

 120周年校庆年系列学术活动

# 第九届先进云计算与大数据国际会议

## The Ninth International Conference on Advanced Cloud and Big Data (CBD 2021)

### Final Program

March 26-27, 2022, Xi'an, China

Organized by



Co-Sponsored by





# 第九届先进云计算与大数据国际会议

## The Ninth International Conference on Advanced Cloud and Big Data (CBD 2021)



CBD参会人员群

# Table of Contents

<b>Welcome Message</b> .....	<b>02</b>
<i>Message from Conference Chairs</i> .....	03
<i>Message from Program Chairs</i> .....	04
<b>Organization</b> .....	<b>05</b>
<i>CBD 2021 Organization Committee</i> .....	06
<i>CBD 2021 Program Committee</i> .....	07
<b>Conference Information</b> .....	<b>10</b>
<i>Conference Schedule</i> .....	11
<i>Keynote Speeches</i> .....	12
<i>Sessions</i> .....	15
Session 1: Cloud Computing and Applications I.....	15
Session 2: Cloud Computing and Applications II.....	16
Session 3: Machine Learning & Data Mining I.....	17
Session 4: Machine Learning & Data Mining II.....	18
Session 5: Machine Learning & Data Mining III.....	19
Session 6: Machine Learning & Data Mining IV.....	20
Session 7: Cloud Security and Privacy.....	21
Session 8: Edge Computing and Edge Intelligence.....	22
Session 9: AR/VR & Miscellaneous.....	23
<i>Author Presentation Instructions</i> .....	24





# Welcome Message

## Message from Conference Chairs

It is our great pleasure to welcome you to the Ninth International Conference on Advanced Cloud and Big Data (CBD 2021) at Xi'an, China. This conference is jointly organized by Northwest University, Xi'an Polytechnic University and Southeast University to promote the cooperative research on cloud computing and big data between academia and industry.

CBD 2021 is expected to serve as a platform for researchers and practitioners to exchange ideas regarding advancements and practices in cloud and big data. CBD 2021 also covers edge computing and artificial intelligence in exploiting recent research advances to solve real-world problems. All participants are expected to obtain rewarding experiences as well as to have much fun during CBD 2021.

A number of people and organizations make great efforts to ensure the success of CBD 2021. First, we would like to express our deepest thanks to all the authors for submitting their papers and the program committee members for their review of the papers. We highly appreciate Prof. Yi Pan from Georgia State University(USA), Prof. Zhiwen Yu from Northwestern Polytechnical University(China), and Prof. Jianming Yong from University of Southern Queensland(Australia) for their keynote speeches. We sincerely give our special thanks to Steering Committee Co-chairs Junzhou Luo, Yi Pan and Laurence T. Yang for their great guidance in organizing this conference. We also thank Program Co-chairs Jianpin Fan, Xiaojiang Chen, Tao Xue and Fang Dong for their great devotion through the paper review process. Last but not least, we gratefully acknowledge the support from Northwest University, Xi'an Polytechnic University, Southeast University, ACM Xi'an Chapter, ACM Nanjing Chapter, Shaanxi Computer Society, Tsinghua Science and Technology, Jiangsu Computer Society. Finally, we thank all the participants for attending the conference. Although CBD is being held online due to the pandemic, we hope everyone will enjoy CBD2021.

Jinye Peng, Northwest University, China

Zhiwen Yu, Northwestern Polytechnical University, China

Junzhou Luo, Southeast University, China

Yi Pan, Georgia State University, USA

Laurence T. Yang, St. Francis Xavier University, Canada

**CBD 2021 General Conference Co-chairs**



## Message from Program Chairs

Welcome to CBD 2021 – the Ninth International Conference on Advanced Cloud and Big Data. The objective of the conference is to bring together researchers and practitioners and bridge the gap between state-of-art research and state-of-practice technologies. We provide a forum for both academics and practitioners working on cloud computing and big data technologies to explore new ideas, share their experiences and leverage each other’s perspectives.

The technical program has 3 keynote addresses and 56 regular papers. They cover a broad spectrum including cloud computing, cloud resource management, cloud data center networking, cloud based deep learning, cloud security and privacy, machine learning and data mining, big data processing and query, data mining in smart applications, edge computing architecture and algorithm, machine learning and AI at edge, AR&VR and etc. We would like to thank all the authors for sharing their ideas and results with us, and all the members of the Program Committee and reviewers for their help in evaluating and selecting high quality papers. Without their participation, the success of the conference would not be possible.

We thank you for attending the conference and hope that you enjoy the program we have prepared for you.

Jianpin Fan, University of North Carolina at Charlotte, USA

### **CBD 2021 Program Chair**

Xiaojiang Chen, Northwest University, China

Tao Xue, Xi’an Polytechnic University, China

Fang Dong, Southeast University, China

### **CBD 2021 Program Co-chairs**

# Organization





# CBD 2021 Organization Committee

## General Conference Co-Chairs

- \* Jinye Peng, Northwest University, China
- \* Zhiwen Yu, Northwestern Polytechnical University, China
- \* Junzhou Luo, Southeast University, China
- \* Yi Pan, Georgia State University, USA
- \* Laurence T. Yang, St. Francis Xavier University, Canada

## Publicity Co-Chairs

- \* Yuhe Zhang, Northwest University, China
- \* Jie Zheng, Northwest University, China
- \* Runqun Xiong, Southeast University, China
- \* Shuai Wang, Southeast University, China

## Local Arrangement Co-Chairs

- \* Hai Wang, Northwest University, China
- \* Jun Wang, Northwest University, China
- \* Kang Li, Northwest University, China
- \* Tianzhang Xing, Northwest University, China

## Program Co-Chairs

- \* Jianpin Fan, University of North Carolina at Charlotte, USA
- \* Xiaojiang Chen, Northwest University, China
- \* Tao Xue, Xi'an Polytechnic University, China
- \* Fang Dong, Southeast University, China

## Publication Co-Chairs

- \* Ziyu Guan, Northwest University, China
- \* Lin Wang, Northwest University, China
- \* He Chen, Tsinghua University Press, China
- \* Xinjuan Zhu, Xi'an Polytechnic University, China
- \* Jinghui Zhang, Southeast University, China

## International Steering Committee

- \* Junzhou Luo, Southeast University, China
- \* Yi Pan, Georgia State University, USA
- \* Laurence T. Yang, St. Francis Xavier University, Canada



## CBD 2021 Program Committee

Bin Zhao, Nanjing Normal University, China  
Byeungwoo Jeon, Sungkyunkwan University, Korea  
Chao Tan, Nanjing Normal University, China  
Chaobo He, Zhongkai University of Agriculture and Engineering, China  
Cong Wang, Notheastern University, China  
Darren Xu, Transaction Network Services, USA  
Dayong Ye, Swinburne University of Technology, Australia  
Dengao Li, Taiyuan University of Technology, China  
Dezun Dong, National University of Defense Technology, China  
Domenico Talia, University of Calabria, Italy  
Dong Yuan, The University of Sydney, Australia  
Fan Yang, Google, USA  
Fang Dong, Southeast University, China  
Fangming Liu, Huazhong University of Science and Technology, China  
Fei Chen, Shenzhen University, China  
Fei Teng, Southwest Jiaotong University, China  
Feng Li, Shandong University, China  
Feng Shan, Southeast University, China  
Frank Jiang, University of Technology Sydney, Australia  
Gaofeng He, Nanjing University of Posts and Telecommunications, China  
Gaofeng Zhang, Hefei University of Technology, China  
Genoveva Vargas, French Council of Scientific Research, France  
Gongxuan Zhang, Nanjing University of Science and Technology, China  
Guangwei Bai, Nanjing Tech University, China  
Hai Jiang, Arkansas State University, USA  
Hai Wang, Northwest University, China  
Haipeng Dai, Nanjing University, China  
Haisheng Tan, University of Science and Technology of China, China  
Hang Shen, Nanjing Tech University, China



Heng Qi, Dalian University of Technology, China  
Huai Liu, Victoria University, Australia  
Huming Chen, University of Wollongong, Australia  
Jiahui Jin, Southeast University, China  
Jian Shen, Nanjing University of Information Science and Technology, China  
Jian Zhou, Nanjing University of Posts and Telecommunications, China  
Jianming Yong, University of Southern Queensland, Australia  
Jieyue He, Southeast University, China  
Jinghui Zhang, Southeast University, China  
Jingya Zhou, Soochow University, China  
Jiyun Li, Donghua University, China  
Jun Shen, University of Wollongong, Australia  
Junwu Zhu, Yangzhou University, China  
Kaigui Bian, Virginia Polytechnic Institute and State University, USA  
Li Li, Southwest University, China  
Liang Liu, Beijing University of Posts and Telecommunications, China  
Lijuan Wang, Xidian University, China  
Lintao Duan, Chengdu University, China  
Lu Liu, University of Derby, UK  
Lu Zhang, Nanjing University of Finance and Economics, China  
Mingfu Xue, Nanjing University of Aeronautics and Astronautics, China  
Mingming Lu, Central South University, China  
Panlong Yang, University of Science and Technology of China, China  
Peijian Wang, Xi'an Jiaotong University, China  
Peng Chen, Facebook, USA  
Pengwei Wang, Donghua University, China  
Qiang He, Swinburne University of Technology, Australia  
Qingguo Zhou, Lanzhou University, China  
Qingjun Xiao, Southeast University, China  
Qun Jin, Waseda University, Japan  
Rui Zhou, Victoria University, Australia  
Runqun Xiong, Southeast University, China

## 第九届先进云计算与大数据国际会议

The Ninth International Conference on Advanced Cloud and Big Data (CBD 2021)

Sheng Zhang, Nanjing University, China  
Shaofu Yang, Southeast University, China  
Siyao Cheng, Harbin Institute of Technology, China  
Songtao Guo, Southwest University, China  
Tao Xiang, Chongqing University, China  
Thomas Rauber, University Bayreuth, Germany  
Tian Wang, Huaqiao University, China  
Tianzhang Xing, Northwest University, China  
Wanchun Dou, Nanjing University, China  
Wei Li, University of Sydney, Australia  
Wei Zheng, Xiamen University, China  
Wenjia Wu, Southeast University, China  
Xiang Fei, Coventry University, UK  
Xiao Fu, Nanjing University of Posts and Telecommunications, China  
Xiao Liu, Deakin University, Australia  
Xiaobing Sun, Yangzhou University, China  
Xiaofan Liu, City University of Hongkong, China  
Xiaofei Wang, Tianjin University, China  
Xiaohua Tian, Shanghai Jiao Tong University, China  
Xiaojiang Chen, Northwest University, China  
Xiaolin Fang, Southeast University, China  
Xuanzhe Liu, Peking University, China  
Xuejun Li, Anhui University, China  
Xuyun Zhang, University of Technology Sydney, Australia  
Yifei Lu, Nanjing University of Science and Technology, China  
Yuxiang Wang, Hangzhou Dianzi University, China  
Zebin Wu, Nanjing University of Science and Technology, China  
Zhen Ling, Southeast University, China  
Zhenhua Li, Tsinghua University, China  
Zhiang Wu, Nanjing University of Finance and Economics, China  
Zhigeng Han, Nanjing Audit University, China





# Conference Information

## Conference Schedule

Time	Contents		Moderator
26th March, 2022 (Saturday)			
<b>Virtual Main Conference Hall(Tencent Meeting ID: 397-427-652, PWD: 0326)</b>			
09:00-09:40	Opening Plenary		Vice President Jiang Chang
09:40-10:30	Keynote Speech 1 (Academician Yi Pan)	Prof. Junzhou Luo	
10:30-10:35	Virtual Coffee/Tea Break (5 mins)		
10:35-11:25	Keynote Speech 2 (Prof. Zhiwen Yu)	Prof. Jinye Peng	
11:25-11:30	Virtual Coffee/Tea Break (5 mins)		
11:30-12:20	Keynote Speech 3 (Prof. Jianming Yong)	Prof. Fang Dong	
12:20-14:00	Virtual Lunch Break		
	Virtual Meeting Room 1 Tencent Meeting ID: 111-561-225 PWD: 0326	Virtual Meeting Room 2 Tencent Meeting ID: 410-878-877 PWD: 0326	Virtual Meeting Room 3 Tencent Meeting ID: 351-633-057 PWD: 0326
14:00-16:00	Session 1	Session 2	Session 3
16:00-16:10	Virtual Coffee/Tea Break		
16:10-18:10	Session 4	Session 5	Session 6
27th March, 2022 (Sunday)			
	Virtual Meeting Room 1 Tencent Meeting ID: 111-561-225 PWD: 0326	Virtual Meeting Room 2 Tencent Meeting ID: 410-878-877 PWD: 0326	Virtual Meeting Room 3 Tencent Meeting ID: 351-633-057 PWD: 0326
09:00-11:00	Session 7	Session 8	Session 9
11:00-11:10	Virtual Coffee/Tea Break (10 mins)		
11:10-12:00	Closing/Award Ceremony		



## Keynote Speeches

**Keynote 1: Automatic and semi-automatic programming of cloud computing programs**

**Prof. Yi Pan**

**Chair Professor and Dean of the College of Computer Science and Control Engineering,  
Shenzhen Institute of Advanced Technologies, Chinese Academy of Sciences China**

**Regents' Professor Emeritus, Georgia State University, USA**

**09:40-10:30 am, March 26, 2022 (Virtual Main Conference Room)**



**Yi Pan**

**Short Bio:** Dr. Yi Pan is currently a Chair Professor and the Dean of the College of Computer Science and Control Engineering, Shenzhen Institute of Advanced Technologies, Chinese Academy of Sciences and Regents' Professor Emeritus at Georgia State University. He served as Chair of Computer Science Department at Georgia State University from 2005 to 2020. He has also served as an Interim Associate Dean and Chair of Biology Department during 2013-2017. Dr. Pan joined Georgia State University in 2000, was promoted to full professor in 2004, named a Distinguished University Professor in 2013 and designated a Regents' Professor (the highest recognition given to a faculty member by the University System of Georgia) in 2015. Dr. Pan received his B.Eng. and M.Eng. degrees in computer engineering from Tsinghua University, China, in 1982 and 1984, respectively, and his Ph.D. degree in computer

science from the University of Pittsburgh, USA, in 1991. His profile has been featured as a distinguished alumnus in both Tsinghua Alumni Newsletter and University of Pittsburgh CS Alumni Newsletter. Dr. Pan's current research interests mainly include bioinformatics and health informatics using big data analytics, cloud computing, and machine learning technologies. Dr. Pan has published more than 450 papers including over 250 journal papers with more than 100 papers published in IEEE/ACM Transactions/Journals. In addition, he has edited/authored 43 books. His work has been cited more than 18000 times based on Google Scholar and his current h-index is 87. Dr. Pan has served as an editor-in-chief or editorial board member for 20 journals including 7 IEEE Transactions. Currently, he is serving as an Associate Editor-in-Chief of IEEE/ACM Transactions on Computational Biology and Bioinformatics. He is the recipient of many awards including one IEEE Transactions Best Paper Award, five IEEE and other international conference or journal Best Paper Awards, 4 IBM Faculty Awards, 2 JSPS Senior Invitation Fellowships, IEEE BIBE Outstanding Achievement Award, IEEE Outstanding Leadership Award, NSF Research Opportunity Award, and AFOSR Summer Faculty Research Fellowship. He has organized numerous international conferences and delivered keynote speeches at over 60 international conferences around the world.



## **Keynote 2: Crowd Sensing 2.0: From Human-Centered to Heterogeneous Crowd Sensing**

**Prof. Zhiwen Yu**

**Chang Jiang Professor and Dean of School of Computer Science,  
Northwestern Polytechnical University, China**

**10:35-11:25 am, March 26, 2022 (Virtual Main Conference Room)**



**Zhiwen Yu**

**Short Bio:** Dr. Zhiwen Yu is currently a professor and dean of School of Computer Science, Northwestern Polytechnical University, China. He has worked as an Alexander Von Humboldt Fellow at Mannheim University, Germany from Nov. 2009 to Oct. 2010, a research fellow at Kyoto University, Japan from Feb. 2007 to Jan. 2009, and a post-doctoral researcher at Nagoya University, Japan in 2006-2007. His research interests cover pervasive computing, Internet of Things, and mobile social networks. He is the Editor-in-Chief of CCF Transactions on Pervasive Computing and Interaction. He has served as an associate/guest editor for a number of international journals, such

as IEEE Transactions on Human-Machine Systems, IEEE Communications Magazine, and ACM Transactions on Intelligent Systems and Technology. He received the CCF Young Scientist Award in 2011, the Humboldt Fellowship in 2008, and the CCF Excellent Doctoral Dissertation Award in 2006. He got the National Science Fund for Distinguished Young Scholars in 2017.



**Keynote 3: How do Big Data, Cloud Computing, Artificial Intelligence and 5G Information Technology assist in the mitigation of COVID-19**

**Prof. Jianming Yong**

**University of Southern Queensland, Australia**

**11:30-12:20 am, March 26, 2022 (Virtual Main Conference Room)**



**Jianming Yong**

**Short Bio:** Dr. Jianming Yong is a full professor in Cybersecurity at University of Southern Queensland, Australia. He has been mainly focused on cyber & cloud security, especially in access control, privacy challenges over the cloud and IoT-based systems. His research has strong connections with world leading research centres such as: The Centre for Education and Research in Information Assurance and Security (CERIAS), Purdue University, West Lafayette, USA, CERT & The Institute for Complex Engineered Systems (ICES), Carnegie Mellon University, Pittsburgh, PA, USA. He succeeded in acquiring funding from the Australian Academy of Science to conduct research collaboration within “The European Cooperation in Science and Technology Research Scheme” on the project of “Intelligent Monitoring, Control and

Security of Critical Infrastructure Systems”. He participated in American National Science Foundation Project on Federal Digital Identity Research. He has published 130+ scholarly papers, including 44 high quality journal papers on cyber security, cloud security, access control and privacy preservation and e-learning. Some publications were published by top tier journals across ICT domain, like IEEE Transactions on Services Computing, IEEE Transactions on Automation Science and Engineering, Computer, Expert Systems with Applications, Knowledge-Based Systems, Information Sciences, Computer Journal, Integrated Computer-Aided Engineering and top tier conference proceedings of PAKDD and PACIS. Recently he was successfully awarded Australian Research Council Discovery Project: “Privacy Preservation over 5G and IoT Smart Devices” from 2022 to 2024 for AU\$350k as the lead chief investigator.

## Sessions

### Session 1: Cloud Computing and Applications I

Tencent Meeting ID: 111-561-225 PWD: 0326

Time: 14:00-16:00 pm, March 26, 2022

Chair: Jie Zheng

◆ **Odd-Even Hash Algorithm: A Improvement of Cuckoo Hash Algorithm**

*Haiting Zhu, Junmei Wan, Nan Li, Yingying Deng, Gaofeng He, Jing Guo and Lu Zhang*

◆ **A Novel Container Workload Prediction Method Based on Automatic Classification and Attention-based LSTM**

*Senfan Wu, Xuemei Yang, Kedong Liu and Hong Luo*

◆ **A Spark-based Parallel NPTSR Algorithm for Hyperspectral Image fusion**

*Xinrong Liu, Yaoqin Zhu, Qiliang Zhu and Jin Sun*

◆ **Solving Virtual Network Mapping Fast by Combining Neural Network and MCTS**

*Cong Wang, Xiaoyang Chen, Yixin Luo and Guoqi Zhang*

◆ **A Distributed and Parallel Tensor Hierarchical Tucker Decomposition on Clouds**

*Weikai Ning, Zebin Wu, Jin Sun, Jiandong Yang, Yi Zhang, Yaoqin Zhu, Zhihui Wei and Lei Xia*

◆ **Flow Characteristics Estimation Based On Multilayer Virtual Active Counter Sharing in Data Center Network**

*Shiqi Wang, Fang Dong, Dian Shen and Wei Zhao*

◆ **DDoS Attack Detection Based on CNN and Federated Learning**

*Dingyang Lv, Xinyu Cheng, Jinghui Zhang, Wei Zhang, Wei Zhao and He Xu*





## Session 2: Cloud Computing and Applications II

Tencent Meeting ID: 410-878-877 PWD: 0326

Time: 14:00-16:00 pm, March 26, 2022

Chair: Tianzhang Xing

◆ **Tailor : Datacenter Load Balancing For Accelerating Distributed Deep Learning**

*Zhengzhi Xu, Yifei Lu, Jingqi Li, Xu Ma and Lei Qian*

◆ **FedKG: Model-Optimized Federated Learning for Local Client Training with Non-IID Private Data**

*Huan Wang and Lijuan Wang*

◆ **DWUPP: Dynamic Weight Update through Pipelined Parallel for Distributed Training Model**

*Yingchi Mao, Zijian Tu, Hua Nie, Ping Ping, Jianxin Huang and Jun Wu*

◆ **KSTA: a strategy for scheduling data-intensive workflows onto cloud computing resources**

*Wei Zheng, Peixuan Lin and Tongzhou Yang*

◆ **Traffic Simulation and Impact Analysis for Alternative Mobility Services in the City of Shenzhen**

*Xueying Zhu, Ye Li, Aledia Bilali, Biyun Zhou, Jun Zhang, Hao Dai, Fan Zhang, Rui Zhang and Leong Hou U*

◆ **A Spatial-Temporal Information based Traffic-Flow Detection Method for video Surveillance**

*Jiajia Yu and Shuyu Gu*

## Session 3: Machine Learning & Data Mining I

Tencent Meeting ID: 351-633-057 PWD: 0326

Time: 14:00-16:00 pm, March 26, 2022

Chair: Lin Wang

◆ **Finding Collusive Spam in Community Question Answering Platforms: A Pattern and Burstiness Based Method**

*Mingming Xu, Lu Zhang and Haiting Zhu*

◆ **Label Enhancement with Sample Correlations via Low-dimensional Feature Representation**

*Xiaoqian Zeng, Zhen Xu, Chao Tan and Genlin Ji*

◆ **Vulnerability Knowledge Extraction Method Based on Joint Extraction Model**

*Zhen Liu, Xiaoqiang Di, Wei Song and Weiwu Ren*

◆ **Self Attention Based Bi-directional Long Short-Term Memory Auto Encoder for Video Anomaly Detection**

*Jie Zhang, Xiaosha Qi and Genlin Ji*

◆ **An Execution Cost Model for Aggregate Queries over Knowledge Graphs**

*Tao Fu, Xiaoliang Xu and Yuxiang Wang*

◆ **YOLO-Cigarette: An effective YOLO Network for outdoor smoking Real-time Object Detection**

*Yankai Ma, Jun Yang, Zhendong Li and Ziqiang Ma*



## Session 4: Machine Learning & Data Mining II

Tencent Meeting ID: 111-561-225 PWD: 0326

Time: 16:10-18:10 pm, March 26, 2022

Chair: Yuhe Zhang

◆ **Joint Deep Dictionary Learning**

*Shiyi Liu, Bo Yang, Feng Wu and Gai Liu*

◆ **Embedding Chinese Face Painting Into the StyleGAN Latent Space**

*Pengsen Ma and Tao Xue*

◆ **SDP-CycleGAN: CycleGAN Based on Siamese Data Pairs for Unraveling Data Imbalance Problems in Anomaly Detection**

*Xuqian Yang and Lijuan Wang*

◆ **An Optimization Method for Weight Computation in Hypergraph Transductive Learning Model**

*Zhe Yang, Liangkui Xu, Ziyu Bu and Yipeng Chen*

◆ **An Automatic Question Classification Model Based on Solving Programs for Online Judge Platforms**

*Qi Li, Peng Qi, Jiangsong Min and Yan Sun*

◆ **A Fast Speech Emotion Conversion Point Detection Algorithm Based on Distance Measurement**

*Ruimeng Tian, Xuemei Yang, Wanqi Dong and Hong Luo*



## Session 5: Machine Learning & Data Mining III

Tencent Meeting ID: 410-878-877 PWD: 0326

Time: 16:10-18:10 pm, March 26, 2022

Chair: Jun Wang

◆ **Handling Imbalanced ECG Heartbeat Classification with Adaptive Sample Masking Updates**

*Renjie Tang, Jiahui Jin, Junbo Qian and Junzhou Luo*

◆ **Action Recognition Based on Parallel Multi-Granularity Feature Refinement Networks**

*Shuaiyu Jia, Ling Gao, Hongbo Guo, Qinyu Sun, Hai Wang and Jie Zheng*

◆ **Action recognition based on parallel convolutional recurrent neural networks**

*Qinyu Sun, Ling Gao, Hongbo Guo, Shuaiyu Jia, Hai Wang and Jie Zheng*

◆ **Multi-Branch Prediction Network for Multi-Label Social Image Classification**

*Junting Lei, Wanqing Zhao, Shaobo Zhang and Jinye Peng*

◆ **Deep Neural Network Based Chinese Dialect Classification**

*Miao Wan, Jie Ren, Miao Ma, Zhiqiang Li, Rui Cao and Quanli Gao*

◆ **Compressed LSTM using balanced sparsity**

*Tao Xiao, Jingfei Jiang, Jinwei Xu, Dong Wen, Junhua Wang and Xuehui Chen*



## Session 6: Machine Learning & Data Mining IV

Tencent Meeting ID: 351-633-057 PWD: 0326

Time: 16:10-18:10 pm, March 26, 2022

Chair: Wanqing Zhao

◆ **Continuous K-Selection Capacity Constrained Assignment in Road-Networks**

*Chenghua Gong, Xiaoyu Sun and Bin Zhao*

◆ **Efficient Mining of Regional Semantic Patterns from Semantic Trajectories on Cloud Computing**

*Yushi Liu, Jingjing Han and Bin Zhao*

◆ **C-BERT: A BERT-based Model For Extractive Summarization Of Chinese Online Judge Questions**

*Song Tian, Peng Qi, Hongjia Xue and Yan Sun*

◆ **Evaluation of pavement surface roughness performance under multi-features conditions based on optimized random forest**

*Yuanjiao Hu, Zhaoyun Sun, Lili Pei, Wei Li and Yingying Li*

◆ **pool-based sequential active learning for regression based on incremental cluster center selection**

*Binwei Lin, Zhiyong Yu, Fangwan Huang and Longkun Guo*

◆ **Applying Graph Neural Network in Deep Reinforcement Learning to Optimize Wireless Network Routing**

*Xiao Xu, You Lu and Qiming Fu*

## Session 7: Cloud Security and Privacy

Tencent Meeting ID: 111-561-225 PWD: 0326

Time: 9:00-11:00 am, March 27, 2022

Chair: Zhanyong Tang

◆ **SCPS:A Secure and Copyright-Preserving System for IIoT Based on Hyperledger Fabric**

*Jiahui Peng, Chunpei Li, Bo Yuan, Hongwei Meng, Feng Yu and Xianxian Li*

◆ **Non-Interactive Correlation Differential Privacy for Healthcare Data**

*Lei Yang and Xiao Zheng*

◆ **An Efficient Intrusion Detection Model Based on Convolutional Neural Network and Transformer**

*Zheyang Zhang and Lijuan Wang*

◆ **Can We Half the Work with Double Results: Rethinking Machine Learning Algorithms for Network Intrusion Detection System**

*Shuren Li, Yifei Lu and Jingqi Li*

◆ **Wi-SL: A Secure Lightweight WiFi Transmission Mechanism for IoT Devices**

*Changzhi Teng, Mingxuan Zhang, Zeng Zeng, Zhen Zhang, Yusen Zhou and Wenjia Wu*

◆ **A Security Situation Assessment Method based on Support Vector Regression for Power Monitoring System**

*Xuesong Huo, Ming Zhang, Hongqin Zhu and Wei Li*

◆ **A proof-of-work based on MH-PBKDF2 algorithm**

*Haiying Chen, Dongzhan Zhang, Zhiyu Chen, Xiangjin Zhan, Zehai Su and Wei Zheng*



## Session 8: Edge Computing and Edge Intelligence

Tencent Meeting ID: 410-878-877 PWD: 0326

Time: 9:00-11:00 am, March 27, 2022

Chair: Jinghui Zhang

◆ **ESOD:Edge-based Task Scheduling for Object Detection**

*Yihao Wang, Ling Gao, Jie Ren, Rui Cao, Hai Wang, Jie Zheng and Quanli Gao*

◆ **Accelerating Multi-Object Tracking in Edge Computing Environment with Time-Spatial Optimization**

*Mengyang Liu, Anran Tang, Huitian Wang, Lin Shen, Yunhan Chang, Guangxing Cai, Daheng Yin, Fang Dong and Wei Zhao*

◆ **Surveillance video analysis and compression based on edge computing**

*Yue Li, Xiaofang Mu, Hui Qi, Hong Shi and Jiaji Liu*

◆ **Vehicle-mounted Early Warning System Based on Edge Intelligence**

*Yifeng Gu, Zhenghua Zhang and Qingqing Hong*

◆ **Task Offloading and Power Assignment Optimization for Energy-Constrained Mobile Edge Computing**

*Xiaoting Wang, Zhimeng Zhou, Hanjing Chen and Yi Zhang*

◆ **Approximate Matching Based Cache Selection Strategy in Mobile Edge Computing**

*Ruixiang Li, Yingchi Mao, Tao Wu and Jun Wu*

◆ **Multi-user Computation Offloading for Long-term Sequential Tasks in MEC Environments**

*Huanhuan Xu and Jingya Zhou*



## Session 9: AR/VR & Miscellaneous

Tencent Meeting ID: 351-633-057 PWD: 0326

Time: 9:00-11:00 am, March 27, 2022

Chair: Baobao Liu

◆ **A Hybrid framework for mobile augmented reality**

*Shaobo Zhang, Wanqing Zhao, Yan Zhao, Xianlin Peng and Jinye Peng*

◆ **Adaptive Bitrate Encoding Strategy for ROI-based Mobile Augmented Reality**

*Jie Ren, Ling Gao, Quanli Gao, Yumeng Hao, Jiale Hou, Hai Wang and Jie Zheng*

◆ **A IoT Terminal Position Recognition Method Based on RSSI and Magnetic Field in A Low Trust Environment**

*Rui Zhang, Weiwei Miao, Jin Huang, Zeng Zeng, Changzhi Teng, Shihao Li, Zhen Zhang and Mingxuan Zhang*

◆ **ETS-TEE: An Energy-efficient Task Scheduling Strategy in Mobile Trusted Computing Environment**

*Hai Wang, Lu Cai, Xuan Hao and Jie Ren*

◆ **Recognition of Heart Failure from Clinical Notes Using I2F-LDA**

*Dengao Li, Huiting Ma, Yi Liu, Jumin Zhao, Jian Fu and Chunxia Li*



# Author Presentation Instructions

We look forward to all authors joining us for the virtual conference mode of CBD 2021. Please see below the specific presentation instructions. All authors are expected to present live at the conference using Tencent Meeting, through screen sharing and activating their video for increased interaction and engagement. However, Internet access and available bandwidth may not permit live streaming at all locations. So, we would like to offer the opportunity to authors to upload a video as backup, in case the live streaming fails. It is the author's responsibility to ensure the quality of the video recording. Even if the recording is ultimately played at the conference, at least one author must participate in the live Q&A following each talk.

## **Oral Presentations:**

Presentation time: 12 mins. 3 mins of Q&A per paper.

There are 5~7 papers per session in general (sessions have 5 papers that may allow for longer presentations)

## **General Video Upload Instruction:**

Go to Wechat Group for CBD2021

Contact the person responsible for video uploading

Send your video file to contact person

All video uploads must be completed latest by March 25, 2022.





## The meeting notes

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---



## The meeting notes

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---



## The meeting notes

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

