

# Conference Program

Time	December 14, 2018 (Friday)	
09:00   21:00	Registration (Lobby, WANDA REALM Hotel)	
Time	December 15, 2018 (Saturday)	
8:20	Shuttle Bus (Hotel → CCIT)	
09:00   09:20	Opening Ceremony <i>Prof. Jeng-Shyang Pan</i> (Room 403, Administration Building, CCIT)	
09:20   10:20	Keynote Speech (I) <i>Prof. Jhing-fa Wang, IEEE Fellow</i> (Room 403, CCIT)	Title: Orange Technology and AI Robot
10:20   10:50	Coffee Break Group Photo (4th Floor , CCIT)	
10:50   11:40	Keynote Speech (II) <i>Prof. Zhigeng Pan</i> (Room 403, CCIT)	Title: The Application of VR and HCI to Virtual Experiments
11:40   12:30	Keynote Speech (III) <i>Prof. Xiudong Peng</i> (Room 403, CCIT)	Title: On Industrial Applications of AI
12:30   13:20	Lunch (3rd Floor, CCIT Canteen)	

13:30   14:30	Keynote Speech (IV) <i>Prof. Jiuyong Li</i> (Room 403, CCIT)	Title: Causal discovery and applications
14:30   15:30	Keynote Speech (V) <i>Prof. Philippe Fournier-Viger</i> (Room 403, CCIT)	Title: Identifying interesting and high-utility patterns in symbolic data
15:30   15:50	Coffee Break (4th Floor , CCIT)	
15:50   16:50	Keynote Speech (VI) <i>Dr. Peter Peng</i> (Room 403, CCIT)	Title: Application of multi-objective k-mean genetic algorithm in analyzing data clustering solutions
17:00   17:30	Paper Awards (Room 403, CCIT)	
17:40	Shuttle Bus ( CCIT → Hotel)	
18:00   19:00	Buffet ( Cafe realm, WANDA REALM Hotel )	

Time	December 16, 2018 (Sunday)	
09:00   10:20	<b>Session 01</b> (Conference Room YANZHENG, 3F, WANDA REALM Hotel) <b>Machine Learning</b>	<b>Session 02</b> (Conference Room BOARDROOM, 3F, WANDA REALM Hotel) <b>Evolutionary Computing</b>
10:20   10:40	<b>Coffee Break</b> (WANDA REALM Hotel)	
10:40   12:00	<b>Session 03</b> (Conference Room YANZHENG, 3F, WANDA REALM Hotel) <b>Image and Video Processing</b>	<b>Session 04</b> (Conference Room BOARDROOM, 3F, WANDA REALM Hotel) <b>Information Hiding</b>
12:10   13:00	<b>Buffet</b> (Cafe realm, WANDA REALM Hotel )	
13:00   14:20	<b>Session 05</b> (Conference Room YANZHENG, 3F, WANDA REALM Hotel) <b>Smart Living</b>	<b>Session 06</b> (Conference Room BOARDROOM, 3F, WANDA REALM Hotel) <b>Classification and Clustering</b>
14:20   14:40	<b>Coffee Break</b> (WANDA REALM Hotel)	
14:40   16:00	<b>Session 07</b> (Conference Room YANZHENG, 3F, WANDA REALM Hotel) <b>Application of Genetic Algorithms</b>	<b>Session 08</b> (Conference Room BOARDROOM, 3F, WANDA REALM Hotel) <b>Smart IOT</b>
16:00   16:20	<b>Coffee Break</b> (WANDA REALM Hotel)	
16:20   17:40	<b>Session 09</b> (Conference Room YANZHENG, 3F, WANDA REALM Hotel) <b>Application of Machine Learning</b>	<b>Session 10</b> (Conference Room BOARDROOM, 3F, WANDA REALM Hotel) <b>Application of Artificial Intelligence</b>
17:40   20:00	<b>Banquet</b> (BALLROOM 3, 3F, WANDA REALM Hotel)	

Time	December 17, 2018 (Monday)
8:30	Tour Bus
9:00   9:30	Ninebot (Changzhou) Technology Co., Ltd.
9:30   10:00	AUBO (Jiangsu) Robotics Co., Ltd.

# Session List

Keynote Speech (I): Orange Technology and AI Robot

Speaker: Dr. James, Jhing-fa Wang, IEEE Fellow  
Date: December 15, 2018 (Saturday)  
Time: 09:20-10:20  
Room: Room 403, Administration Building, CCIT

Keynote Speech(II): The Application of VR and HCI to Virtual Experiments

Speaker: Professor Zhigeng Pan  
Date: December 15, 2018 (Saturday)  
Time: 10:50-11:40  
Room: Room 403, Administration Building, CCIT

Keynote Speech(III): On Industrial Applications of AI  
Speaker: Professor Xiudong Peng  
Date: December 15, 2018 (Saturday)  
Time: 11:40-12:30  
Room: Room 403, Administration Building, CCIT

Keynote Speech(IV): Causal discovery and applications

Speaker: Professor Jiuyong Li  
Date: December 15, 2018 (Saturday)  
Time: 13:30-14:30  
Room: Room 403, Administration Building, CCIT

Keynote Speech(V): Identifying interesting and high-utility patterns in symbolic data

Speaker: Professor Philippe Fournier-Viger, Ph.D

Date: December 15, 2018 (Saturday)

Time: 14:30-15:30

Room: Room 403, Administration Building, CCIT

Keynote Speech(VI): Application of multi-objective k-mean genetic algorithm in analyzing data clustering solutions

Speaker: Dr. Peter Peng

Date: December 15, 2018 (Saturday)

Time: 15:50-16:50

Room: Room 403, Administration Building, CCIT

## **Session 01: Machine Learning**

Data: December 16, 2018 (Sunday)  
Time: 9:00-10:20  
Room: Conference Room YANZHENG, WANDA REALM Hotel  
Session Chair: Prof. Tsu-Yang Wu, Fujian University of Technology, China

(1) Automatic Training Data Generation Method for Pixel-level Road Lane Segmentation

Xun Pan, Yutian Wu, and Harutoshi Ogai

(2) Breaking CNN Based Steganalysis

Zhenxing Qian, Cheng Huang, Zichi Wang, and Xinpeng Zhang

(3) Multi-local Feature Target Detection Method Based on Deep Neural Network

Guojie Li, Wenxue Wei, and Wen Sun

(4) Deep Learning for Image Denoising: A Survey

Chunwei Tian, Yong Xu, Lunke Fei, and Ke Yan

(5) An Public Auditing Scheme with Data Recovery

Tsu-Yang Wu, Chien-Ming Chen, King-Hang Wang, Jimmy Ming-Tai Wu, and Jeng-Shyang Pan

(6) An Adaptive Algorithm of Showing Intuitively the Structure of a Binary Tree

Pin-Ju Ye, Chun-Guo Huang, and Yuan-Wang Hu

(7) Single Actor Pooled Steganalysis

Zichi Wang, Zhenxing Qian, and Xinpeng Zhang

(8) A GIS-based Optimization of ACO in UAV Network

Weifeng Sun, Yuanxun Xing, Guangqun Ma, and Shumiao Yu

## **Session 02: Evolutionary Computing**

Data: December 16, 2018 (Sunday)  
Time: 9:00-10:20  
Room: Conference Room BOARDROOM, WANDA REALM Hotel  
Session Chair: Prof. Shih-Pang Tseng, Tajen University, Taiwan

(1) A New Advantage Sharing Inspired Particle Swarm Optimization Algorithm

Lingping Kong and Vaclav Snasel

(2) Density Peak Clustering based on Firefly Algorithm

Jiayuan Wang, Tanghuai Fan, Zhifeng Xie, Xi Zhang, and Jia Zhao

(3) A Multi-Population QUasi-Affine Transformation Evolution Algorithm for Global Optimization

Nengxian Liu, Jeng-Shyang Pan, Xiangwen Liao, and Guolong Chen

(4) Particle Swarm Optimization based Parallel Input Time Test Suite Construction

Yunlong Sheng, Changan Wei, and Shouda Jiang

(5) Improved Whale Optimization Algorithm and its Application to UCAV Path Planning Problem

Jeng-Shyang Pan, Jenn-Long Liu, and En-Jui Liu

(6) Effects of Centrality and Heterogeneity on Evolutionary Games

Xin Ge, Hui Li, and Lili Li

(7) An Improvement for View Synthesis Optimization Algorithm

Chang Liu, Ke-Bin Jia, and Peng-Yu Liu

(8) External Hierarchical Archive based Differential Evolution

Zhenyu Meng, Jeng-Shyang Pan, and Xiaoqing Li



### **Session 03: Image and Video Processing**

Data: December 16, 2018 (Sunday)

Time: 10:40-12:00

Room: Conference Room YANZHENG, WANDA REALM Hotel

Session Chair: Prof. Jie Niu, Changzhou College of Information Technology, China

(1) A Bi-level Image Segmentation Framework Using Gradient Ascent

Cheng Li, Baolong Guo, Xinxing Guo, and Yulin Yang

(2) Graph-regularized NMF with Prior Knowledge for Image Inpainting

Li Liu, Fei Shang, Siqi Chen, Yumei Wang, and Xue Wang

(3) Virtual Reality Projection Alignment for Automatic Measuring Truck's Box Volume in Single Image

Wei Sun, Lei Bian, Peng-hui Li, and Yue-Cheng Li

(4) Collaborative Filtering Model based on Time Context for IPTV Live Recommendation

Zhengying Hu, Yun Gao, Xin Wei, and Fang Zhou

(5) License Plate Occlusion Detection based on Character Jump

Wenzhen Nie, Pengyu Liu, and Kebin Jia

(6) A New Comprehensive Database for Hand Gesture Recognition

Lanyue Pi, Kai Liu, Yun Tie, and Lin Qi

(7) A Robust on-road Vehicle Detection and Tracking Method Based on Monocular Vision

Ling Xiao, Yongjun Zhang, Jun Liu, and Yong Zhao

(8) A Distributing Method for Insufficient Supply in P2P Video Broadcast System

Zhiming Cai, Xuehong Huang, and Yiwen Ou

(9) Field Analysis and Flux Weakening Control of PMSM Used in Vehicle

Zhong-Shu Liu

## **Session 04: Information Hiding**

Data: December 16, 2018 (Sunday)

Time: 10:40-12:00

Room: Conference Room BOARDROOM, WANDA REALM Hotel

Session Chair: Prof. Jimmy Ming-Tai Wu, Shandong University of Science and Technology, China

(1) Reversible Watermarking based on Adaptive Prediction Error Expansion

Qi Li, Bin Yan, Hui Li, and Jeng-Shyang Pan

(2) Visual QR Code with Beautification and Self-Recovery Based on Data Hiding

Huili Cai, Bin Yan, and Jeng-Shyang Pan

(3) Generalized Benford's Distribution for Data Defined on Irregular Grid

Li-Fang Shi, Bin Yan, Jeng-Shyang Pan, and Xiao-Hong Sun

(4) Detection of Opinion Leaders in Social Networks using Entropy Weight Method for Multi-Attribute Analysis

Liqing Qiu, Wenwen Gao, Xin Fan, Wei Jia, and Jinfeng Yu

(5) A K-shell Decomposition based Heuristic Algorithm for Influence Maximization in Social Networks

Liqing Qiu, Jinfeng Yu, Wei Jia, Xin Fan, and Wenwen Gao

(6) An Image Encryption Scheme Based on the Discrete Auto-Switched Chaotic System

Chunlei Fan, Kai Feng, Xin Huang, and Qun Ding

(7) Service Migration based on Software-Defined Networking

Chin-Shiuh Shieh, Cheng-Ta Lu, Yu-Chun Liu, and Yuh-Chung Lin

(8) Reliable and Efficient Task Allocation Method in Wireless Sensor Networks

Da-Xiu Zhang, Chia-Cheng Hu, Xiao-Juan Zhu, and Rui-Bin Xu

## **Session 05: Smart Living**

Data: December 16, 2018 (Sunday)

Time: 13:00-14:20

Room: Conference Room YANZHENG, WANDA REALM Hotel

Session Chair: Prof. Zhai Wenzheng, Changzhou College of Information Technology, China

(1) An Intelligent Temperature Measurement and Control System for the Steel Mill

Yuhang Huang, Yeqing Wang, and Gefei Yu

(2) Influence of SVC and STATCOM Access on Voltage Stability of Doubly-Fed Wind Turbine

Peiqiang Li, Zhengbang Xia, Luqi Jie, Chuan Lin, Peidong Sun, and Pengcheng Cao

(3) Influence of Wind Farm Access on System Small Signal Stability

Pei-Qiang Li, Lu-Qi Jie, Zheng-Bang Xia, and Cai-Jie Weng

(4) A Uniform Methodology for Mobile and Desktop Web Applications

Chi-Tsai Yeh and Ming-Chih Chen

(5) Design and Implementation of Microbiological Fermentation Monitoring System

Jing Wang, Jun Wang, and Shengxia Liu

(6) An AC Power Conditioning with Robust Intelligent Controller for Green Energy Applications

En-Chih Chang, Rong-Ching Wu, and Chun-An Cheng

(7) Predicting the Co-Movement of stocks in the Hong Kong Stock Market

Chuxun Chen and Jean Lai

(8) Applying Wireless Sensors to Monitor the Air Conditioning Management System

Tung-Ming Liang, Yi-Nung Chung, and Chao-Hsing Hsu

## **Session 06: Classification and Clustering**

Data: December 16, 2018 (Sunday)

Time: 13:00-14:20

Room: Conference Room BOARDROOM, WANDA REALM Hotel

Session Chair: Prof. Jerry Chun-Wei Lin, Western Norway University of Applied Sciences, Norway

(1) Meteorite Detection and Tracing with Deep learning on FPGA Platform

Kuo-Kun Tseng, Jiangrui Lin, Haichuan Sun, K.L. Yung, and W. H. Ip

(2) Medical Image Diagnosis with Deep Learning on FPGA Platform

Kuo-Kun Tseng, Ran Zhang, and Lantian Wang

(3) Convolutional Neural Networks Implemented by Tensorflow for the Segmentation of Left Ventricular MRI Images

Chih-Yu Hsu and Kuo-Kun Tseng

(4) Financial Analysis with Deep Learning

Kuo-Kun Tseng, Chiye Ou, Ao Huang, and Regina Fang-Ying Lin, Xiangmin Guo

(5) A Novel Approach for Objectness Estimation Based on Saliency Segmentation and Superpixels Clustering

Jie Niu, Yi-Wen Jiang, Liang Huang, and Hao-Wen Xue

(6) Imbalanced Data Classification Algorithm Based on Integrated Sampling and Ensemble Learning

Yan Han, Mingxiang He, and Qixian Lu

(7) Classification of Snoring Sound Related Signals Based on MLP

Limin Hou, Huancheng Liu, Xiaoyu Shi, and Xinpeng Zhang

(8) Extension of Sample Dimension and Sparse Representation based Classification of Low-dimension Data

Qian Wang, Yongjun Zhang, Ling Xiao, and Yuewei Li

(9) GFSOM: Genetic Feature Selection for Ontology Matching

Hiba Belhadi, Karima Akli-Astouati, Youcef Djenouri, Jerry Chun-Wei Lin, and Jimmy Ming-Tai Wu

## **Session 07: Application of Genetic Algorithms**

Data: December 16, 2018 (Sunday)

Time: 14:40-16:00

Room: Conference Room YANZHENG, WANDA REALM Hotel

Session Chair: Prof. Lijuan Shi, Changzhou College of Information Technology, China

(1) Finger Vein Image Registration based on Genetic Algorithm

Zilong Chen, Wen Wang, Lijuan Sun, Jian Guo, Chong Han, and Hengyi Ren

(2) A Review of Satellite Video on Demand with Evolutionary Computing

De Yao Lin and Xue-Hong Huang

(3) Design of Greenhouse Wireless Monitoring System based on Genetic Algorithm

Lijuan Shi, Shengqiang Qian, Lu Wang, and Qing Li

(4) Design of Library Reader Deployment and Management System Based on RFID Technology

Lijuan Shi and Yafei Wang

(5) Matching Biomedical Ontologies Through Compact Evolutionary Simulated Annealing Algorithm

Xingsi Xue, Jie Chen, Jianhua Liu, and Dongxu Chen

(6) Study on Information and Integrated of MES Big Data and Semiconductor Process Furnace Automation

Kuo-Chi Chang, Jeng-Shyang Pan, Kai-Chun Chu, Der-Juinn Horng, and Huang Jing

## **Session 08: Smart IOT**

Data: December 16, 2018 (Sunday)

Time: 14:40-16:00

Room: Conference Room BOARDROOM, WANDA REALM Hotel

Session Chair: Prof. Xiaogang Wang, Changzhou College of Information Technology, China

(1) An Application of Support States from Speech Emotions in Consensus Building

Ning He and Yang Liu

(2) Application of Bluetooth Low Energy in Smart Connected Lighting

Kai Yang

(3) Parking Information Acquisition System Based on LoRa and Geomagnetic Sensor

Zhai Wenzheng

(4) A New Multi-criteria Recommendation Algorithm for Groups of Users

Shenghui Guo, Shujuan Ji, Chunjin Zhang, Xin Wang, and Jianli Zhao

(5) Innovative Financial Prediction Model Based on Lasso and Keras Neural Network

Xiaogang Wang and Shichen Zhai

(6) Innovative Text Extraction Algorithm Based on Tensorflow

Shichen Zhai, Xiaogang Wang, Di Xiao, and Zhiwen Li

(7) Application of Big Data Technology in Student Management Decision

Jianjian Luo

## **Session 09: Application of Machine Learning**

Data: December 16, 2018 (Sunday)

Time: 16:20-17:40

Room: Conference Room YANZHENG, WANDA REALM Hotel

Session Chair: Prof. Shaoqin Lu, Changzhou College of Information Technology, China

(1) A LSTM-Based Topic Flow Pattern Learning Algorithm and its Application in Deceptive Review Detection

Na Liu, Lu-Yu Dong, and Shu-Juan Ji

(2) Fast Algorithms for Poisson Image Denoising using Fractional-Order Total Variation

Jun Zhang, Mingxi Ma, Chengzhi Deng, and Zhaoming Wu

(3) An Adaptive Model Parameters Prediction Mechanism for LCU Level Rate Control

Zeqi Feng, Pengyu Liu, Kebin Jia, and Kun Duan

(4) Research on the Method of Solving Danger Level of Cascading Trips in Power System

Hui-Qiong Deng, Bo-Lan Yang, and Chao-Gang Li

(5) Decision Support of Intelligent Factory Evaluation Based on RAGA-AHP

Shaoqin Lu

(6) Hot Topic Detection Based on VSM and Improved LDA Hybrid Model

Qiu Liqing, Liu Haiyan, Fan Xin, and Jia Wei

## **Session 10: Application of Artificial Intelligence**

Data: December 16, 2018 (Sunday)  
Time: 16:20-17:40  
Room: Conference Room BOARDROOM, WANDA REALM Hotel  
Session Chair: Prof. Hsun-Hui Huang, Tajen University, Taiwan

(1) Cloud Service and APP for Drug-Herb Interaction

Lingyun Feng, Jui-Le Chen, Li-Chai Chen, and Shih-Pang Tseng

(2) Design and Implementation of the Health Monitor for Aged People

Zhong-Jie Liu and Shih-Pang Tseng

(3) Implementation of Data Collection in Smart Living Application

Yuh-Chung Lin, Yu-Chun Liu, Chun-Cheng Wei, and Xiao-Gang Wang

(4) An Ontology Based Recommendation System for ADAS Design

Hsun-Hui Huang, Horng-Chang Yang, and Yongjia Yu

(5) Effects of Different Factors on the Visibility in Kaohsiung Area using Hierarchical Regression

Chang-Gai Lee and Wen-Liang Lai

(6) Using Open Data to Create Smart Travel Application

Xiao-Hu Ma, Yu-Chun Liu, and Chun-Cheng Wei

(7) Discussions about Construction of Digital Campus in the Development of Higher Vocational Colleges

Haiying Zhou