

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

Osaka, Japan

April 12-14, 2018



**Program of the 2018
International Symposium on
Advanced Technologies and
Applications in the Internet of Things**

ATAIT 2018



Foreword

General Chairs		
	Lin Meng Feng Zeng	Ritsumeikan University, Japan Central South University, China
Program Executive Chairs		
	XianHua Han XiaoHeng Deng	Yamaguchi University, Japan Central South University, China
Program Chairs		
	WenJia Li ZhiFang Liao	New York Institute of Technology, USA Central South University, China
Organization Chairs		
	Ming Zhao XuePeng Qian	Central South University, China Ritsumeikan Asia Pacific University, Japan
Publication Chairs		
	AnFeng Liu ZhongKui Wang	Central South University, China Ritsumeikan University, Japan
Registration Chairs		
	Lan Yao Yun Liu Yu Zhang	Hunan University, China Chaohu University, China Ritsumeikan University, Japan
Financial Chairs		
	ChangAn Jiang Jiaqi Liu	Ritsumeikan University, Japan Central South University, China
Publicity Chairs		
	Deyu Zhang Jia Wu	Central South University, China Central South University, China
Best Paper Award Chairs		
	Deng Li Hui Liu	Central South University, China Missouri State University, USA
Local Arrangement Chairs		
	Xiangbo Kong Naoto Nojiri	Ritsumeikan University, Japan Ritsumeikan University, Japan
Steering Committee		
	Dong Wang Fernando Torre Gang Zeng Hai Min JinSong Wu Hiroyuki Tomiyama Kenji Nakamura Kenshi Saho Pen-chung Yew Shigeru Oyanagi Tomonori Izumi WenJia Li WeiMin Li Yu Bai Yuji Iwahori ZhiGang Chen	Hunan University, China Minnesota University, USA Nagoya University, Japan HeFei University of Technology, China Universidad de Chile Ritsumeikan University, Japan Osaka University of Economics, Japan Toyama Prefectural University, Japan Minnesota University, USA Ritsumeikan University, Japan Ritsumeikan University, Japan New York Institute of Technology, USA Shanghai University, China California State University, Fullerton, USA Chubu University, Japan Central South University, China

	ZhongFeng Wang ZhangBing Zhou ZhiHua Zhang	Nanjing University, China China University of Geosciences (Beijing), China Sanyo women's College, Japan
--	--	---

Advance program

13 th April 2018		
09:30-	Registration	
10:00-10:05	Opening Remarks	
10:05-10:50	<p>Invited Speech: Gait Analysis Using Micro-Doppler Radar for Fall-risk Assessment of Elderly People Kenshi Saho, (Toyama Prefectural Univ., Japan)</p>	
Session 1: IoT on the Problems of Elderly People Chair: Lin Meng, (Ritsumeikan University, Japan)		
	<p>Remote Measurement of Dementia-Related Gait Deterioration Using Micro-Doppler Radar Kouki Sugano, Kenshi Saho, Kazuki Uemura and Michito Matsumoto (Toyama Prefectural Univ., Japan)</p>	1
	<p>Steady-State Performance Analysis of Fourth-Order Moving-Object Tracker ($\alpha - \beta - \gamma - \delta$ Filter) Takanori Shibata and Kenshi Saho (Toyama Prefectural Univ., Japan)</p>	2
	<p>A Kinect-based Stand-to-fall Analysis for Elderly Persons Xiangbo Kong, Zelin Meng, Lin Meng and Hiroyuki Tomiyama (Ritsumeikan Univ., Japan)</p>	3
Session 2: IoT and the Applications Chair: Kenshi Saho, (Toyama Prefectural Univ., Japan)		
	<p>Coordinate Transformations for Binocular Vision Systems Zelin Meng, Xiangbo Kong, Lin Meng and Hiroyuki Tomiyama (Ritsumeikan Univ., Japan)</p>	1
	<p>Space-Color Clustering for Front Vehicle Detection Naoto Nojiri, Lin Meng, Hiromitsu Shimakawa (Ritsumeikan Univ., Japan)</p>	2
	<p>Scoring Model of Yoga Posture Using Yoga Mat with Conductive Fiber-based Pressure Sensor Yunbin Kim, Jaewon Sa, Yunchang Choi, Sunju Lee (Korea Univ., the Republic of Korea) and Jaekyung kwak (Morethings Co., Ltd., Korea)</p>	3
Session 3: Architecture, Platform and Algorithm (1) Chair: Changan Jiang (Ritsumeikan Univ., Japan)		
14:10-15:10	<p>An Automatic Programming Platform Based on Dataflow Approach for IoT Devices Seongbae Eun, Dongkyu Kim, Jinman Jung, Young-Sun Yoon (Hannam Univ., Korea), Sun Sup So (Kongju National Univ.,</p>	1

	Korea), Junyoung Heo (Hansung Univ., Korea) and Hong Min (Hoseo Univ., Korea)	
	A Heterogeneous Multicore Architecture and a Parallel Software Environment for Zynq SoC Takafumi Miyazaki, Ittetsu Taniguchi and Hiroyuki Tomiyama (Ritsumeikan Univ., Japan)	2
	Uncertain EFCM-ID Clustering Algorithm for Interval Data Yimin Mao, Yinping Liu, Jiawei Wang (Jiangxi Univ. of Science and Technology, China), Dinghui Mao (Shanxi Nuclear Industry Group Co., China) and Jian Hu (Jiangxi Univ. of Science and Technology, China)	3
15:20-16:20	Session 4: Architecture, Platform and Algorithm (2) Chair: Weimin Li, (Shanghai Univ., China)	
	Genetic algorithm for Scheduling of Data-Parallel Tasks Yang Liu, Lin Meng and Hiroyuki Tomiyama (Ritsumeikan Univ. Japan)	1
	Design of Asymmetric and Symmetric 32-core Architectures on FPGA Seiya Shirakuni, Ittetsu Taniguchi and Hiroyuki Tomiyama (Ritsumeikan Univ., Japan)	2
	Research and Application of an Uncertain DM-chameleon Clustering Algorithm in Landslide Hazard Prediction Jian Hu (Jiangxi Univ. of Science and Technology, China), Haiwan Zhu, Yimin MAO, Canlong Zhang (Shanxi Nuclear Industry Group Co., China) and Liang Tian (Jiangxi Univ. of Science and Technology, China)	3
18:00-20:00	Bequet	

