### Message from the organizers

Dear Colleagues and Friends,

Asia Pacific Society for Computing and Information Technology 2017 Annual Meeting (APSCIT 2017 Annual Meeting) will be held in Hokkaido, Japan during July 27-30 2017.

APSCIT 2017 Annual Meeting is a new symposium and aimed to provide a platform for the exchange and networking between top scientists, emerging young researchers, and students across a wide spectrum of computer science and informatics.

We would like to invite you to participate in APSCIT 2017 Annual Meeting. Your active participation is the key to the success of this conference.



Yours Sincerely,

APSCIT 2017 Annual Meeting Committee

Asia Pacific Society for Computing and Information Technology (APSCIT)

www.apscit.org



### **Conference organizing committee**

#### **CONFERENCE CHAIRS**

Prof. Youhei AKIMOTO (Shinshu University)

Prof. Chih-Yu JIAN (Takming University of Science and Technology)

Prof. Dong-Seong KIM (Kumoh National Institute of Technology)

Prof. Che-Wei LEE (National Kaohsiung Marine University)

Prof. Manabu OKUMURA (Tokyo Institute of Technology)

Prof. Young B. PARK (Dankook University)

Prof. Kouichi SAKURAI (Kyushu University)

Prof. Daishi WATABE (Saitama Institute of Technology)

**CONFERENCE PROGRAM DIRECTORS** 

Dr. Yingxue SONG (APSCIT)

**CONFERENCE SECRETARIAT** 

Ms. Yangjun HU (APSCIT)

Ms. Yaru WU (APSCIT)



### **Conference topics**

- 1. Theory, Algorithms, Programming
- 2. Database, Cloud Computing, Data Mining, Big Data
- 3. Communications, Networking, Security, and Internet of Things
- 4. Multimedia, Image Processing and Recognition (Virtual Reality)
- 5. High Performance Computing and Intelligent Systems (AI, Robotics)
- 6. Software Engineering and Applications
- 7. Electronics (Analog/Digital Circuits, Signal Processing, System Architectures)

	THU, 7/27	FRI, 7/28	SAT, 7/29	SUN, 7/30
9:00 - 10:20	Pre-session	Oral Presentation		
10:20 - 10:30	technical and discussion forums	Coffee & Tea Break		
10:30 - 12:00	on international collaboration	Oral Presentation		
12:10 - 13:00		Lunch Break		
13:10 - 14:40		Oral Pre		
14:40 - 14:50		Coffee & Tea Break		
14:50 - 16:30		Oral Presentation		Optional Excursion
17:00 - 18:30	Conference Registration		Poster Session	
19:00 – 20:30	Conference Reception		Banquet(Japanese convivial gathering)	

### Presentation List (No. 103 Meeting Room)

	THU, 7/27	FRI, 7/28	SAT, 7/29	SUN, 7/30
9:00 - 10:20	Pre-session	1. H. KAMABE 2. T. WATANABE	13. M.W. DAVID 14. G.J. ZHANG	25. K. YADA 26. F.Y. CHIU
10:20 - 10:30	technical and discussion forums on international		Coffee & Tea Break	
10:30 - 12:00	collaboration	3. S.S. HONG 4. K.J. HAN 5. K. OTA	15. K. NISHIDA 16. R. TANABE 17. N. SAKAMOTO	27. R.D. LI
12:10 - 13:00		Lunc		
13:10 - 14:40		6. T. MUNAKA 7. W.T. LIN 8. R. ANDO	18. M. MIYAKAWA 19. H. SATO 20. N. HAMADA	
14:40 - 14:50		Coffee & Tea Break		
14:50 - 16:30		9. H.Y. PARK 10. T. NAKATOH 11. F. MASUI 12. R.C. WANG	21. Y. AKIMOTO 22. S. SHIRAKAWA 23. K. KOMOKU 24. K. NAKAJIMA	Conference Excursion
17:00 - 18:30	Conference Registration		Poster Session	
19:00 - 20:30	Conference Reception		Conference Banquet (Japanese Convivial Gathering)	

### Presentation List (No. 106 Meeting Room)

	THU, 7/27	FRI, 7/28	SAT, 7/29	SUN, 7/30
9:00 - 10:20	Pre-session technical and discussion forums on international collaboration		13. S.K. LU 14. D.S. KIM	
10:20 - 10:30			Coffee & Tea Break	
10:30 - 12:00			15. J.M. LEE 16. H. NANBA 17. H.J. YUN	
12:10 - 13:00		Lunc	h Break	
13:10 - 14:40			<ol> <li>18. T. MURAYAMA</li> <li>19. K. SAHO</li> <li>20. X.N. CUI</li> </ol>	
14:40 - 14:50		Coffee & Tea Break		
14:50 - 16:30			21. C.W. LEE 22. C.K. HUANG	Conference Excursion
17:00 - 18:30	Conference Registration		Poster Session	
19:00 _ 20:30	Conference Reception		Conference Banquet (Japanese Convivial Gathering)	

#### Presentations for APSCIT 2017 Annual Meeting

#### FRIDAY 7/28

#### No. 103 Meeting Room

- 1. Compactness of Immink Coding (H. KAMABE)
- 2. A Reflective Functional Reactive Programming Language for Small-Scale Embedded Systems (T. WATANABE)
- 3. Software Platform Architecture for Safe Autonomous Vehicles (S.S. HONG)
- 4. A Review of Enhanced Strategies to Improve Performance of Device Discovery in Bluetooth Low Energy (BLE) Networks (K.J. HAN)
- Eyes in the Dark: Distributed Scene Understanding for Disaster Management (K. OTA)
- 6. The Results of a Demonstration Experiment of IoT Trash Boxes (T. MUNAKA)
- 7. Automatic Motel Checkout Mechanism and Management System with IOT Technology (W.T. LIN)
- Emerging Big Data Mining Technologies under IoT Era and Narrative Fallacy (R. ANDO)
- 9. Design of Deep Neural Networks for Image Pattern Recognition (H.Y. PARK)
- 10. Survey Method of Related Research based on Citation Relations (T. NAKATOH)
- 11. Toward Cruling Science: Tackling Support for Tactics and Strategies in Curling with Information Technology (F. MASUI)
- 12. Cross APPs Attacks on Android Devices (R.C. WANG)

#### SATURDAY 7/29

#### No. 103 Meeting Room

- 13. Towards Trustworthy Smart Cyber-Physical Systems (M.W. DAVID)
- 14. Phase Modulation Characteristics of Spatial Light Modulator and its Operation System (G.J. ZHANG)
- 15. Population Size Adaptation for the CMA-ES Based on the Accuracy of the Parameter Update (K. NISHIDA)
- 16. A Review of Simulation-Based Approaches for Analyzing Operator and Parameter Adaptation Methods (R. TANABE)
- 17. Improvement to the Box Constraint Handling Method for the CMA-ES and its Generalization to Linear Constraints (N. SAKAMOTO)
- 18. Utilization of Infeasible Solutions in Constrained Many-objective Evolutionary Algorithm Based on Decomposition (M. MIYAKAWA)
- 19. A Study on Search Amount Control in Decomposition Based Evolutionary Multi-Objective Optimization (H. SATO)
- 20. When Evolutionary Multiobjective Optimization Meets Multicriteria Decision Making: A Global-Geometoric View of Scalarization (N. HAMADA)
- 21. Covariance Matrix Adaptation Evolution Strategy for High Dimensional Search Space (Y. AKIMOTO)
- 22. Evolutionary Computation Approaches to Designing Deep Neural Network Architectures (S. SHIRAKAWA)

- 23. Effective Implementation of Lorenz Plot for MEMS Tactile Sensor System (K. KOMOKU)
- 24. Development of Large-Scale Scientific & Engineering Applications on Post-Peta/Exascale Systems using ppOpen-HPC (K. NAKAJIMA)

#### No. 106 Meeting Room

- 13. IDEA: An Integrated Dependability Enhancement Architecture for Flash Memory Storage System (S.K. LU)
- 14. IOT technology and application for military and logistics (D.S. KIM)
- 15. Design of Log Analysis Software using Smart Platform for Naval Combat Systems (J.M. LEE)
- 16. Automatic Compilation of Travel Information from Texts (H. NANBA)
- Integrating Social Science Theory with Text Mining: Illustration of Evaluating Service Quality in Hotel Business (H.J. YUN)
- Large deviation analysis of a prototypical system with noisy and networked sensors (T. MURAYAMA)
- 19. Gait classification based on difference of balance ability using micro-Doppler radar for identificastion of elderly pedestrians with high-risk of falls (K. SAHO)
- 20. Wide-Residual-Inception Network Based Object Detection on Embedde Board (X.N. CUI)
- 21. Introduction to the Developement of Image Authentication Techniques (C.W. LEE)

22. Using Computer Technology in Education (C.K. HUANG)

#### POSTER SESSION

- P1. Design and Implementation of Adaptive Artillery Simulator on Naval Combat System (H.K. JO)
- P2. A Case Study on One-Source Multi-Platform Mobile Game Development Using Unity3D (H. LEE)
- P3. Design and Implementation of Smart Farm System with LoRa and IEEE 802.11ac (H.H. CHOI)
- P4. Design of Deflection Measurement System using Smart Proximity Sensors for Ship Engine (H.Y. LEE)
- P5. Energy-Saving Multihop Routing Protocol for Bluetooth Low Energy Ad hoc Networks (C.S. JUNG)
- P6. Performance Evaluation of Routing Protocol on FANET for Multimedia Transmission (M.R. RAMLI)
- P7. Error Detection Scheme of Middleware for Smart DDS base Naval Combat System (J.H. CHA)
- P8. Conditional Generative Adversarial Netowrks Based Depth Estimation from A Single Image (C.B. JIN)

- P9. Openflow Controller for Software-defined Real-time Ethernet (A.A. PRANATA)
- P10. Device-to-Device Routing based Connection Stability Optimization for Indoor IoT Device Communications (T. FUKASE)
- P11. Drosophila Heart Chambers Segmentation Algorithm for Optical Coherence Tomography (C.Y. LEE)

#### **SUNDAY 7/30**

#### No. 103 Meeting Room

- 25. Marketing and the Uses of Big Data (K. YADA)
- 26. Research on K 6 Program Education by Using Robot and Graphic Programming (F.Y. CHIU)
- 27. A Distributed Authentication and Authorization Scheme for In-Network Data Sharing (R.D. LI)