

Final Program



8th International Virtual Conference on Computational Science/Intelligence & Applied Informatics (CSII 2021)

Sponsored by International Association for Computer and Information Science (ACIS)



September 13-15, 2021

Beijing Institute of Technology (Zhuhai)

<http://acisinternational.org/conferences/csii-2021/>

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Roger Lee, Central Michigan University, USA

Local Arrangements Chair:

Assoc/ Prof. En Zhange Beijing Institute of Technology (Zhuhai)

Program at a Glance

Monday, September 13, 2021

Time (UTC+8)	Activity	Location
9:30 – 12:00	Opening Ceremony Keynote 1 Keynote 2 https://meeting.tencent.com/dm/NNsqCLpWqXRS	Virtual
13:30 - 15:10	Regular Session (1) SMTA2021 (1) https://meeting.tencent.com/dm/aElmPG2qDniZ	
15:10 - 15:30	Break	
15:30 - 17:10	Regular Session (2) SMTA2021 (2) https://meeting.tencent.com/dm/IMAsHJLoSDt	

Tuesday, September 14, 2021

Time (GMT+7)	Activity	Location
9:30 – 11:00	Regular Session (3) SMTA2021 (3) https://meeting.tencent.com/dm/twpRoZqeuVxr	Virtual

Keynote 1

Unsupervised Ensemble Learning and Its Application to Temporal Data Mining

Yun Yang Ph. D

Professor, National Pilot School of Software, Yunnan University, China

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Abstract

Ensemble learning is originally proposed for classification tasks in a manner of supervised learning, the basic concept of ensemble learning is to train multiple base learners as ensemble members and combine their predictions into a single output that should have better performance on average than any other ensemble member. Recently, ensemble learning has been extended to unsupervised learning with different strategies, named as clustering/unsupervised ensemble. This has led to many real-world applications, such as gene classification, image segmentation, video retrieval, and so on. This presentation is going to concentrate on unsupervised ensemble learning technique, and talk about how such technique can deal with the challenge in clustering temporal data with various and high dimensionality, large volume, very high-feature correlation, and a substantial amount of noise.

Biography

Yun Yang received the B.Sc. (Hons.) degree with first class in information technology and telecommunication from Lancaster University, Lancaster, U.K., in 2004, the M.Sc. degree in advanced computing from Bristol University, Bristol, U.K., in 2005, and the M.Phil. degree in informatics and the Ph.D. degree in computer science from the University of Manchester, Manchester, U.K., in 2006 and 2011, respectively. He was a Research Fellow with the University of Surrey, Surrey, U.K., from 2012 to 2013. He is currently with the National Pilot School of Software, Yunnan University, Kunming, China, as a full Professor of Machine learning and Data Mining, he is also a Yunnan (China) distinguished professor (Yunnan Province High Level Overseas Talent Recruitment Program), and member of Yunnan University (China) Software School Academic Commission, Director of Kunming key laboratory of data science and intelligent computing, Director of Yunnan Provincial University Key Laboratory of Data Science and intelligent Computing, Deputy Secretary General of China information economics society-Internet economy and cross-border e-commerce Specialized Committee. He serves the Yunnan Provincial Academic Commission as proposal evaluator, project auditor. His current research interests include machine learning, data mining, pattern recognition and temporal data process and analysis. Dr. Yang has published more than 70 papers (including TKDE, TSMC, TNNLS, TII, TCBY, IF, PR) and 2 monograph books in the field of machine learning, data mining and pattern recognition, and serves as an Associate Editor for journal of Yunnan University (Natural Sciences Edition), Complex & Intelligent Systems, and Neural Networks, reviewers in more than 10 international journals, and the section chair or the PC member in some international conferences.

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Keynote 2

Data Security : From Data Generation to Data Processing

Yongkai Fan Ph. D

Associated Professor, Communication University of China, Beijing

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Abstract

Data is the basic ingredient in our information era. Confidentiality, Integrity, and Availability are the vital characteristics of data. In this talk, we present our group's research works about data security, from data generation to data processing, the content includes: From the data generation aspect, Trustworthiness of data is vital to data analysis in the age of big data. The way that data originated from sensors is common in consideration of this cyber-physical world, how can we make sure the trustworthiness of data in the generation phase and transmission phase? From the data storing aspect, the uncertainty of cloud service providers and user devices poses new challenges for users' privacy protection and data security, how to keep data security in the storing aspect? From the data processing aspect, we share some viewpoints of processing data with the consideration of data security.

Biography

Yongkai Fan received the Bachelor, Master and Ph.D. degrees from Jilin University, Changchun, China, in 2001, 2003, and 2006. From 2006 to 2009, he was an assistant researcher at Tsinghua University, Beijing. He was a visiting scholar in the Department of Computer science and Engineering at Lehigh University in the USA (201508-201601) and was a visiting scholar in the Department of Computer Science and Engineering at Penn State University in the USA (201602-201608). Dr. Fan is the session chair of the workshop on Big data and machine learning for security in ICCCN 2020, and he is one of the Technical Program Committee in the Joint Workshop on CPS&IoT Security and Privacy in ACM Conference on Computer and Communications Security 2020. His current appointment is as an associate professor at the Communication University of China, and his current research interests include theories of software engineering and software security. He has published more than 50 journal/conference papers. His current research interests include theories of Data security, AI security and IoT security.

Program in Detail

Monday, September 13, 2021

9:30 - 9:50 – Opening Ceremony **Virtual**

9:50 - 10:50 – Keynote 1 **Virtual**

10:50 - 11:00 – Break

11:00 - 12:00 – Keynote 2 **Virtual**

12:00 - 13:30 – Break

13:30 - 15:10 – Regular Session (1) **Virtual**
Chair: TBC

Research on High-speed Object Tracking Based on Circle Migration Estimation Neighborhood
Zehan Tan, Weidong Yang, Shaobin Li, Yanyu Chen, Xinlei Ma and Shuai Wu, School of Computer Science, Fudan University, China

Knowledge Graph-Based Sequence Recommendation
Yujuan Zhang, Jing Zhou and Weiguo Lin, Communication University of China

3MKG: Multidimensional Metadata Based Music Knowledge Graph
Rui Liu and Yizhen Cao, Communication University of China

Intrusion Detection for Modern DDos Attacks Classification Based on Convolutional Neural Networks
Wenwen Chen, Haiyan Zhang and Xiaoshu Zhou, Beijing Institute of Technology Zhuhai, China

13:30 - 15:10 – SMTA2021 (1) **Virtual**
Chair: TBC

Design of Intelligent Teaching Audio System
Xiaolong Ben, School of Music and Recording Arts, Communication University of China

Analysis of Airport Taxi Related Problems
Yuping Li and Jinnuo Zhang, School of Mathematics and Statistics, Zhengzhou Normal University China; School of Economics and Management, the University of Sheffield, United Kingdom

Design And Implementation Of Standard Compliance Testing For Chinese News Markup Language
Yanfeng Wang and Pengzhou Zhang, State Key Laboratory of Media Convergence and Communication, Communication University of China

The Influence of Reverberation on the Perceptual Judgment of Cross-Lingual Speakers' Timbre
Yali Liu and Mian Wu, Key Laboratory of Media Audio & Video, Communication University of China

15:10 - 15:30 –Break

15:30 - 17:10 – Regular Session (2) **Virtual**
Chair: TBC

KnowGraph-PM: a Knowledge Graph based Pricing Model for Semiconductors Supply Chains
Nour Ramzy, Sören Auer, Javad Chamanara and Hans Ehm, Leibniz Universität Hannover and Infineon Technologies AG, Germany

Video Captioning via Two-stage Attention Model and Generative Adversarial Network
Wencai Yan, Cong Jin, Yun Tie and Lin Qi, Zhengzhou University, China

Quality Detection Method for Controller Process Based on Mask R-CNN Network Model
Xinlei Ma, Yanyu Chen, Shaobin Li, Wencai Du, Zehan Tan, Qinggu Li, Yaqi Ma and Haiyan Deng, Data Science Research Institute, City University of Macau; Gree Electric Appliances, Inc. of Zhuhai, China

Research on Quality Control of Intelligent Injection Molding System Based on Process Monitoring
Han Wang, Shasha Lv, Shaobin Li, Wencai Du, Qinggu Li and Bo Wang, Data Science Research Institute, City University of Macau; Gree Electric Appliances, Inc. of Zhuhai, China

15:30 - 17:10 – SMTA2021 (2)

Virtual

Chair: TBC

An Enhanced Expression Recognition Based on Sparse Representation Using Data Normalization
Xiaofang Jin and Yijia Xiao, School of Information and Communicating Engineering, Communication University of China

Facial Expression Recognition Based on K-SVD Dictionary Learning and OMP Compression Perceptual Reconstruction
Xiaofang Jin and Ziyi Sha, School of Information and Communicating Engineering, Communication University of China

Exploration of Online and Offline Media Convergence Based on Artificial Intelligence Technology
Jinbao Song, Junli Deng, Xin Xin, Xiaoguang Wu and He Liu, State Key Laboratory of Media Convergence and Communication, Communication University of China; Beijing HeXinChenGuang Information Technology Co., Ltd., China

Tuesday, September 14, 2021

9:30 - 11:00 – Regular Session (3)

Virtual

Chair: TBC

Applying Data Mining Technology on Inflation Prediction in the United States
Ruijian Zhang, Purdue University, USA

Hyperspectral image classification based on superpixel segmentation and multi-directional LBP
Liguo Wang, Peimao Cai and Zhen Zhang, College of Information and Communication Engineering, Dalian Minzu University, China

Multi-Objective Scheduling Model for OpenStack-based Cloud
Haiyan Zhang, Kai-Yung Lin and Huahang Huang, Beijing Institute of Technology Zhuhai, China

9:30 - 11:00 – SMTA2021 (3)

Virtual

Chair: TBC

Design and Realization of Practice Teaching Platform for Integrated Media Based on Cloud Architecture
Xin Zhang, Shiyao Wei and Jiaqi Fan, Department of Laboratory and Equipment Management, Communication University of China; Teachers College Columbia University, United States; School of Cultural Industries Management, Communication University of China

Multi-Hop Reasoning for Question Answering with Knowledge Graph
Jiayuan Zhang, Yifei Cai, Qian Zhang, Zehao Cao, Zhenrong Cheng, Dongmei Li, Xianghao Meng, School of Information Science and Technology, Beijing Forestry University, China; National Forestry and Grassland Administration Engineering Research Center for Forestry-oriented Intelligent Information Processing, China

Graph classification model based on Graph Neural Networks and graph distance
Xiaoling Li, Zixuan Guan, Cong Jin, Qian Xu, School of Information and Communication Engineering, School of Computer and Cyberspace Security; School of Animation and Digital Arts, Communication University of China

2021 Conference Schedule

Dates	Location	Conference Name	Acronym
Oct 13-15	Xi'An China	21 st IEEE/ACIS International Fall Conference on Computer and Information Science	ICIS 2021 Fall
Nov. 24-26	Taichung Taiwan	22 nd IEEE/ACIS International Fall Conference on Software Engineering, Artificial Intelligence, Networking and Parallel/Distributed Computing	SNPD 2021 Fall

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 or so.

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

International Journal of Software Innovation (IJSI)

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

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

International Journal of Big Data Intelligence and Applications (IJBDA)

IJBDA is a world-class international journal. IJBDA Journal has been indexed in Scopus.

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

ACIS Official Website

<http://www.acisinternational.org>