Program of the 2021 International Symposium on Advanced Technologies and Applications in the Internet of Things

ATAIT 2021

RITSUMEIKAN

IEEE Council on Electronic Design Automation

Advance program

24th August 2021	
08:30-09:00	**Registration**
09:00-09:05	**Opening Remarks**
09:05-09:40	Invited Speech: **AI, IoT, FPGA and the Combinations** Professor: Yu Bai, California State University, USA. Professor: Wenwen Wang, University of Georgia, USA.

10:00-12:00	**Session 1: IoT + Devices** **Chair: Xiangbo Kong, (Ritsumeikan University, Japan)**	
No. 2	**Pix2Pix-Based Depth Estimation from Monocular Images for Dynamic Path Planning of Multirotor on AirSim** Tomoyasu Shimada, Hiroki Nishikawa, Xiangbo Kong and Hiroyuki Tomiyama Ritsumeikan University, Japan.	1
No. 19	**Urine-activated Battery Using Conductive Yarn Electrodes with Folded Backstitch Structure for Self-powered Urinary Incontinence Sensor** Ami Tanaka, Shiyuya Imoto and Takakuni Douseki Ritsumeikan University, Japan.	2
No. 16	**Quasi-Unsupervised Learning of Open Circuit Voltage Profiles for Efficiency Degradation Diagnosis in Operation** Masahito Arima[†], Lei Lin[†] and Masahiro Fukui[††] [†] Daiwa Can Company, Japan; [††] Ritsumeikan University, Japan.	3
No. 17	**Routing of Delivery Drones Considering Load and Wind Effects** Satoshi Ito[†], Keishi Akaiwa[†], Yusuke Funabashi[†], Hiroki Nishikawa[†], Xiangbo Kong[†], Ittetsu Taniguchi[††] and Hiroyuki Tomiyama[†] [†] Ritsumeikan University, Japan; [††] Osaka University, Japan.	4
No. 10	**High-degree Connectivity-based Swarm Communication Framework: Application to a Herd of Pastured Cattle** Geunho Lee[†], Kouki Ogata[†], Kota Okabe[†] and Fumiaki Sugino[††] [†] University of Miyazaki, Japan; [††] Miyazaki Livestock Research Institute, Japan.	5
No. 9	**A Survey on FPGA-based Deep Neural Network Accelerators** Mingyuan Li[†], Hengyi Li[††] and Lin Meng[††] [†] Hefiei University of Technology, China [††] Ritsumeikan University, Japan.	6

13:00-14:40	**Session 2: AI + Documents + Scenes** **Chair: Liang Li, (Ritsumeikan University, Japan)**	
No. 5	**A Effective Approach for Noise Reduction from Shirakawa's Hand-Notated Documents on OBIs Research** Ziming Wang, Xuebin Yue and Lin Meng Ritsumeikan University, Japan.	1
No. 11	**Discovering Coherent Topics from Urdu Text** Mubashar Mustafa[†], Feng Zeng[†], Hussain Ghulam[†] and Wenjia Li[††] [†] Central Sourth University, China; [††] New York Institute of Technology, USA.	2
No. 8	**Pruning Network Based Knowledge Distillation for Offline Handwritten Chinese Character Recognition** Zhuo Li, Yongping Dan, Zongnan Zhu and Dinggen Zhang Zhongyuan University of Technology, China.	3
No. 14	**An AI-based Android Application for Ancient Documents Text Recognition** Tomoki Morioka, Aravinda C V and Lin Meng Ritsumeikan University, Japan.	4
No. 3	**A Lightweight Auto-Crop Based on Deep Reinforcement Learning** Kunxiang Liu, Shaoqiang Zhu and Junsong Zhang Central China Normal University, China.	5
14:50-16:30	**Session 3: AI + Application + Optimization** **Chair: Zhongkui Wang, (Ritsumeikan University, Japan)**	
No. 15	**Frailty Classification Based on Artificial Intelligence** Zelin Meng, Lin Meng, Kenshi Saho, Xiangbo Kong and Hiroyuki Tomiyama Ritsumeikan University, Japan.	1
No. 13	**Task Offloading Optimization in Vehicular Edge Computing Based on Vehicle Mobility Analysis** Yarui Li, Feng Zeng and Qiao Chen Central Sourth University, China.	2
No. 7	**A Deep Analysis of Group Convolution Schemes for Improving Deep Learning Performance** Jianhao Gong, Hengyi Li, Qi Li and Lin Meng Ritsumeikan University, Japan.	3