

**17<sup>th</sup> IEEE/ACIS International Conference on Software Engineering, Management and Applications (SERA 2019)**

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**7<sup>th</sup> ACIS International Conference on Applied Computing & Information Technology (ACIT 2019)**

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**6<sup>th</sup> International Conference on Computational Science/Intelligence & Applied Informatics (CSII 2019)**

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**4<sup>th</sup> IEEE/ACIS International Conference on Big Data, Cloud Computing, and Data Science Engineering (BCD 2019)**

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**Honolulu, Hawaii, May 29-31, 2019**

**Final Program**

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## Program at a Glance

Wednesday, May 29, 2019

<b>Time</b>	<b>Activity</b>	<b>Location</b>
7:30 – 5:00	Registration	Foyer
8:00 – 9:40	Session 0A Session 0B Session 0C	Room A Room B Room C
9:40 – 10:00	Opening Ceremony	Room X
10:00-10:15	Coffee Break	Foyer
10:15 – 11:05	Keynote 1	Room X
11:05 – 12:05	Keynote 2	Room X
12:05 – 1:00	Luncheon on your own	
1:00 – 3:00	Session 1A Session 1B Session 1C	Room A Room B Room C
3:00 – 3:15	Coffee Break	Foyer
3:15 – 5:35	Session 2A Session 2B Session 2C	Room A Room B Room C
6:00 – 7:30	Dinner Banquet	Room Y

- 20 minutes per presentation including Q&A.

**Thursday, May 30, 2019**

<b>Time</b>	<b>Activity</b>	<b>Location</b>
8:00 -10:00	Session 3A Session 3B Session 3C	Room A Room B Room C
10:00 – 10:15	Coffee break	Foyer
10:15 – 12:15	Session 4A Session 4B Session 4C	Room A Room B Room C
12:15 – 1:30	Luncheon Banquet	Room Z
1:30 – 3:40	Session 5A Session 5B Session 5C	Room A Room B Room C
3:40 – 3:55	Coffee Break	Foyer
3:55 – 5:55	Session 6A Session 6B Session 6C	Room A Room B Room C

**Friday, May 31, 2019**

<b>Time</b>	<b>Activity</b>	<b>Location</b>
8:00 -10:00	Session 7A Session 7B Session 7C	Room A Room B Room C
10:00 – 10:15	Coffee break	Foyer
10:15 – 12:35	Session 8A Session 8B Session 8C	Room A Room B Room C
12:35 – 12:40	Session 9A  Closing Remarks by Program Chair (s)	Room A

## Keynote 1

# Improving Health and Quality of Life in One-Person Households

## Using IoT and Machine Learning

Masahide Nakamura

Graduate School of System Informatics

Kobe University, JAPAN

masa-n@cs.kobe-u.ac.jp

### Abstract

Worldwide, there has been an increase in the number of individuals that live alone in one-person households (OPHs). Compared to those living with family, people in OPHs easily lose control of life rhythm. Given that the disturbance of life rhythm leads to chronic disease, they have a higher risk of illness. As such, there is an urgent demand for assistive technology that allows people in OPHs to enjoy healthy, high-quality lives. For decades, there has been significant research and development of smart systems to assist people at home. However, there are still limitations on the practical use of these systems in actual OPHs. More specifically, they are often too intrusive to the lifestyle of users or home objects. In addition, they are often expensive to deploy and maintain. Furthermore, these systems are unable to evaluate the quality of life rhythm. As a result, it is difficult for individual users to determine what their healthy life rhythms should be, and how to improve their current situation.

The goal of research is to develop a new smart system for OPHs that can minimize intrusiveness and cost, while also facilitating the assessment of life rhythms of individual users. The new system collects user position and environmental data inside the house in a non-intrusive way, using affordable IoT devices. From this data, the system then recognizes the daily activities of the user. Based on these activities, eventually, the system can quantitatively evaluate the user's life rhythms and provide practical advice for maintaining a healthy life.

### Bio

Masahide Nakamura received the B.E., M.E., and Ph.D. degrees in Information and Computer Sciences from Osaka University, Japan, in 1994, 1996, 1999, respectively. From 1999 to 2000, he has been a post-doctoral fellow in SITE at University of Ottawa, Canada. He joined Cybermedia Center at Osaka University from 2000 to 2002. From 2002 to 2007, he worked for the Graduate School of Information Science at Nara Institute of Science and Technology, Japan. He is currently an associate professor in the Graduate School of System Informatics at Kobe University. In 2015, he worked for Universite Grenoble Alpes as a visiting professor. In 2018, he joined RIKEN Center for Advanced Intelligence Project as a visiting researcher. His research interests include the service/cloud computing, smart home, smart city, and gerontechnology. He is a member of the IEEE, IEICE and IPSJ.”

## Keynote 2

# Blockchain: A Software Engineering Perspective

Lawrence Chung

Computer Science Department

University of Texas at Dallas, USA

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## Abstract

Blockchain is intended to help enhance the trustworthiness of data and transactions, by chaining and distributing blocks of the same data so that they may become more transparent, traceable, and immutable. With such a great potential, blockchain is increasingly being explored in many applications, especially in the presence of (potential) dis-/mis-/un-trust among organizations and individuals, well beyond its original use, namely, for bitcoin. However, an ad hoc approach to adopting blockchain may lead to not better, but worse, situations and results, and with severe disappointments. In this talk, I will describe *Fides* - a framework for systematically utilizing blockchain towards enhancing business processes with trustworthiness. Fides takes a goal-oriented, software engineering approach, in which trust-related concerns are explicitly represented as (soft)goals to be achieved, problems for achieving the goals are diagnosed, and then alternatives are explored in terms of business processes for eliminating or alleviating the problems, while at the same time achieving the goals. Finally, a selection is made among the alternatives that best utilize blockchain. In this approach, business processes are modelled, rules are formulated at the requirements level for beneficially transitioning from as-is to to-be, and transformed into smart contracts. At the end, I will describe a couple of applications of Fides, for an initial assessment of its strengths and weaknesses.

## Bio

Lawrence Chung has been working in Requirements Engineering, System/Software Architecture and Systems Engineering. He was the principal author of the research monograph "[Non-Functional Requirements in Software Engineering](#)", and has been involved in developing "[RE-Tools](#)" (a multi-notational requirements tool), "[HOPE](#)" (a smartphone app project for people with difficulties), and "[Silverlining](#)" and "[IRIS](#)" (respectively a cloud computing and big data project). He has been a keynote speaker, invited lecturer, co-editor-in-chief for *International Journal of Innovative Software (IJIS)* and *International Journal of Big Data Intelligence and Applications (IJBDIA)*, editorial board member for Requirements Engineering Journal and International Journal of Networked and Distributed Computing, editor for ETRI Journal, and program co-chair for various international events. He is currently on the faculty of Computer Science at University of Texas at Dallas. He received his Ph.D. in Computer Science in 1993 from University of Toronto.



**Wednesday, May 29, 2019**

**7:30am-5:00pm – Registration**

**Foyer**

<b>Session 0A (ACIT 2019)</b>		<b>Room A</b>
<b>Special Session 2: Computer-aided Assistive Technology for Creating an Inclusive Society - 2</b>		
<b>Session Chair: Eiji Nishiyama, Kimiyasu Kiyota</b>		
<b>8:00am-9:40am</b>		
8:00	Pen-based Smart Tablet with Finger-tracing Reading for People with Visual Disabilities	Kimiyasu Kiyota, Takaaki Ishibashi, Manabu Shimakawa, Hiroshi Kuribayashi, Kazuyuki Itou, Kazuko Fujisawa
8:15	Development of Vertical Obstacle Detection System for Visually Impaired Individuals	Yutaka Tange, Tomohiro Konishi, Hideaki Katayama
8:30	Development of Learning Support Equipment for Sign Language and Fingerspelling by Mixed Reality	Natsuhiko Hirabayashi, Nami Fujikawa, Ryohei Yoshimura, Yoshinori Fujisawa
8:45	Attempt to Acceleration Sense Provision for Improvement of Impression Feeling by Using Electrical Rocking Chair	Kazuhiro Koshi, Masaya Muraki, Masazumi Miyoshi,
9:00	A Study of a Removable Omnidirectional Automotive Mechanism for Movement Efficiency	Tomoka Ueda, Masanobu Nagata, Tatsuya Katoh, Kazunori Matsuo
9:20	A Remote Controllable Supporting Device for Deaf-blind Person using Handwritten Character	Mitsutaka Nakano, Kazuhiro Koshi, Jin Akaishi, Kimiyasu Kiyota

<b>Session 0B (ACIT 2019)</b>		<b>Room B</b>
<b>Special Session 2: Computer-aided Assistive Technology for Creating an Inclusive Society - 1</b>		
<b>Session Chair: Manabu Shimakawa, Kimiyasu Kiyota</b>		
<b>8:00am-9:40am</b>		
8:00	Prototype of Simplified VOCA Device for Special Support Education	Masuo Furukawa, Mitsuki Itakura, Yoshinori Fujisawa
8:20	Gaze Region Estimation Algorithm without Calibration Using Convolutional Neural Network	Tatsuya Kato, Keigo Jo, Koki Shibusato, Tetsuya Hakata
8:40	Tender – Smartphone Application for Braille Reading	Shoichi Ito, Yoshinori Fujisawa
9:00	Speech-text display system as auxiliary device of the hearing aid	Koki Miyazaki, Hidetoshi Nakashima, Nobuhiko Hiruma, Yoh-ichi Fujisaka
9:20	Development of a Standalone Color Identification Device to Support the Independence of the Visually-Impaired	Atsushi Sasaki, Hirotochi Honma, Hideki Satoh, Kimiyasu Kiyota, Mamoru Sakaki

<b>Session 0C (BCD 2019)</b>		<b>Room C</b>
<b>Data Mining</b>		
<b>Session Chair: Hirohisa Aman</b>		
<b>8:00am-9:40am</b>		
8:00	Challenges and Approaches for Mining Astronomical Data and Complex Models	Maria Jose Marquez
8:15	Do You Like the Sclera?: Sclera-Region Detection in Line Drawings for Automated Colorization	Masashi Aizawa, Yuichi Sei, Yasuyuki Tahara, Ryohei Orihara and Akihiko Ohsuga
8:30	Hidden Markov Models for Sentiment Analysis in Social Media	Isidoros Perikos
8:45	Analysis of Success Factors in Global Niche Top Companies using ISM	Atsushi Shimoda
9:00	Multimodal Sentiment Analysis via RNN variants	Ayush Agrawal, Ashima Yadav and Dinesh Vishwakarma
9:20	Scalable Laplacian Regularized Least Squares Classification on Anchor Graph	Syozo Saeki, Minoru Kawahara and Hirohisa Aman

**9:40am-10:00am – Opening Ceremony**

**Room X**

**10:00am-10:15am – Coffee Break**

**Foyer**

**10:15am-11:05am – Keynote 1**

**Room X**

**11:05pm-12:05pm – Keynote 2**

**12:05pm-1:00pm - Lunch on Your Own**

<b>Session 1A (SERA 2019)</b>		<b>Room A</b>
<b>Special Session 1: Welcome Message form SERA Program Chairs</b>		
<b>Session Chair: Robert Hammell</b>		
<b>1:00pm-3:00pm</b>		
1:10	Use of Type-2 Fuzzy Sets for Military Value of Information Decision Support	Timothy Hanratty and Robert Hammell
1:30	Aggregating Information Toward Military Decision Making	Behrooz Etesamipour and Robert Hammell
1:50	Detecting Diagnosing Psychological Disorders Through Decision Rule Set Formation	Anila Umar and Usman Qamar
2:10	A QoS Aware Uplink Scheduler for IoT in Emergency over LTE/LTE-A Networks	Jin Zhang, Yalong Wu, Wei Yu and Chao Lu
2:30	Emulation-Based Performance Evaluation of the Delay Tolerant Network (DTN) in Dynamic Network Topologies	Weichao Gao, Hengshuo Liang, James Nguyen, Fan Liang, Wei Yu, Chao Lu and Mont Orpilla

<b>Session 1B (SERA 2019)</b>		<b>Room B</b>
<b>Special Session 1: Welcome Message form SERA Program Chairs</b>		
<b>Session Chair: Yong Ik Yoon</b>		
<b>1:00pm-3:00pm</b>		
1:10	Extracting Inclusion Graphs of API Member Sets to Improve Searchability	Yushi Kondoh, Masashi Nishimoto, Keiji Nishiyama, Hideyuki Kawabata and Tetsuo Hironaka
1:30	Masashi Nishimoto, Keiji Nishiyama, Hideyuki Kawabata and Tetsuo Hironaka	Masashi Nishimoto, Keiji Nishiyama, Hideyuki Kawabata and Tetsuo Hironaka
1:50	Cognitive Service Platform for Super Things	Hana Jo and Yong Ik Yoon
2:10	Sentiment Analysis For Urdu News Tweets Using Decision Tree	Raheela Bibi, Usman Qamar, Munazza Ansar and Asma Shaheen
2:30	Spectrum-based Bug Localization of Real-world Java Bugs	Cherry Oo and Hnin Min Oo
2:45	Project Management Model based on consistency strategy for Blockchain Platform	Eunhee Lee and Yongik Yoon

<b>Session 1C (SERA 2019)</b>		<b>Room C</b>
<b>Special Session 1: Welcome Message form SERA Program Chairs</b>		
<b>Session Chair: Chris Macnab</b>		
<b>1:00pm-3:00pm</b>		
1:10	Towards Automated Security Vulnerability and Software Defect Localization	Nicholas Visalli, Lin Deng, Amro Al-Suwaid, Zachary Brown, Manish Joshi and Bingyang Wei
1:30	Development of A Request Processing Method For Relief Goods In The Distributed Material Management Support System Of Evacuation Shelters Using DTN	Sunao Sato, Mineo Takai, Yasunori Owada, Taka Maeno and Masato Oguchi
1:50	Analysis of Missing Data using Matrix-Characterized Approximations	Thin Thin Soe
2:10	Y-Position based Myanmar Touching Character Segmentation and Sub-components based Character Classification	Kyi Zaw
2:30	The Role of Unconscious Bias in Software Project Failures	Chris Macnab and Sam Doctolero

**3:00-3:15pm – Coffee Break**

**Foyer**

<b>Session 2A (SERA 2019)</b>		<b>Room A</b>
<b>Regular Session</b>		
<b>Session Chair: Behrooz Etesamipour</b>		
<b>3:15pm-5:35pm</b>		
3:15	An Optimized Forward Scheduling Algorithm in A Software-defined Satellite Network	Teng Ling, Lixiang Liu, Changwen Zheng, Shuaijun Liu and Xi Zhou
3:35	Genetic Algorithm-Based Learning Framework for Compositional Stochastic Model Checking in Assume-Guarantee Style	Yan Ma, Zining Cao and Yang Liu
3:55	Compositional Stochastic Model Checking Probabilistic Automata Via Symmetric Assume-Guarantee Rule	Rui Li and Yang Liu

4:15	KNN-Based Overlapping Samples Filter Approach for Classification of Imbalanced Data	Mar Mar Nwe and Khin Thidar Lynn
4:35	Searching Tourism Information by Using Vertical Search Engine Based on Nutch and Solr	Huawei Ma, Wencai Du and Simon Xu
4:55	Identification of Difficult English Words for Assisting Hearing Impaired Children in Learning Language	Munazza Ansar, Dr. Usman Qamar, Raheela Bibi and Asma Shaheen

<b>Session 2B (SERA 2019)</b>		<b>Room B</b>
<b>Regular Session</b>		
<b>Session Chair: Ali Tekeoglu</b>		
<b>3:15pm-5:35pm</b>		
3:15	Classification of Smart Contract Bugs Using the NIST Bugs Framework	Wesley Dingman, Aviel Cohen, Nick Ferrara, Adam Lynch, Patrick Jasinski, Paul E. Black and Lin Deng
3:35	Expansion of Cyber Attack Data from Unbalanced Datasets using Generative Adversarial Networks	Tim Merino, Matt Stillwell, Mark Steele, Max Coplan, Jon Patton, Alexander Stoyanov and Lin Deng
3:55	A Secure and Scalable Data source for Emergency Medical Care using Blockchain Technology	Shirin Hasavari, Yeong-Tae Song
4:15	Multiplatform Application Development for Andriod & Java	Yoonsik Cheon
4:35	Hybrid Intrusion Detection System Using Machine Learning Techniques in Cloud Computing Environments	Ibraheem Aljamal, Ali Tekeoglu, Korkut Bekiroglu and Saumendra Sengupta
4:55	Sentiment Analysis For Urdu News Tweets Using Decision Tree	Raheela Bibi, Usman Qamar, Munazza Ansar and Asma Shaheen
5:15	Measure your API Complexity and Reliability* *Video Presentation	Srikanth Jonnada and Jothis K Joy

<b>Session 2C (ACIT 2019)</b>		<b>Room C</b>
<b>Special Session 2: Computer-aided Assistive Technology for Creating an Inclusive Society - 3</b>		
<b>Session Chair: Seiichiro Miura, Kimiyasu Kiyota</b>		
<b>3:15pm-5:35pm</b>		
3:15	Distinguishing Road Surface Conditions for Wheelchair Users	Satoshi Ohash, Mio Aochi, Akira Shionoya
3:35	Development of Finger Rehabilitation Device using Pneumatic Actuator made of Nylon Film	Takehiro Arai, Katsumi Hama, Kaori Chiba, Sadayoshi Mikami
3:55	Trial on Orientation Education used by Electric Blocks for AT Engineers Supporting Inclusive Society	Seiichiro Miura, Keiji Tanimoto,
4:15	Development of individual education support system for children with developmental disabilities -Suggestion of shelter for emotional control	Sakiko Ogoshi, Yasuhiro Ogoshi, Akemi Emoto
4:35	Smartphone Apps of Obstacle Detection for Visually Impaired and its Evaluation	Manabu Shimakawa, Kosei Matsushita, Issei Taguchi, Chiharu Okuma, Kimiyasu Kiyota

**6:00-7:30pm - Dinner Banquet**

**Room Y**

## Thursday, May 30, 2019

**8:00am-5:00pm – Registration**

**Foyer**

<b>Session 3A (CSII 2019)</b>		<b>Room A</b>
<b>Regular Session</b>		
<b>Session Chair:</b> Hitoshi Iima		
<b>8:00am-10:00am</b>		
8:00	Deep Learning for Designing an AI Player of the Puzzle Game Geometry Friends	Hitoshi Iima and Hiroya Oonishi
8:20	Prediction of Abnormal Plasma Discharge through Machine Learning	Shota Nakagawa, Teruhisa Hochin, Hiroki Nomiya, Hideya Nakanishi and Mamoru Shoji
8:40	Improvement of Incremental Hierarchical Clustering Algorithm by Re-insertion	Kakeru Narita, Teruhisa Hochin, Yoshihiro Hayashi and Hiroki Nomiya
9:00	Obtaining Factors of Q&A Statements with the Consideration of Categories	Yuya Yokoyama, Teruhisa Hochin and Hiroki Nomiya
9:20	Predictive Maintenance Framework for Nuclear Infrastructure using Machine Learning	Hardik Gohel

<b>Session 3B (BCD 2019)</b>		<b>Room B</b>
<b>Special Session 1</b>		
<b>Session Chair:</b> Masayuki Goto		
<b>8:00am-10:00am</b>		
8:00	An Analysis Model for the Relationship Between Consumers' Purchase and Sense of Value	Ryunosuke Tachibana, Haruka Yamashita
8:20	A Study on Analysis Methods of Latent Customer Purchase Behavior Focused on Membership Stage Growth	Tianxiang Yang, Haruka Yamashita, Masayuki Goto
8:40	Greedy Features Quantity Selection Method from Multivariate Time Series Data for Customer Classification	Gendo Kumoi, Masayuki Goto
9:00	Latent Class Models on Business Analytics	Masayuki Goto

**10:00-10:15am - Coffee Break**

**Foyer**

<b>Session 4A (CSII 2019)</b>		<b>Room A</b>
<b>Regular Session</b>		
<b>Session Chair:</b> Yuya Yokoyama		
<b>10:15am-12:15pm</b>		
10:15	Detection of Driver's Eye Fixation on a Moving Target by Using Line Fitting	Teruhisa Hochin, Yumiko Shinohara and Yukiko Nishizaki
10:35	Semantic Schema Matching for String Attribute with Word Vectors	Kenji Nozaki, Teruhisa Hochin and Hiroki Nomiya

10:55	Finding Moving Objects in Astronomical Image Datasets	Francisco Javier de la Mora Garcia, Teruhisa Hochin and Hiroki Nomiya
11:15	A Proposal of Creating Ideal UTAU Voice based on Voice of the User's Own Key by Interactive Differential Evolution	Asami Inoue and Makoto Fukumoto
11:35	A New Probabilistic Tree Expression for Probabilistic Model Building Genetic Programming	Yoshiko Hanada, Daichi Kumoyama and Keiko Ono

<b>Session 4B (ACIT 2019)</b>		<b>Room B</b>
<b>Special Session 3: Intelligent Systems for Social Welfare - 1</b>		
<b>Session Chair: Yuhki Kitazono</b>		
<b>10:15am-12:15pm</b>		
10:15	Fishing Support System - Tying Fishing Line Automatically	Takumi Sasaki, Seiichi Serikawa, Yuhki Kitazono
10:35	Storage and Playback Device for Creative Dance with Kinect	Yuma Hamasaki, Seiichi Serikawa, Yuhki Kitazono
10:55	Proposal of a Method for Obstacle Detection by the Use of Camera and Line Laser	Miki Suetsugu, Kanako Kinoshita, Akihiro Ito, Shiyuan Yang, Seiichi Serikawa
11:15	Proposal of a Method to Detect Size of Overlapping Cardboard Boxes Using Plural Lightings	Ryota Iwaizono, Shiyuan Yang, Seiichi Serikawa

<b>Session 4C (BCD 2019)</b>		<b>Room C</b>
<b>Machine Learning</b>		
<b>Session Chair: Akihiko Ohsuga</b>		
<b>10:15am-12:15pm</b>		
10:15	Multi-task Deep Reinforcement Learning with Evolutionary Algorithm and Policy Gradients Method in 3D Control Tasks	Shota Imai, Yuichi Sei, Yasuyuki Tahara, Yasuyuki, Ryohei Orihara and Akihiko Ohsuga
10:35	Model smoothing using virtual adversarial training for speech emotion estimation	Toyoaki Kuwahara, Yuichi Sei, Yasuyuki Tahara, Ryohei Orihara and Akihiko Ohsuga
10:55	"Never fry carrots without cutting." Cooking Recipe Generation from Videos Using Deep Learning Considering Previous Process	Tatsuki Fujii, Yuichi Sei, Yasuyuki Tahara, Ryohei Orihara and Akihiko Ohsuga
11:15	Classification of Mutual Fund Investment Types with Advanced Machine Learning Model	Kexin Yan, Tao Tao and Shuyan Yang
11:35	Using Artificial Neural Network to Predict Value-at-Risk of S&P 500 Market Index with External Information	Yue Jiang, Yanning Wang and Guoqian He

**12:15-1:30pm - Luncheon Banquet**

**Room Z**

<b>Session 5A (CSII 2019)</b>		<b>Room A</b>
<b>Special Session: Applied Intelligent Systems and Simulations</b>		
<b>Session Chair: Nobuhiro Ito</b>		
<b>1:30pm-3:40pm</b>		

1:30	Infrastructure in Assessing Disaster-Relief Agents in the RoboCupRescue Simulation	Shunki Takami, Masaki Onishi, Itsuki Noda, Kazunori Iwata, Nobuhiro Ito, Yohsuke Murase and Takeshi Uchitane
1:50	Map creations with OpenStreetMap for RoboCupRescue Simulation	Yusuke Hosoya, Haruaki Ueda, Kazunori Iwata and Nobuhiro Ito
2:10	A design method for kicks of the desired distance by combinations of based kicks	Atsuto Kawazoe, Kazunori Iwata and Nobuhiro Ito
2:30	Consideration of the Essential Topics for Role Estimation for AIWolf	Shoma Kato, Tomoya Okumura, Itsuki Toda, Takanori Fukui, Kazunori Iwata and Nobuhiro Ito
2:50	Applying Machine Learning Classification to Determining Outliers in Effort for Embedded Software Development Projects	Kazunori Iwata, Toyoshiro Nakashima, Yoshiyuki Anan and Naohiro Ishii

<b>Session 5B (ACIT 2019)</b>		<b>Room B</b>
<b>Special Session 3: Intelligent Systems for Social Welfare - 2</b>		
<b>Session Chair: Kenichi Nakashi, Shenglin Mu, Yuhki Kitazono</b>		
<b>1:30pm-3:40pm</b>		
1:30	Distinction of Heart Sound and Respiratory Sound Using Body Conduction Sound Sensor Based on HPSS	Kaede Torii, Shota Nakashima, Hiroshi Nakamura, Tetsuo Ooyagi, Kanya Tanaka, Hiroyuki Yagami
1:50	Position Control of USM using Variable Gain PID Control Combined with ABC Type Neural Network	Shenglin Mu, Satoshi Shibata, Yamamoto Tomonori, Shota Nakashima, Kanya Tanaka
2:10	Improvement of Road Surface Discrimination Performance of Movement Support System Using Ultrasonic Sensors	Masahiro Yamamoto, Shota Nakashima, Kazuo Haruyama, Shenglin Mu
2:30	Meal Assistant Robot with Omnidirectional Mobile Plate	Takanori Higuma, Shota Nakashima, Kanya Tanaka, Shenglin Mu
2:50	Study on Evaluating Risks of Routes Damages at Earthquakes for Evacuation Guidance System	Yujiro Mihara, Rin Hirakawa, Hideaki Kawano, Kenichi Nakashi, Yoshihisa Nakatoh

<b>Session 5C (BCD 2019)</b>		<b>Room C</b>
<b>Special Session 2</b>		
<b>Session Chair: Arata Koike</b>		
<b>1:30pm-3:40pm</b>		
1:30	Elevator monitoring system to guide user's behavior by visualizing state of the crowdedness	Haruhisa Hasegawa, Shiori Aida
1:50	Mobile-Carrier & Mobile-Phone Choice Behavior Analysis Using Supervised Learning Models	Akiya Inoue, Ayako Sato, Ken Nishimatsu, Motoi Iwashita
2:10	Choice Behavior Analysis of Internet Access Services Using Supervised Learning Models	Ken Nishimatsu, Akiya Inoue, Miiru Saito, Motoi Iwashita
2:30	Secure Operation of Biometric Authentication Based on User's Viewpoint	Shigeaki Tanimoto, Satomu Toriyama, Motoi Iwashita, TeruoEndo, PirajakChertchom
2:50	Evaluation of Message Protocols for IoT	Yoshiko Sueda, Mizuki Sato, Kazuo Hasuie

3:10	Infrastructure for Supporting Networked Robotics System Relying on Intermittent Communication	Arata Koike
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**3:40-3:55pm – Coffee Break**

**Foyer**

<b>Session 6A (CSII 2019)</b>		<b>Room A</b>
<b>Regular Session</b>		
<b>Session Chair: Teruhisa Hochin</b>		
<b>3:55pm-5:55pm</b>		
3:55	Implementation of User Authentication Processes for the Cloud Type Virtual Policy Based Network Management Scheme for the Specific Domain	Kazuya Odagiri, Shogo Shimizu and Naohiro Ishii
4:15	Implementation of a Blockchain-Based Event Reselling System	Tralyn Le, Yoohwan Kim and Ju-Yeon Jo
4:35	Graphical User Interface for Multimedia Retrieval System Based on Impression	Thi Bich Lien Tran, Teruhisa Hochin and Truong Hong Ngan Pham
4:55	Different Dimensions of Service Fairness in Satisfaction for Cloud Services	Montri Lawkobkit
5:15	Energy Efficient Load Balanced Cluster Formation by Distance Adjustment of Wireless Sensor Networks	Rowsan Jahan Bhuiyan, M. Abul Kashem, Md Mostafizur Rahman and Saiful Islam

<b>Session 6B (ACIT 2019)</b>		<b>Room B</b>
<b>Special Session 3: Intelligent Systems for Social Welfare - 3</b>		
<b>Session Chair: Hideaki Kawano, Yuhki Kitazono</b>		
<b>3:55pm-5:55pm</b>		
3:55	Study on Watching System for Door-to-door Sales Detection and Risk Determination	Rin Hirakawa, Hideaki Kawano, Kenichi Nakashi, Yoshihisa Nakatoh
4:15	Study on Method of Veering Correction by Vibration Transmission in Walking Support for Visually Impaired People	Tomohiro Hirayama, Rin Hirakawa, Hideaki Kawano, Hideaki Kawano, Kenichi Nakashi, Yoshihisa Nakatoh
4:35	In Load Collapse Prevention System Examination of the Relationship Between Truck Vibration and Load Inclination	Chihiro Inoshita, Rin Hirakawa, Hideaki Kawano, Kenichi Nakashi, Yoshihisa Nakatoh
4:55	Examination of Acoustic Features for Discriminating Between Real and Loudspeaker Sounds	Yuto Kinoshita, Rin Hirakawa, Hideaki Kawano, Kenichi Nakashi, Yoshihisa Nakatoh
5:15	Discussion on Differences in Frequency Band Required for Horizontal Sound Localization by Age	Tomoya Okuno, Rin Hirakawa, Hideaki Kawano, Kenichi Nakashi, Yoshihisa Nakatoh
5:35	Enhancement of Electrolarynx Speech Based on WaveRNN	Eturo Urabe, Rin Hirakawa, Hideaki Kawano, Kenichi Nakashi, Yoshihisa Nakatoh



<b>Session 6C (BCD 2019)</b>		<b>Room C</b>
<b>Big Data &amp; Network</b>		
<b>Session Chair: Shahid Noor</b>		
<b>3:55pm-5:55pm</b>		
3:55	Cluster Formation by Distance Adjustment with Various Threshold of Wireless Sensor Networks	Rowsan Jahan Bhuiyan, M. Abul Kashem, Md Mostafizur Rahman and Saiful Islam
4:15	Survey of Data Locality in Apache Hadoop	Sungchul Lee, Juyeon Jo and Yoohwan Kim
4:35	Automated Configuration Parameter Classification Model for Hive Query Plan on the Apache Yarn	Jongyeop Kim, Seongsoo Kim, Donghoon Kim and Hong Liu
4:55	Robust Optimization Method for Designing Emerging Cloud-Fog Networks	Masayuki Tsujino
5:15	IoTDoc: A Docker-Container based Architecture of IoT-enabled cloud system	Shahid Noor, Bridget Koehler, Abby Steenson, Jesus Caballero, David Ellenberger and Lucas Heilman

**Friday, May 31, 2019**

**8:00am-12:00pm – Registration**

**Foyer**

<b>Session 7B (ACIT 2019)</b>		<b>Room B</b>
<b>Special Session 1: Bioinstrumentation, Affective Computing and Humanware Engineering</b>		
<b>Session Chair: Naruki Shirahama</b>		
<b>8:00am-10:00pm</b>		
8:00	Do Virtual Reality Images Provide Greater Relaxation Effects than 2D Images?	Kenji Moriya, Rikuto Osawa, Yuya Chiba, Yoshiko Maruyama, Masahiro Nakagawa
8:20	Character input system based on EMG signals generated by eye blinks	Yoshiko Maruyama, Takuya Sawada, Kenji Moriya
8:40	Measurement of dynamic vein pressure during venous needle dislodgement	Naofumi Nakaya, Tomoki Okajima, Takayuki Abe, Satoshi Watanabe, Yukio Mori, Naruki Shirahama, Kazuo Aoki
9:00	Measurements of the Impression of Three Pieces of Sounds Based on Visual Analog Scale by Small Samples	Satoshi Watanabe, Naruki Shirahama, Naofumi Nakaya, Yuji Matsumoto, Hiroyuki Tsukamoto, Yukio Mori
9:20	A Proposal for Subjective Evaluation Method in Small Sample using Visual Analog Scale	Naruki Shirahama, Satoshi Watanabe, Naofumi Nakaya, Yukio Mori

<b>Session 7C (BCD 2019)</b>		<b>Room C</b>
<b>Healthcare</b>		
<b>Session Chair: Masataka Sano</b>		
<b>8:00am-10:00am</b>		
8:00	Secure Pattern-Based Data Sensitivity Framework for Big Data in Healthcare	Yiu Chung Yau, Praveenkumar Khethavath and Jose A. Figueroa
8:20	Thermal Vision Based Fall Detection via Logical and Data driven Processes	Joseph Rafferty
8:40	Improving the Quality of the Clinical Trial System through Comparative Study & Requirements Modeling Approaches	Tenzin Kunga, Masataka Sano and Motoi Iwashita
9:00	Development of cleaning viewpoints and evaluation of anonymity among Japanese Adverse Drug Event Report database	Masataka Sano and Yosuke Sato

**10:00-10:15am - Coffee Break**

**Foyer**

<b>Session 8A (BCD 2019)</b>		<b>Room A</b>
<b>Data Science</b>		
<b>Session Chair: Motoi Iwashita</b>		
<b>10:15am-12:35pm</b>		
10:15	Tags-Aware Recommender Systems: A Systematic Review	Babak Maleki Shoja and Nasseh Tabrizi
10:35	A Survival Analysis-Based Prioritization of Code Checker Warning: A Case Study using PMD	Hirohisa Aman, Sousuke Amasaki, Tomoyuki Yokogawa and Minoru Kawahara
10:55	NBA On-Ball Screens: Automatic Identification and Analysis of Basketball Plays	Sun Sunnie Chung and Andrew Yu
11:15	Mention Detection Method for Entity Linking	Naotaka Kawata and Genichiro Kikui
11:35	Transitional Approach to Evaluate Customer Satisfaction for Video Distribution Services	Motoi Iwashita

<b>Session 8B (ACIT 2019)</b>		<b>Room B</b>
<b>Regular Session</b>		
<b>Session Chair: Takaaki Goto</b>		
<b>10:15am-12:35pm</b>		
10:15	Wikitheoria: A Computational Framework for Parsimonious Sociology Theory Construction	Mingzhe Du, Jose Vidal and Barry Markovsky

10:35	Using Pre-trained Embeddings to Detect the Intent of an Email	Zaid Alibadi, Mingzhe Du and Jose Vidal
10:55	Recognition the Object Hardness from Images Using Capsule Network	Shyota Shindo, Takaaki Goto and Kensei Tsuchida
11:15	Transformer Design Software with Parallel Processing	Junhyun Park, Keun-Ho Park, Hak-Ju Lee, Bum-In Shin, Tae-Ho Kim, Kyung-Ho Park, Ayoung Jang, Sung-Chin Hahn and Jangwu Jo
11:35	Design of Efficient Distribution Transformer: a deep learning approach	Junhyun Park, Ayoung Jang, Keun-Ho Park, Hak-Ju Lee, Bum-In Shin, Tae-Ho Kim, Kyung-Ho Park, Sung-Chin Hahn and Jangwu Jo

**12:35-12:40pm – Closing Remarks by Program Chair(s)**

## **Future Conference Information**

### **2019 Conferences**

#### **IEEE/ACIS ICIS 2019**

18th IEEE/ACIS International Conference on Computer and Information Science  
June 17-19, 2019, Beijing, China

#### **IEEE/ACIS SNPD 2019**

20th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence,  
Networking and Parallel/Distributed Computing  
July 8-11, 2019, Toyama, Japan

### **2020 Conferences**

#### **IEEE/ACIS ICIS 2020**

19th IEEE/ACIS International Conference on Computer and Information Science  
TBA, Shanghai, China

#### **IEEE/ACIS SNPD 2020**

21th IEEE/ACIS International Conference on Software Engineering, Artificial Intelligence,  
Networking and Parallel/Distributed Computing  
**July 1-3**, Melbourne, Australia

#### **IEEE/ACIS SERA 2020**

19th IEEE/ACIS International Conference on Software Engineering Research, Management and  
Applications  
TBA, Kitakyushu, Japan

#### **ACIS ACIT 2020**

8th International Conference on Applied Computing and Information Technology  
TBA, Kitakyushu, Japan

#### **ACIS CSII 2020**

7th International Conference on Computational Science/ Intelligence and Applied Informatics  
TBA, Macao

#### **ACIS BCD 2020**

5th International Conference on Big Data, Cloud Computing, Data Science & Engineering  
TBA, Macao

#### **ACIS AI 2020**

1<sup>st</sup> International Conference of Artificial Intelligence  
TBA, Macao

## **ACIS Journal Information**

### **International Journal of Networked and Distributed Computing (IJNDC)**

IJNDC is a world-class international journal. IJNDC Journal has been indexed in ESCI and Scopus and will ultimately be indexed in SCI **approximately** within one year.

<http://www.atlantis-press.com/publications/ijn/dc/>

### **International Journal of Software Innovation (IJSI)**

IJSI is a world-class international journal. IJNDC Journal has been indexed in ESCI and Scopus and will ultimately be indexed in SCI **approximately** within one year.

<http://www.igi-global.com/ij/si>

### **International Journal of Big Data Intelligence and Applications (IJBDA)**

A new journal published by IGI-Global coming 2020.

### **ACIS Official Website**

<http://www.acisinternational.org>