# 11/26 Workshop on Al Computing in Science and Technology

Time Content

Theme: Welcome

09:00~09:05 Welcome and Introduction of SEAIP2018

09:05~09:15 Who's who

### Keynote: PRAGMA Institute

Session Chair: Fang-Pang Lin, NCHC, NARLabs, Taiwan

**09:15-09:30** PRAGMA and Scientific Expedition

Shava Smallen, Chair of PRAGMA SC, UCSD, USA

#### Theme: Network & Security

09:30~09:45 Honeynet and Malware Knowledge Base

Boyi Lee, NCHC, NARLabs, Taiwan

09:45~10:00 Towards Connected - HPC

Hiroaki Morimoto, CMC, Osaka University, Japan

10:00~10:15 Implementation of a Transnational Testbed with Layer 3 SDX

Te-Lung Liu, NCHC, NARLabs, Taiwan

10:15~10:30 News Tracking System on Cloud

Yih-Jia Tsai, Tamkang University

10:30-10:50 Coffee Break

### Theme: Resources Management

**10:50:11:05** Towards Intelligent Resource Management in Fog Clusters: An Reinforcement Learning Approach

Aye Mon Tun, UCSY, Myanmar

11:05~11:20 A Resource Usage Prediction System Using Functional-link and Genetic Algorithm Neural Network for Multivariate Cloud Metrics

Nguyen Van Thieu, HPCC, Hanoi University of Science and Technology, Vietnam

11:20~11:35 Integration of Fuzzy Computing and Knowledge Discovery in the Light of Al and Cloud Computing

Le Hoang Son, Vietnam National University, Hanoi, Vietnam

## Theme: Instrumentation & Services

11:35~11:50 Unmanned Aerial Monitoring and Information Management of Aging Structures

Noel B. Linsangan, Mapua University, Philippines

11:50~12:10 Research Applications on the Internet of Things (IoT)

Meryl Regine Algodon, Advanced Science and Technology Institute, Philippines

12:10~13:30

Lunch & Posters

13:30~13:45 Intelligent Quality Inspection and Monitoring

Lai Weng Kin, Tunku Abdul Rahman University College, Malaysia

13:45~14:00 Digital Assistants: The Challenges

Duc Nghia Pham, MIMOS Berhad, Malaysia

## Theme: Agriculture

**14:00~14:15** Disaster and Agricultural Remote Sensing Applications Using High Performance Computing

Roel M. De La Cruz & Nash Frederic Prado, Advanced Science and Technology Institute, Philippines

14:15~14:30 Komiot: Exploring Rest Protocol for IOT Server of The Automatic Irrigation Control System

Sri Wahjuni, Bogor Agricultural University, Indonesia

#### Theme: Smart Cities

14:30~14:45 SDN, IoT and Fog Computing Testbed for Smart Cities

Đinh Văn Dũng, Information Technology Institute (ITI) Vietnam National University Hanoi , Vietnam

14:45~15:00 Warning Alert System for Reducing Road Traffic Accidents Using IoT Tin Lae Lae Mon, University of Computer Studies Yangon, Myanmar

15:00~15:30 Coffee Break

15:30~15:45 Scene Understanding for Power Generation Inspection Vehicle

Teesid Leelasawassuk, National Electronics and Computer Technology Center,

Thailand

**15:45~16:00** Reinforcement Learning for Determining The Best Route Based on Weather Condition Taken by Wireless Sensor Network

Nurmaya, YARSI University, Indonesia

#### Theme: Natural Disasters

**16:00~16:15** Land Feature Pseudo-Segmentation and Object Class Estimation Using Deep Learning on Satellite-based RGB Images

Jeffrey A. Aborot, Department of Science and Technology - Advanced Science and Technology Institute, Philippines

16:15~16:30 Monitoring Landslide Prone Area using Internet of Things

Chaw Chaw Khaing, UCSY, Maymmar

16:30~17:30 Poster Session

18:00~ Discussions & Dinner

# 11/27 Al Innovation in Cloud Computing and IOT

Time Content

Theme: Welcome

09:00~09:20 SEAIP Opening

Kao-Cheng Wang, Vice President of Tamkang University Ce-Kuen Shieh, Director General of Delegate of NARL

## Theme: Keynote Speech on Al Innovation

Session Chair: Hui-Hung Hsu, Dean College of Engineering, Tamkang University

**09:20~09:40** Collaboration: A Critical Strategy to Bridge Al Innovations Applied to Cloud Computing and IoT with Scientific and Societal Challenges

Peter Arzberger, UCSD, USA

**09:40~10:00** Opportunities for Young Scientists in the Age of Autonomous Systems and AI

Williams, Y, Chang, University of Hawaii at Manoa, USA

10:00~10:20 Coffee Break

Theme: Keynote Speech on Advance Science and Technology

Session Chair: Shava Smallen, UCSD, USA

**10:20~10:50** Virtual and Augmented Reality for Scientific Visualization *Uwe Woessner, HLRS, Germany* 

**10:50-11:20** Self-aware Machine Intelligence and International Collaboration in Biodiversity Data Research

Jose Fortes, University of Florida, USA

11:20~11:40 Al Bridging Cloud Infrastructure (ABCI)

Yoshio Tanaka, AIST, Japan

**11:40~12:00** Distributed AI and Edge-oriented IoT Infrastructures for Smart Cities Hock-Beng Lim, Singapore University of Technology and Design, Singapore

12:00~13:30 Lunch & Poster Session

#### Theme: Al applications in Biomedical Development

Session Chair: Heru Suhartanto, Universitas Indonesia, Indonesia

13:30-13:55 Improving the Performance of Colon Histopathology Images Training Based on Convolutional Neural Network on GPU Environment

Heru Suhartanto, Universitas Indonesia, Indonesia

13:55~14:20 Telemedicine

Raul Gilberto Hazas Izquierdo, Universidad de Sonora, Mexico

14:20~14:40 FORMOSAT-5 Application Current and Future

Bo Chen, NSPO, NARLabs, Taiwan

**14:40~15:00** On The Robustness of Cry Detection Methods In Real Neonatal Intensive Care Units

Huy Hoang Vuong, Institute of Information Technology Vietnam Academy of Science and Technology, Vietnam

15:00~15:30 Coffee break

Theme: Al Applications in Smart Cities

Session Chair: Fang-Pang Lin, NCHC, Taiwan

15:30~15:55 Urban Ecology

Hen-Biau King, The Jane Goodall Institute Taiwan

**15:55~16:20** Towards a Periodontal Screening Using a Smart Phone Camera Yusuke Moriyama, CMC, Osaka University, Japan

**16:20~16:40** A Hyper-heuristic based Artificial Bee Colony Algorithm for the Multi-modal Transportation Problem

Li Pei Wong, School of Computer Sciences University Sains Malaysia, Malaysia

16:40~17:00 Innovative Solution for Smart Building

Yen-Jong Chen, NCKU, Taiwan

**18:00~20:00** Banquet

Fullon Hotel Tamsui Fisherman's Wharf @ 3F

# 11/28 Joint Workshop on Alin Art, Culture and Society (ACS)

Time Content

Theme: Joint Workshop on Art, Culture and Society

09:30~09:40 Opening on Joint Workshop

Mr. Hsiaote, Hsu, Chief Curator, NPM

Ce-Kuen Shieh, Director of NCHC, NARLabs

Theme: Al & Smart and Connected Communities

09:40~10:00 Keynote from National Palace Museum

Chun-Ko Hsieh, Deputy Chief, Education Exhibition Department, NPM

10:00~10:20 Coffee Break

Theme: Smart and Connected Communities

10:20~10:50 Cultural Heritage and Arts in VR

Uwe Woessner, HLRS, Germany

10:50~11:05 Cultural Heritage in Bagan

Thida Aung, UCSY, Myanmar

11:05~11:20 Deep Learning on Point Clouds

Cherdsak Kingkan, NECTEC, Thailand

11:20~12:00 Reverse-engineering an ML-based Information Delivery System

S. Felix Wu, UC Davis, USA

12:00~13:30 Lunch

Theme: Al and Beyond

13:30~14:30 Coordinated Mining of 3D Physical World from Big Visual Data

Jenq-Neng Hwang, University of Washington, USA

14:30~17:45 Cultural Tour in National Palace Museum

## 11/29 Al in Education and Applications

Time Content

Theme: Cultivating Young Talents Through Community Collaboration

**09:00~10:20** Panel in Al Education & Programs for Junior High, Undergraduate and Post Graduate Students

PRAGMA, AIST, NMMBA, NMMST

10:20~10:40

Coffee Break & Posters

Theme: Al Applications in Intelligent Manufacturing

10:40~11:00 Smart and Connected Communities

Rui Oliveira, INESC TEC, Portugal

11:00~11:20 Scalable Research Platform for Global Research Collaboration

Jim Chen, iCAIR, University of North Western, USA

11:20~11:40 Secure Staging Mechanism towards Al-related Research Treating Security-sensitive Scientific Data

Susumu Date, CMC, Osaka University, Japan

11:40~12:00 A Weaving CAD Software with AI

V.K. Bhatia & Satya Vir Singh, India Media Lab, India

12:00~14:00

Lunch/Posters

## Theme: Marine Science and Technology

**14:00~14:20** Lifemapper in Southeast Asia: Past, Present, and Future Collaborations in Biodiversity Research

Aimee Stewart, University of Kansas Biodiversity Institute, USA

14:20~14:40 Lifemapper Installs for NMMST and PRAGMA, PRP

Nadya Williams, UCSD, USA

**14:40~15:00** Applying Artificial Intelligence and 3D Technology in Coral Reef Monitoring and Mass Coral Culture

Tung-Yung Tony Fan, NMMST, Taiwan

15:00~15:15Sea-surface temperature spatiotemporal analysis for the Gulf of California, 1998-2015: regime change simulation

Maria Del Carmen Heras Sanchez, Universidad de Sonora, Maxico

15:15~15:30

Coffee Break & Preparation for Breakout Groups

15:30~15:40TCA Introduction on Smart Cities Summit & Expo 2019

15:30~17:30 The World Cafe and Mini-Workshops

Groups to kick off

- 1. Modeling & Visualization for Museum in Marine Science (e.g. Coral Reef Ecosystem)
- 2. Starlight Connectivity Opportunity for SEAIP Members
- 3. Smart Cities Platform and Applications

18:00~ Discussions & Dinner

## 11/30 International Collaborative on Al

Time Content

Theme: Welcome

**09:00~10:00** Collaborative Discussions in AI – Review of SEAIP2017/2018 *Ideas, Prototyping & Proposals* 

10:00~10:30 Coffee Break & Posters

**10:30~11:00** Collaborative Discussions in AI – Review of SEAIP2017/2018 *Ideas, Prototyping & Proposals* 

11:00~ Cultural Tour at Tamsui