUTUAL COUPLING	116
<i>Fei Ma, Yuexian Wang, Ling Wang, Chuang Han, Northwestern Polytechnical University, China</i>	
FR-UC.1P.6: TREE ROOT POSITIONING IN HETEROGENEOUS SOIL ENVIRONMENT USING GPR	118
<i>Wenhao Luo, Haihan Sun, Yee Hui Lee, Abdulkadir C Yucel, Nanyang Technological University, Singapore; Genevieve Ow, Mohamed Lokman Mohd Yusof, Centre for Urban Greenery & Ecology National Parks Board, Singapore</i>	

FR-UC.1P.7: ECHO DATA ANALYSIS OF TUNNEL HAZARD DETECTION RADAR BASED ON COMPRESSED SENSING 120

Renzhou Gui, Xiaomeng Zhao, Jun Zhao, Juan Li, Huilin Zheng, Tianyu Tang, Xiaohong Ji, Hehua Zhu, Wei Wu, Tongji University, China

FR-UC.1P.8: CONSTRUCTION ON WIRELESS LINK BETWEEN IOT SENSOR NODES AND GATEWAY FOR LANDSLIDES PREDICTION SYSTEM 122

Daiya Miyamoto, Yuki Shinhama, Takuma Kinoshita, Subaru Iwaki, Kouta Iwamoto, Masaya Sakamoto, Futoshi Kuroki, National Institute of Technology, Kure College, Japan; Aoi Sakata, Kazuya Miyamoto, Miyamoto Device Development Co., Ltd., Japan

FR-UC.1P.9: AN ON-CHIP 2-D DFT ACCELERATOR ULTRASONIC WAVEFRONT FOR CONVOLUTIONAL NEURAL NETWORKS 124

Kok-Hin Teng, Salahuddin Raju, Di Zhu, Lay Keng Jayce Lim, Ssu-Han Daniel Chen, Leong Ching Eva Wai, Jaibir Sharma, En-Yuan Joshua Lee, Jiaqiang Eldwin Ng, Tshun Chuan Kevin Chai, Lal Amit, Institute of Microelectronics, Singapore

FR-UC.1P.10: GRAVITATIONAL WAVE SIGNAL EXTRACTION BASED ON CHIRPLET TRANSFORM 126

Renzhou Gui, Xiaomeng Zhao, Jun Zhao, Juan Li, Huilin Zheng, Tianyu Tang, Xiaohong Ji, Hehua Zhu, Wei Wu, Tongji University, China