11th International Conference on MOBILe Wireless MiddleWARE, Operating Systems, and Applications (EAI MOBILWARE 2022)

Online Conference, 28-29 December 2022

Advanced Program Summary (Chinese Standard Time Zone)

28 December 2022 (Wednesday)	
14:50-15:00	**Opening Ceremony**
15:00-15:50	**Keynote Speech**
16:00-17:30	Session 1 Middleware, Wireless, and Future Networks
17:30-17:40	**Break**
17:40-19:50	Session 2 Integrated Satellite-Terrestrial Information Network
29 December 2022 (Thursday)	
15:00-17:10	Session 3 Integrated Satellite-Terrestrial Intelligent Information Processing, Decision and Planning (1)
17:10-17:20	**Break**
17:20-19:30	Session 4 Integrated Satellite-Terrestrial Intelligent Information Processing, Decision and Planning (2)
19:30-19:40	**Closing**

Keynote 1: 15:00-15:5028December 2022(Wendesday)

Session Chair:

Keynote Speech

Technical Program*(Time zone: GMT/UTC)*

Wednesday, 28 December 2022

Session 1Middleware, Wireless, and Future Networks
Sesion Chair: Xin Liu, Dalian University of Technology, China

Middleware-Based Approach for Latency-Sensitive Service Provisioning in IoT with End-Edge Cooperation
CanlongSun (The 705 Research Institute of China State Shipbuilding Corporation Limited),Ting Li(The 705 Research Institute of China State Shipbuilding Corporation Limited), ZihaoWu (The 705 Research Institute of China State Shipbuilding Corporation Limited), CongLi (Xi'an Institute of Optics and Precision Mechanics)

Deep Reinforcement Learning based Congestion Control Mechanism for SDN and NDN in Satellite Network
Ziyang Xing (Changchun University of Science and Technology, China), HuiQi (Changchun University of Science and Technology), Xiaoqiang Di (Changchun University of Science and Technology),JinyaoLiu (Changchun University of Science and Technology), LigangCong (Changchun University of Science and Technology)

Intelligent Automated Penetration Testing using Reinforcement Learning to Improve the Efficiency and Effectiveness of Penetration Testing
Mohammed Aqra (Changchun University of Science and Technology), Xiaoqiang Qi (Changchun University of Science and Technology)

Research and Application of Water Quality Prediction Algorithm based on 5G and AI
AnshunZhou (Hainan Branch, China United Network Communication Corporation, Hainan, China),Yifan Xiao (Hainan Branch, China United Network Communication Corporation, Hainan, China), YuwenHuo (College of Computer and Information Science, Southwest University, Chongqing, China),MingdeHuo (Chongqing Branch, China United Network Communications Corporation, Chongqing, China), Yuting Luan (China Railway Engineering Consulting Group Corporation, Beijing, China)

Time Slot Correlation-Based Caching Strategy for Information-Centric Satellite Networks
Rui Xu (Changchun University Of Science And Technology), Rui Xu (Changchun University of Science and Technology),XiaoqiangDi (Changchun University of Science and Technology), Jing Chen (Changchun University of Science and Technology), JinhuiCao (Changchun University of Science and Technology), Hao Luo (Changchun University of Science and Technology),HaoweiWang (Changchun University of Science and Technology), Hui Qi(Changchun University of Science and Technology),XiongwenHe (Beijing Institute of Spacecraft System Engineering),WenpingLei (Beijing Institute of Space Mechanic and Electricity)

Session 2 Integrated Satellite-Terrestrial Information Network
Session Chair: Zhenhui Dong, Beijing Institute of Spacecraft System Engineering, China

Powder Sintering Fabrication of the Ba-Al-S:Eu Single Sputtering Target
DongpuZhang (Beijing Institute of Spacecraft System Engineering),Huimin Chen (Sifang College, Shijiazhuang TiedaoUnverisity), Fang Xu (Beijing Lenovo Software Ltd.),WeiguoGuo (Beijing Institute of Spacecraft System Engineering), ZhaojingCui (Beijing Institute of Spacecraft System Engineering, China), Wen Wu (Beijing Institute of Spacecraft System Engineering)

Features extraction of Reconstruction Model using in Augmented Reality System of Teleoperation Mobile Robots
DongpuZhang (Beijing Institute of Spacecraft System Engineering), Fang Xu (Beijing Lenovo Software Ltd.),HuiminChen (Sifang College, ShijiazhuangtTiedaoUnverisity), WenWu (Beijing Institute of Spacecraft System

Engineering),ZhaojingCui (Beijing Institute of Spacecraft System Engineering, China),WeiguoGuo (Beijing Institute of Spacecraft System Engineering)
Design and implementation of a pipeline-based data scheduling method for spacecraft with multiple data buses
Sheng Yu (China Academy of Space Technology), Duo Wang (CAST),ZejingLv (CAST), Dan Wang (University of Chinese Academy Science), ZhenhuiDong (Beijing Institute of Spacecraft System Engineering)

Research on Rapid 3D Reconstruction for Teleoperation in Manned Lunar Exploration Mission
TianLin (Beijing Institute of Spacecraft System Engineering),YinuoSheng (Beijing Institute of Spacecraft System Engineering),XishengLi (Beijing Institute of Spacecraft System Engineering),PengchengWang (Beijing Institute of Spacecraft System Engineering)

Onboard Software Maintenance Design and Implementation for networking satellites
Wei Wu (Beijing Institute of Spacecraft System Engineering), Liang Qiao (Beijing Institute of Spacecraft System Engineering, China Academy of Space Technology),HongchengYan (Beijing Institute of Spacecraft System Engineering),CuilianWang (Beijing Institute of Spacecraft System Engineering), Yong Xu (Beijing Institute of Spacecraft System Engineering),XiaoruiYang (Beijing Institute of Spacecraft System Engineering)

Model Based Development of Spacecraft OBDH Software
ZhenhuiDong (Beijing Institute of Spacecraft System Engineering), YahangZhang (Beijing Institute of Spacecraft System Engineering),PeiyaoYang (Beijing Institute of Spacecraft System Engineering), YimingLiu (Beijing Institute of Spacecraft System Engineering), Xuan Chu (Beijing Institute of Spacecraft System Engineering)

Design of Aerospace Cloud Computing Server Based on Docker Cluster
ZhenhuiDong (Beijing Institute of Spacecraft System Engineering),LuyuanWang (Beijing Institute of Spacecraft System Engineering), Bowen Cheng (Beijing Institute of Spacecraft System Engineering), Zhihong Xu (Beijing Institute of Spacecraft System Engineering), ChaojiChen (Beijing Institute of Spacecraft System Engineering)

Session 3 Integrated Satellite-Terrestrial Intelligent Information Processing, Decision and Planning (1)
Session Chair: Dan Wang, Beijing Institute of Spacecraft System Engineering, China

Invited Talk: Research on the Development of Intelligent Space System (ISS)
Dan Wang (Beijing Institute of Spacecraft System Engineering (ISSE)), Fang Dong (Beijing Institute of Spacecraft System Engineering (ISSE)), Sheng Yu(China Academy of Space Technology),LuyuanWang(Beijing Institute of Spacecraft System Engineering)

Analysis and Simulation of High Orbit Weak Signal Tracking Algorithm
Xiaojiang Yang (Space Star Technology Company Limited), Qian Yu (Space Star Technology Company Limited),DongboPei (Space Star Technology Company Limited)

Avionic system Architecture Design of the Manned Deep Space Exploration Spacecraft
YanLiu(Beijing Institute of Spacecraft System Engineering), Yuchen Jia (Beijing Institute of Spacecraft System Engineering), Yuyin Tan (National Space Science Center, the Chinese Academy of Sciences),Songtao Fan (Beijing Institute of Spacecraft System Engineering),RuixunChen (Beijing Institute of Spacecraft System Engineering)

A Multi-Agent based Satellite Health Management System Architecture and Implementation Scheme
Bo Pang (Beijing Institute of Spacecraft System Engineering)

Research and application of energy efficiency optimization algorithm for spacecraft simulation platform
Zhou An (Beijing Institute of Spacecraft System Engineering), Yi Yuan (Beijing Institute of Spacecraft System Engineering), Xun Zhou (Beijing Institute of Spacecraft System Engineering), Wenlong Song (Beijing Institute of

Spacecraft System Engineering), Miao Qi (Beijing Institute of Spacecraft System Engineering), Huifang Pan (Beijing Institute of Spacecraft System Engineering)

SADA: SDN Architecture Based Secure Dynamic Access Scheme for Satellite Network
Dong Yan (Beijing Institute of Spacecraft System Engineering), Ming Gu (Beijing Institute of Spacecraft System Engineering), Luyuan Wang (Beijing Institute of Spacecraft System Engineering), Xiongwen He (Beijing Institute of Spacecraft System Engineering)

Research on the Concept and Connotation of Space Proving Grounds (SPG)
Dan Wang (Beijing Institute of Spacecraft System Engineering),ZhengjiSong (Beijing Institute of Spacecraft System Engineering, China),ChaojiChen (Beijing Institute of Spacecraft System Engineering)

Session 4 Integrated Satellite-Terrestrial Intelligent Information Processing, Decision and Planning (2)
Session Chair: Fan Bai, Beijing Institute of Spacecraft System Engineering, China

Invited Talk: Research on Integrated operation design of low orbit remote sensing satellite for intelligent application
Jie Du (CAST),ZhuoLi (CAST), Yixin Liu (CAST),Mengjie Shi (CAST),HaihuaLi (CAST)

Avionics System Architectures for Software-Defined Spacecraft
XiongwenHe (Beijing Institute of Spacecraft System Engineering),JionghuiLi (Beijing Institute of Spacecraft System Engineering, CAST),Fan Bai (Beijing Institute of Spacecraft System Engineering),XiaoyuJia (Beijing Institute of Spacecraft System Engineering),XiaofengHuang (Beijing Institute of Spacecraft System Engineering),MingweiXu (Tsinghua University)

Design of Satellite and Ground Data Interaction System Based on DSP and FPGA
Bo Liu (Beijing Institute of Spacecraft System Engineering),Shifeng Gao (Beijing Institute of Spacecraft System Engineering), Jiang Bo (Qian Xuesen Laboratory of Space Technology)

Research on Tianwen-1 Mars Probe Relay Communication Technology
Fan Bai (Beijing Institute of Spacecraft System Engineering), Han Yu (Beijing Institute of Spacecraft System Engineering), Ting Zhang (Beijing Institute of Spacecraft System Engineering), HuipingQiang(Beijing Institute of Spacecraft System Engineering), JionghuiLi (Beijing Institute of Spacecraft System Engineering)

Design and ptactice of Communication System During EDL for Mars Probe
TingZhang (Beijing Instiute of Space System Engineering),HuipingQiang(Beijing Instiute of Space System Engineering), Han Yu (Beijing Instiute of Space System Engineering),Huijiong Li (Beijing Instiute of Space System Engineering), Fan Bai (Beijing Instiute of Space System Engineering)
Design and implementation of power supply and distribution system for Mars landing mission
Yan Chen (Beijing Institute of Spacecraft System Engineering),Dong Yang (Beijing Institute of Spacecraft System Engineering),HaipingShi (Beijing Institute of Spacecraft System Engineering), Chengxiong Tang (Beijing Institute of Spacecraft System Engineering)

Study on EMC Influence of Zhu Rong Rover UHF band communication system
Han Yu (Beijing Institute of Spacecraft System Engineering)

Closing