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Friday, October 5

Friday, October 5 10:30 - 12:00

S1: Localization

Chair: Hirozumi Yamaguchi (Osaka University, Japan)

OmimamoriNet: An Outdoor Positioning System Based on Wi-SUN FAN Network

Yin Chen, Mina Sakamura, Jin Nakazawa, Takuro Yonezawa and Akira Tsuge (Keio University, Japan); Yuichi Hamada (NISSIN SYSTEMS Co., Ltd., Japan)

Evaluation of MultiZigLoc: Indoor ZigBee Localization System Using Inter-Channel Characteristics

Ryota Kimoto, Takahiro Yamamoto and Shigemi Ishida (Kyushu University, Japan); Shigeaki Tagashira (Kansai University, Japan); Akira Fukuda (Kyushu University, Japan)

Method to Improve Accuracy of Indoor PDR Trajectories Using a Large Amount of Trajectories

Kosuke Yotsuya (Aichi Institute of Technology, Japan); Nobuyuki Ito (Mitsubishi Electronic Engineering Co. Ltd., Japan); Katsuhiro Naito, Naoya Chujo, Tadanori Mizuno and Katsuhiko Kaji (Aichi Institute of Technology, Japan)

Partial Matching Estimation Method of Walking Trajectories for Generating Indoor Pedestrian Networks

Sou Sugimoto (Graduate School of Business Administration and Computer Science, Aichi Institute of Technology, Japan); Nobuyuki Ito (Mitsubishi Electronic Engineering Co. Ltd., Japan); Katsuhiro Naito, Naoya Chujo, Tadanori Mizuno and Katsuhiko Kaji (Aichi Institute of Technology, Japan)

Friday, October 5 1:30 - 3:00

S2: System-supported Human Collaboration

Chair: Yusuke Fukazawa (NTT DOCOMO, Inc., Japan)

An Identity Privacy Preserving Incentivization Scheme for Participatory Sensing

Martin Connolly (Cork Institute of Technology, Ireland); Ivana Dusparic and Mélanie Bourroche (Trinity College Dublin, Ireland)

A Motivation-based Partnership Decision Model on Event-Stream Knowledge in Real-time Business

Sunyanan Choochotkaew, Hirozumi Yamaguchi and Teruo Higashino (Osaka University, Japan)

VR Classroom: Enhancing Learning Experience with Virtual Class Rooms

Kodai Oiwake, Kosuke Komiya, Hina Akasaki and Tatsuo Nakajima (Waseda University, Japan)

Investigating User Reactions to Interactive-signage-based Stimulation Toward Behavior Change

Zhihua Zhang, Yuta Takahashi and Manato Fujimoto (Nara Institute of Science and Technology, Japan); Yutaka Arakawa (Nara Institute of Science and Technology & NAIST, Japan); Keiichi Yasumoto (Nara Institute of Science and Technology, Japan)

Friday, October 5 3:30 - 4:50

S3: Wireless Networking

Chair: Christopher J Rapson (Auckland University of Technology, New Zealand)

Transmit Power and Carrier Sense Control for Massive Machine-to-Machine Communication in Wireless Ultra-dense Networks

YU YU (Japan Advanced Institute of Science and Technology, Japan); Yuto Lim (Japan Advanced Institute of Science and Technology (JAIST) & School of Information Science, Japan); Yasuo Tan (Japan Advanced Institute of Science and Technology & National Institute of Information and Communications Technology, Japan)

Time Switching Based Relaying for Coordinated Transmission Using NOMA

Syeda Kanwal Zaidi, Syed Faraz Hasan and Xiang Gui (Massey University, New Zealand)

Recovery of Synchronization for Wireless Sensor Networks

Hiromi Yagiri and Takeshi Okadome (Kwansei Gakuin University, Japan)

An Examination of Pairing Method with Camera and Acceleration Sensor

Makoto Nagatomo (Kanagawa Institute of Technology, Japan); Kentaro Aburada and Naonobu Okazaki (University of Miyazaki, Japan); Mirang Park (Kanagawa Institute of Technology, Japan)

Friday, October 5 4:50 - 7:00

Poster/Demo

Fall Detection Using Smartphones to Enhance Safety and Security of Older Adults at Home

Hoa Nguyen, Feng Zhou, Farhaan Mirza and M. Asif Naeem (Auckland University of Technology, New Zealand)

Applying PDE in the Medical Field and Basic Concept of PDS Agent

Masanari Hatano (Tokyo Denki University, Japan); Yoji Taniguchi (Daiichi Institute of Technology, Japan); Hiroshi Yajima (Tokyo Denki University, Japan)

Traffic Flow in the Mixed Environment of Autonomous and Human-Operated Vehicles

Hiroto Furukawa (Graduate School of Kanagawa Institute of Technology, Japan); Ryoza Kiyohara (Kanagawa Institute of Technology, Japan)

Dementia Diagnosis System Using Social Media Agency Robot

Toru Kobayashi, Taishi Miyazaki and Kenichi Arai (Nagasaki University, Japan)

Location Prediction Based on Smartphone Multimodal Personal Data for Proactive Support Services

Naoharu Yamada, Norihiro Katsumaru and Hiroaki Nishijima (NTT DOCOMO, INC., Japan); Masatoshi Kimoto (NTT DOCOMO, Japan)

Software Modem for Secure Near-field Communication for Smartphones Using Sound and Vibration

Saki Nishihara, Takuya Aoki, Tadashi Ebihara, Koichi Mizutani and Naoto Wakatsuki (University of Tsukuba, Japan)

Improving Post-Hospital Discharge Management by Implementing the Discharge Summary on a Mobile Application

Hiten Karamchandani, Asif Naeem and Farhaan Mirza (Auckland University of Technology, New Zealand); Mirza Baig (AUT University, New Zealand)

Estimating Distance of Going Up and down Stairs in a Building Using the Smartphone's Rotation Vector Sensor

Masaki Nishizaka, Kenta Okina and Hiroaki Morino (Shibaura Institute of Technology, Japan)

Proposal for Safety Confirmation System That Launches Bulletin Board Automatically

Rikuto Goto and Akira Watanabe (Meijo University, Japan)

Hybrid Access Network Integrated with Radio-over-Fiber and Passive Optical Network

Liwei Yang (China Agricultural University, P.R. China); Junning Zhang (Chinese Academy of Agricultural Mechanization Sciences, P.R. China); Wenjie Zhang (Minnan Normal University, P.R. China)

A Route Map for Wireless Sensor Networks over Large Coverage Area

Rishabh Jain, Partha Adhikary, Bashar Barmada, Guillermo Ramirez-Prado and Iman Ardekani (Unitec Institute of Technology, New Zealand)

Interactive Video CAPTCHA for Better Resistance to Automated Attack

Shotaro Usuzaki, Kentaro Aburada, Hisaaki Yamaba, Tetsuro Katayama and Masayuki Mukunoki (University of Miyazaki, Japan); Mirang Park (Kanagawa Institute of Technology, Japan); Naonobu Okazaki (University of Miyazaki, Japan)

Intention Understanding in Small Training Data Sets by Using Transfer Learning

Hideaki Joko, Hayato Uchide, Yusuke Koji and Takahiro Otsuka (Mitsubishi Electric Corporation, Japan)

Incremental Top-K Keyword Queries in Directed Road Networks

Muhammad Attique (Sejong University, Korea); Tae-Sun Chung (Ajou University, Korea)

Dynamic Parameter Control Method Mitigating Sticky Client Problem in High-Density Wi-Fi

Yuki Katsumata, Daisuke Nojima and Akira Yamada (NTT DOCOMO, INC., Japan)

Exercise Guidance Generation Based on Joint Vector Model Using Kinect Sensor

Junji Tsuda, Yudai Iimura and Makoto Imamura (Tokai University, Japan)

Compression Method of Position Information for IoT-based Bus Location System Using LoRaWAN

Takuya Boshita, Hidekazu Suzuki and Yukimasa Matsumoto (Meijo University, Japan)

Evaluating VANET Routing Protocols for Auckland Area

Bashar Barmada, Naji Alobaidi, Iman Ardekani and Guillermo Ramirez-Prado (Unitec Institute of Technology, New Zealand); Maryam Sabaee (Unitec Institute of Technology, Japan)

Mobile Terminals Cooperative Communication Framework for Energy Saving: Evaluation of Energy Efficiency Using Smartphone Test-Bed

Katsuhiro Temma (National Institute of Information and Communications Technology & Resilient ICT Research Center, Japan); Kiyohiko Hattori (Saitama Institute of Technology, Japan); Lin Shan and Ou Zhao (National Institute of Information and Communications Technology (NICT), Japan); Yasunori Owada (National Institute of Information and Communications Technology, Japan)

A Cross-Platform Study on IoT Malware

Tao Ban (National Institute of Information & Communications Technology, Japan); Ryoichi Isawa (NICT, Japan); Katsunari Yoshioka (Yokohama National University, Japan); Daisuke Inoue (National Institute of Information and Communications Technology, Japan)

Saturday, October 6

Saturday, October 6 9:00 - 10:00

Keynote Talk 1

Chair: Xuyun Zhang (Auckland University, New Zealand)

Saturday, October 6 10:30 - 12:00

S4: Mobile Networking

Chair: Akira Uchiyama (Osaka University, Japan)

Energy-Efficient Computation Offloading in Cloudlet-Based Mobile Cloud Using NSGA-II

Xiaolong Xu and Shucun Fu (Nanjing University of Information Science & Technology, P.R. China); Yuan Yuan (Michigan

State University, USA); Lianyong Qi (Qufu Normal University, P.R. China); Wanchun Dou (Nanjing University, P.R. China)

Deep Reinforcement Learning-Based Method of Mobile Data Offloading

Daisuke Mochizuki, Yu Abiko and Hiroshi Mineno (Shizuoka University, Japan); Takato Saito and Daizo Ikeda (NTT DOCOMO, INC., Urban Sensing Research Group, Research Laboratories, Japan); Masaji Katagiri (NTT DOCOMO, INC., Japan)

Adaptive Congestion Control for Handover in Heterogeneous Mobile Content-Centric Networking

Daiki Iwamoto and Daisuke Sugahara (Kansai University, Japan); Masaki Bandai (Sophia University, Japan); Miki Yamamoto (Kansai University, Japan)

Selecting Ubiquitous Services in Future Heterogeneous Wireless Networks Using Multi-Attributes Decision Making

Muhammad Ghulam Abbas Malik (Otago Polytechnic & AGI Education, New Zealand); Sayan Kumar Ray (Manukau Institute of Technology, New Zealand); Zia Bashir (Quaid-i-Azam University, Pakistan); Aftab Mughal (AGI Education, New Zealand)

Saturday, October 6 1:30 - 2:50

S5: Network Architecture and Models

Chair: Kentaro Aburada (University of Miyazaki, Japan)

Flexible Name Autoconfiguration for IoT Devices

Tomohiro Yanase, Hisayoshi Tanaka and Hidekazu Suzuki (Meijo University, Japan)

Traffic Shaping Based Queue Management for Delay Sensitive Multimedia Applications

Yu-ning Dong and Zheng Wu (Nanjing University of Posts and Telecommunications, P.R. China); Yujue Peng (Nanjing University of Posts and Telecommunication, P.R. China)

Modelling and Analysing Overlay Networks by Ambients with Wormholes

René Rydhof Hansen (Aalborg University, Denmark); Christian Probst (Unitec Institute of Technology, New Zealand)

Implementation and Evaluation of IP Mobility Functions in NTMobile for Android

Kaito Kuromiya, Hisayoshi Tanaka and Hidekazu Suzuki (Meijo University, Japan); Katsuhiro Naito (Aichi Institute of Technology, Japan); Akira Watanabe (Meijo University, Japan)

Saturday, October 6 3:20 - 4:30

S6: Vehicular Systems

Chair: Panagiotis Patros (University of Waikato, New Zealand & University of New Brunswick, Canada)

Applying NOMA to Undersampled Optical Camera Communication for Vehicular Communication

Christopher J Rapson, Boon-Chong Seet, Peter Han Joo Chong and Reinhard Klette (Auckland University of Technology, New Zealand)

Ground Object Recognition from Aerial Image-based 3D Point Cloud

Katsuya Ogura (Osaka University, Japan); Yuma Yamada (Osaka Univ, Japan); Shugo Kajita, Hirozumi Yamaguchi and Teruo Higashino (Osaka University, Japan); Mineo Takai (University of California, Los Angeles & Osaka University, USA)

VANET-based Dynamic Route Guidance System Considering Communication Performance

Yuta Sakoguchi, Toshiya Miyazaki and Hiroshi Shigeno (Keio University, Japan)

Sunday, October 7

Sunday, October 7 9:00 - 10:00

Keynote Talk 2

Chair: Takuya Yoshihiro (Wakayama University, Japan)

Sunday, October 7 10:30 - 12:00

S7: Cloud and Edge Systems and Software

Chair: Bashar Barmada (Unitec Institute of Technology, New Zealand)

Garbage Collections Delays on Java GUIs

Panagiotis Patros (University of Waikato, New Zealand & University of New Brunswick, Canada); Michael Dawson (IBM Runtimes, Canada); Kenneth B. Kent (University of New Brunswick, Canada)

More than Old Wine in New Bottles: A Secure Live Virtual Machine Job Migration Framework for Cloud Systems Integrity

Hanif Deylami, Jairo A Gutierrez and Roopak Sinha (Auckland University of Technology, New Zealand)

Development of Secure Safety Confirmation System Using Virtual Private Cloud

Masaki Nagata (Shizuoka University & AvanceSystem Corporation, Japan); Yusuke Abe, Nobuyuki Takanashi and Misato Fukui (AvanceSystem Corporation, Japan); Kunihiro Yamazaki and Takahiro Hasegawa (Shizuoka University, Japan)

An Efficient Data Processing Scheme for Wireless Sensor Network Monitoring Using a Machine Learning Model

Zhishu Shen and Atsushi Tagami (KDDI Research, Inc., Japan); Teruo Higashino (Osaka University, Japan)

Sunday, October 7 1:30 - 3:00

S8: Human Monitoring

Chair: Aniket Mahanti (University of Auckland, New Zealand)

Physiological Stress Level Estimation Based on Smartphone Logs

Naoki Yamamoto (NTT DOCOMO, Japan); Keiichi Ochiai (NTT DOCOMO, INC., Japan); Akiya Inagaki (NTT DOCOMO, Japan); Yusuke Fukazawa (NTT DOCOMO, Inc., Japan); Masatoshi Kimoto (NTT DOCOMO, Japan); Kazuki Kiri and Kouhei Kaminishi (University of Tokyo, Japan); Jun Ota (The University of Tokyo, Japan); Tsukasa Okimura, Yuri Terasawa and Takaki Maeda (Keio University, Japan)

Sidewalk-level People Flow Estimation Using Dashboard Cameras Based on Deep Learning

Yusuke Hara (University of Osaka, Japan); Akira Uchiyama (Osaka University, Japan); Takaaki Umedu (Shiga University, Japan); Teruo Higashino (Osaka University, Japan)

MutualMonitor: A Tool for Elderly People to Anonymously Monitor Each Other

Research Dawadi, Teruhiro Mizumoto and Keiichi Yasumoto (Nara Institute of Science and Technology, Japan)

The Proposal and It's Evaluation of Biometric Authentication Method by EEG Analysis Using Image Stimulation

Masato Yamashita, Minoru Nakazawa and Yukinobu Nishikawa (Kanazawa Institute of Technology, Japan)