Advanced Program

IFIP IIP2020

11th IFIP International Conference

On

Intelligent Information Processing

July 3-6, 2020

Hangzhou, China

Advanced Program

*11th **IFIP** International Conference on*

Intelligent Information

Processing

IIP 2020

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Hangzhou, China

Sponsored by

    International Federation for Information Processing, IFIP TC12

Co-Sponsored by

    Chinese Association for Artificial Intelligence

    Key Laboratory of Brain Machine Collaborative Intelligence of Zhejiang Province,

    Hangzhou Dianzi University

    Institute of Computing Technology, Chinese Academy of Sciences

Welcome Address

Dear Colleagues,

   This volume comprises of papers collected in the 11th IFIP International Conference on Intelligent Information Processing. As the world proceeds quickly into the Information Age, it encounters both successes and challenges, and it is well recognized that intelligent information processing provides the key to solve many challenges in the Information Age. Intelligent Information Processing supports the most advanced techniques that are able to change human life and the world. However, the path to the success is never a straight one. Every new technology brings with it many challenging problems, and researchers are in great demand to tackle the challenging problems. This conference provides a forum for engineers and scientists in research institutes, universities and industries to report and discuss their latest research progresses in all aspects of intelligent information processing.

   We received more than 36 papers, of which 24 papers are included in this program as regular papers and 5 as short papers. All papers submitted were reviewed by three reviewers. We are grateful for the dedicated work of both authors and reviewers.

A conference such as this cannot succeed without help from many individuals who contributed their valuable time and expertise. We want to express our sincere gratitude to the Program Committee members and referees, who invested many hours for reviews and deliberations. They have provided detailed and constructive review comments that have significantly improved paper quality included in the proceedings.

   We are very grateful to have the sponsorship of the following organizations: IFIP TC12, Key Laboratory of Brain Machine Collaborative Intelligence of Zhejiang Province, Hangzhou Dianzi University and Institute of Computing Technology, Chinese Academy of Sciences. We specially thank Wanzeng Kong, Jianhai Zhang and Yang Song for organizing the conference and Xuanyu Jin, Wenfen Ling for carefully checking the proceedings.

   Finally, we hope you find this volume inspiring and informative. We wish that the research results reported in the proceedings will bear fruit over the years to come.

Zhongzhi Shi
Sunil Vadera
Elizabeth Chang

July 2020

Conference Organization

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Program Committee

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F. Zhuang, China

Local Arrangement

Organization Chair: Wanzeng Kong   （China）

Organization Co-Chair: Jianhai Zhang   （China）

General Secretary: Yang Song   （China）

Keynotes Speakers

Tensor networks and their applications in image and time series reconstruction and prediction

Andrzej Cichocki

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Abstract. Tensor factorizations / decompositions and their extensions tensor networks have become emerging techniques in AI and machine learning methods. Tensor networks have been already successfully used over a number of applied areas in machine learning, including deep neural networks, generalized regression, classification, clustering, support tensor machines (STM), tensor canonical correlation analysis (TCCA), higher order partial least squares (HOPLS), multilinear independent component analysis (MLICA), Non-negative Tensor Factorization (NTF), multiway robust PCA (MRPCA) and Higher order SVD.

In this talk we briefly overview these applications, and special emphasis will be give to emerging applications in image reconstructions and enhancement, and higher order time series forecasting (TSF).

Bio-Sketch: Andrzej Cichocki received the M.Sc. (with honors), Ph.D. and Dr.Sc. (Habilitation) degrees, all in electrical engineering from Warsaw University of Technology (Poland). He spent several years at University Erlangen (Germany) as an Alexander-von-Humboldt Research Fellow and Guest Professor. He was a Senior Team Leader and Head of the laboratory for Advanced Brain Signal Processing, at RIKEN Brain Science Institute (Japan) and now he is a Professor in the Skolkovo Institute of Science and Technology - SKOLTECH (Russia). He is author of more than 500 technical papers and 5 monographs in English (3 of them translated to Chinese). He served as Associated Editor of, IEEE Trans. on Signals Processing, IEEE Trans. on Neural Networks and Learning Systems, IEEE Trans on Cybernetics, Journal of Neuroscience Methods and he was as founding Editor in Chief for Journal Computational Intelligence and Neuroscience. Currently, his research focus on deep learning, multiway blind source separation, tensor decompositions, tensor networks for big data analytics, and Brain Computer Interface. His publications currently report over 41,000 citations according to Google Scholar, with an h-index of 91. He is Fellow of the IEEE since 2013.

Behavior based Artificial Intelligence from the perspective of automatic control

Fuchun SUN

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Abstract: In the development of human society, the invention and use of machine is an important sign of human being's entering into industrialization, and machine becomes an independent actuator, which realizes the separation of executor and action instruction sender from our human. Furthermore, the emergence of artificial intelligence makes it possible for a machine to become a sender of instructions through interactions with environment and human, and as a result, the sender and executor of the instruction are unified on the machine itself. This report systematically analyzes behavior-based artificial intelligence from evolution of automatic control. Then, taking "how to sense like a human being" as the topic, the talk puts forward the framework of robot active perception, introduces the main achievements of the team in visual multi-target detection, visual tactile representation, multimodal fusion and developmental learning, and takes "how to operate like a human being" as the problem, gives the main achievements of the team in learning smart operation skills such as active imitation learning and preference learning achievements. Next, taking "how to make decision like a human being" as the topic, some new points are given in terms of micro-size intelligence. Finally, the development trend of robot dexterous operation skill learning under the condition of incomplete information is given.

Bio-Sketch: Dr. Fuchun Sun is professor of Department of Computer Science and Technology and President of Academic Committee of the Department, Tsinghua University, deputy director of State Key Lab. of Intelligent Technology & Systems, Beijing, China. He also serve as Vice president of Society of Chinese Association for Artificial Intelligence and executive director of China Automation Society. His research interests include robotic perception and intelligent operations. He has won the Champion of Autonoumous Grasp Challenges in IROS2016 and IROS 2019.

Dr. Sun is the recipient of the excellent Doctoral Dissertation Prize of China in 2000 by MOE of China and the Choon-Gang Academic Award by Korea in 2003, and was recognized as a Distinguished Young Scholar in 2006 by the Natural Science Foundation of China. He served as associated editors of IEEE Trans. on Neural Networks during 2006-2010, IEEE Trans. On Fuzzy Systems during 2011-, IEEE Trans. on Cognitive and Development Systems since 2018 and IEEE Trans. on Systems, Man and Cybernetics: Systems since 2015.

Invited Speakers

Tensor Network Representations in Machine Learning

Qibin Zhao
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Abstract: Tensor networks are factorizations of very large tensors into networks of smaller tensors, it is shown to be a general extension of typical tensor decomposition to high dimensional case. Recently, tensor networks are also increasingly finding applications in machine learning such as model compression or acceleration of computations. In this talk, I will firstly present the general concept of tensor network related research in machine learning, and then introduce our studies on fundamental tensor network model, algorithm, and applications. In particular, the tensor ring decomposition model is introduced and shown to be powerful and efficient representations. In addition, we will present recent progresses on how tensor networks can be employed to solve challenging problems in tensor completion, multi-task learning and multi-modal learning.

Bio-Sketch: Qibin Zhao received the Ph.D. degree in computer science from Shanghai Jiao Tong University, China in 2009. He was a research scientist at RIKEN Brain Science Institute from 2009 to 2017. He is currently a unit leader for tensor learning unit at RIKEN Center for Advanced Intelligence Project (AIP). His research interests include machine learning, tensor factorization and tensor networks, computer vision and brain signal processing. He has published more than 100 papers in international journals and conferences and two monographs. He is a senior member of IEEE and serve as an editorial board member for Science China Technological Sciences.

Uncertainty between prediction and interpretability

Junping Zhang

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Abstract: In this topic, I will briefly survey the development of deep learning, and try to uncover a miracle that deep learning have superior prediction performance. Then I would like to talk about the uncertatinty between prediction and interpretability, and some potential research direction from the angle of uncertainty.

Bio-Sketch: Junping Zhang is a professor at School of Computer Science, Fudan University since 2011. His research interests include machine learning, image processing, biometric authentication, and intelligent transportation systems. He has been an associate editor of the IEEE INTELLIGENT SYSTEMS since 2009 and the IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS from 2010 to 2018. He has widely published in high-impact international journals and conferences such as TPAMI, TNNLS, TIP, ToC, TAC and ICML, AAAI, ECCV, ACM MM.

Neuromorphic Computing Approach to Auditory and Visual Perception

Huajin Tang

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Abstract: In recent years neuromorphic computing has become an important methodology to emulate brain style intelligence. There has been rapid progress in computational theory, learning algorithms, signal processing and circuit design and implementation. By using neural spikes to represent the outputs of sensors and for communication between computing blocks, and using spike timing based learning algorithms, neuromorphic computational models and hardware have achieved promising real-time learning performance. This talk will start from introducing the computational principles and architecture found in neural systems, and present a new theme of neuromorphic approach to auditory and visual perception.

Bio-Sketch: Prof. Huajin Tang received the B.Eng. degree from Zhejiang University, China in 1998, received the M.Eng. degree from Shanghai Jiao Tong University, China in 2001, and received the Ph.D. degree from the National University of Singapore, in 2005. Prof. Tang's research interests include neuromorphic computing, neuromorphic hardware and cognitive systems, robotic cognition, etc. He received 2016 IEEE Transactions on Neural Networks and Learning Systems Outstanding Paper Award, 2019 IEEE Computational Intelligence Magazine Outstanding Paper Award. Dr. Tang has served as an Associate Editor of IEEE Trans. on Neural Networks and Learning Systems, IEEE Trans. on Cognitive and Developmental Systems and Frontiers in Neuromorphic Engineering. He was the Program Chair of IEEE CIS-RAM (2015, 2017), International Symposium on Neural Networks (2019) and Chair of IEEE Symposium on Neuromorphic Cognitive Computing. and. He is now a member of the Board of Governors for International Neural Network Society.

Neuromusicology with machine learning – how human understands music

Toshihisa Tanaka

Electrical and Electronic Engineering

Tokyo University of Agriculture and Technology，Japan

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Abstract: This talk addresses my recent neurophysiological studies of music cognition. I will talk about the neural entrainment to the familiarity of a listener with music using both the electroencephalogram (EEG) signals and the music. It is shown that the cross-correlation between EEG and the music when listening to unfamiliar music is significantly stronger than that when listening to famil-iar music. Moreover, the familiarity of music can be classified by machine learning techniques such as neural networks and support vector machines.

Bio-Sketch: Toshihisa Tanaka received the B.E., the M.E., and the Ph.D. degrees from the Tokyo Institute of Technology in 1997, 2000, and 2002, respectively. From 2000 to 2002, he was a JSPS Research Fellow. From October 2002 to March 2004, he was a Research Scientist at RIKEN Brain Science Institute. In April 2004, he joined Department of Electrical and Electronic Engineering, the Tokyo University of Agriculture and Technology, where he is currently a Professor. In 2005, he was a Royal Society visiting fellow at the Communications and Signal Processing Group, Imperial College London, U.K. From June 2011 to October 2011, he was a visiting faculty member in Department of Electrical Engineering, the University of Hawaii at Manoa.

His research interests include a broad area of signal processing and machine learning including brain and biomedical signal processing, brain-machine interfaces and adaptive systems. He is a co-editor of Signal Processing Techniques for Knowledge Extraction and Information Fusion (with Mandic, Springer), 2008 and a leading co-editor of Signal Processing and Machine Learning for Brain-Machine Interfaces (with Arvaneh, IET, UK), 2018.

He served as an associate editor and a guest editor of special issues in journals including Neurocomputing and IEICE Transactions on Fundamentals and Computational Intelligence and Neuroscience (Hindawi). Currently he serves as an associate editor of IEEE Transactions on Neural Networks and Learning Systems, Applied Sciences (MDPI), and Advances in Data Science and Adaptive Analysis (World Scientific). Furthermore, he serves as a member-at-large, board of governors (BoG) of Asia-Pacific Signal and Information Processing Association (APSIPA). He was a chair of the Technical Committee on Biomedical Signal Processing, APSIPA. He is a senior member of IEEE, and a member of IEICE, APSIPA, Japan Epilepsy Society, and Society for Neuroscience.

Intelligent Analysis of Brain Imaging for Early Diagnosis of Brain Diseases

Daoqiang Zhang

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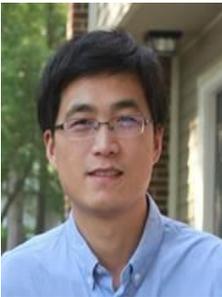
Abstract: In recent years, the brain research projects have received considerable public and governmental attentions worldwide. Brain imaging technique is an important tool for brain science research. However, due to the high-dimensional, multi-modality, heterogenous, and time-variant characteristics of brain images, it is very challenging to develop both efficient and effective methods for brain image analysis. In this talk, I will introduce our recent works on intelligent methods of brain imaging, based on machine learning techniques. Specifically, this talk will cover the topics including multi-modal brain image fusion and classification, image genomic association analysis, functional alignment and brain network analysis, as well as their applications in early diagnosis of brain disease and brain decoding.

Bio-Sketch: Daoqiang Zhang received the B.S. and Ph.D. degrees in computer science from the Nanjing University of Aeronautics and Astronautics (NUAA), China, in 1999 and 2004, respectively. He joined the Department of Computer Science and Engineering, NUAA, as a Lecturer in 2004, where he is currently a Professor. His research interests include machine learning, pattern recognition, data mining, and medical image analysis. In these areas, he has published over 150 scientific articles in refereed international journals, such as IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Image Processing, IEEE Transactions on Medical Imaging, Pattern Recognition, Neuroimage, Human Brain Mapping, Medical Image Analysis, and conference proceedings, such as IJCAI, AAAI, NIPS, CVPR, KDD, MICCAI with over 10000 citations by the Google Scholar. He was nominated for the National Excellent Doctoral Dissertation Award of China in 2006, received the Most Cited Article Award of Pattern Recognition and Most Cited Paper Award of Neuroimage, received the best paper award or the best student award of several international conferences, such as the PRICAI'06, STMI'12, and BICS'16. He has served as a Program Committee Member for several international and native conferences, such as the IJCAI, AAAI, NIPS, MICCAI, SDM, PRICAI, and ACML.

Data-Driven Security Analysis of Machine

Chao Shen

School of Electronic and Information Engineering

Xi'an Jiaotong University, China

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Abstract: Human society is witnessing a wave of machine learning (ML) driven by deep learning techniques, bringing a technological revolution for human production and life. In some specific fields, ML has achieved or even surpassed human-level performance. However, most previous machine learning theories have not considered the open and even adversarial environments, and the security and privacy issues are gradually rising. Besides of insecure code implementations, biased models, adversarial examples, sensor spoofing can also lead to security risks, which are hard to be discovered by traditional security analysis tools. This talk reviews previous works on ML system security and privacy, revealing potential security and privacy risks. Firstly, we introduce a threat model of ML systems, including attack surfaces, attack capabilities and attack goals. Second, we analyze security risks and countermeasures in terms of four critical components in ML systems: data input (sensor), data preprocessing, machine learning model and output. Finally, we discuss future research trends on the security of ML systems. The aim is to arise the attention of the computer security society and the ML society on security and privacy of ML systems, and so that they can work together to unlock ML's potential to build a bright future.

Bio-Sketch: Chao Shen is a Professor in School of Electronic and Information Engineering, and serves as the Associate Dean of School of Cyber Science and Engineering, at Xi'an Jiaotong University. He is also a member of Ministry of Education Key Lab for Intelligent Networks and Network Security. He was a research scholar in Computer Science Department of Carnegie Mellon University from 2011 to 2013. He has published over 70 papers in prestigious journals and conferences of cyber security and artificial intelligence fields such as USENIX Security, ACM CCS, IEEE TDSC, IEEE TIFS, Automatica, IEEE TNNLS, and ACM TKDD. He was the recipient of NSFC Excellent Young Scientists Fund. He serves as an associate editor of several international journals, as well as organization committee member or program committee member of several academic conferences.

Overview of Technical Program

	July 3 Friday	July 4 Saturday		July 5 Sunday		
8:00-8:30		Registration		Registration		
9:00-10:30		IIP2020 Opening Ceremony And Plenary Session 1 Place:		Plenary Session 3 Place:		
10:30-11:00		Coffee Break				
11:00-12:30		Plenary Session 2 Place:		Plenary Session 4 Place:		
12:30-14:00		Lunch				
14:00-15:30	Registration	**Session A1** Machine Learning (1) Place:	**Session B1** Pattern Recognition (1) Place:	**Session A3** Machine Learning (3) Place:	**Session B3** Computer Vision Place:Langqian Hall（朗乾厅)	
15:30-16:00	Registration	Coffee Break				
16:00-17:30	Registration	**Session A2** Machine Learning (2) Place:	**Session B2 Pattern Recognition (2)** Place:	**Session A**4 Brain Computer Integration Place:	**Session B4** Social Computing Place:	
18:00-20:00	Reception	Banquet				

Technical Program

Friday July 3, 2020

2:00pm – 5:00pm: Registration

Place: The lobby

6:00pm – 8:00pm: Reception

Saturday July 4, 2020

8:00am – 5:00pm: Registration

9:00am-9:15am: IIP2020 Opening Ceremony
Place:
Chair: Wanzeng Kong

Qi Wu: Greetings from General Chairs
                : Welcome from Hangzhou Dianzi University
Zhongzhi Shi: Introduction to IIP2020 Program

9:15-10: 30 Plenary Session 1
Room:
Chair: Wanzeng Kong

Fuchun SUN: Behavior Based Artificial Intelligence from the Perspective of Automatic Control

Qibin Zhao: Tensor Network Representations in Machine Learning

10:30am-11:00am Coffee Break

11:00am-12:30am: Plenary Session 2
Room:
Chair: Wanzeng Kong

Junping Zhang: Uncertainty between prediction and interpretability
Huajin Tang: Neuromorphic Computing Approach to Auditory and Visual Perception

12:30**pm-1:30pm: Lunch Break**

2:00pm– 3:30pm: Parallel Sessions

Session A1: Machine Learning (1)
Room:
Chair: Junping Zhang

1. A Salient Object Detection Algorithm Based on Region Merging and Clustering   Weiyi wei, Yijing
   Weiyi Wei, Yijing Yang, Wanru Wang, Xiufeng Zhao, Huifang Ma
2. Link-based Cluster Ensemble Method for Improved Meta-Clustering Algorithm
   Changlong Shao, Shifei Ding
3. Large-scale Spectral Clustering with Stochastic Nyström Approximation
   Hongjie Jia, Liangjun Wang, Heping Song
4. Feature selection algorithm based on Multi Strategy grey wolf optimize
   Guangyue Zhou, Kewen Li, Guoqiang Wan, Hongtu Ji

Session B1: Pattern Recognition (1)
Room:
Chair: Daoqiang Zhang

1. Phase Plane Analysis of Traffic Flow Evolution Based on a macroscopic traffic flow model
   WenHuan Ai,Tao Xing,YuHang Su,DaWei Liu, HuiFang Ma
2. Phase Plane Analysis of Traffic Phenomena with Different Input and Output Conditions
   WenHuan Ai,YuHang Su,Tao Xing,DaWei Liu,HuiFang Ma
3. Bird Detection on Transmission Lines Based on DCYOLO Model
   Cong Zou ,Yong-quan Liang
4. Design and Implementation of smart home cloud system based on Kinect
   Xue Bin Tang, Jin Chuang Zhao and Bin Feng

3:30pm-4:00pm: Coffee Break

4:00pm-5:30pm: Parallel Sessions

Session A2: Machine Learning (2)
Room:
Chair: Huajin Tang

1.. A Novel Fuzzy C-means Clustering Algorithm Based on Local Density
   Jianjun Liu, Jiancong Fan
2. A novel method to solve the separation problem of LDA
   Meng Zhang, Wei Li, Bo Zhang
3. Multi-label Classification of Short Text based on Similarity Graph and Restart Random Walk Model
   Xiaohong Li, Fanyi Yang, Yuyin Ma, Huifang Ma
4. Research on Customer Credit Scoring Model Based on Bank Credit Card
   Maoguang Wang, Hang Yang

Session B2: **Pattern Recognition (2)**

Room:
Chair: Chao Shen

1. Speech Triggered Mobility Support And Privacy
   Michael Zipperle, Marius Becherer, Achim Karduck
2. Analysis of the stability and solitary waves for the carfollowing model on two lanes
   WenHuan Ai, Tao Xing,YuHang Su,DaWei Liu,HuiFang Ma
3. Queue Length Estimation based Defence Against Data Poisoning Attack for Tra c Signal Control
   Xu Gao, Jiqiang Liu, Yike Li, Xiaojin Wang, YingXiao Xiang, Endong Tong, Wenjia Niu, Zhen Han
4. A Method of Style Transfer for Chinese Painting
   Cunjian Chen

6:00pm-8:00pm: Banquet
Room:

Sunday July 5

9:00-10: 30 Plenary Session 3
Room:
Chair: Jianhai Zhang

Andrzej Cichocki: Tensor networks and their applications in image and time series reconstruction and prediction
Daoqiang Zhang: Intelligent Analysis of Brain Imaging for Early Diagnosis of Brain Diseases
Toshihisa Tanaka: Neuromusicology with machine learning – how human understands music

10:00am-10:30am Coffee Break

10:30am-12:30am: Plenary Session 4
Room:
Chair: Jianhai Zhang

Toshihisa Tanaka: Neuromusicology with machine learning – how human understands music
Chao Shen: Data-Driven Security Analysis of Machine Learning Systems

12:00pm-1:30pm: Lunch Break

2:00pm– 3:30pm: Parallel Sessions

Session A3: Machine Learning (3)
Room:
Chair: Jiali Feng

1. The Conjugate Entangled Manifold of Space-Time Induced by the Law of Unity of Contradiction
   Jiali Feng, Jingjuan Feng
2. Environmental Parameters Analysis and Power Prediction for Photovoltaic Power Generation Based on Ensembles of Decision Trees
   Shuai Zhang, Hongwei Dai, AizhouYang, Zhongzhi Shi
3. Similarity Evaluation with Wikipedia Features
   Shahbaz Wasti, Jawad Hussain, Guangjiang Huang, Yuncheng Jiang

Session B3: Computer Vision
Room:
Chair: Chenguang Lu

1. Explaining Color Evolution, Color Blindness, and Color Recognition by the Decoding Model of Color Vision
   Chenguang Lu
2. A Content-based Deep Hybrid Approach with Segmented Max-pooling
   Dapeng Zhang, Yajun Liu, Jiancheng Liu
3. Image caption combined with GAN training method
   Zeqin Huang, Zhongzhi Shi
4. Stochastic Blockmodels Meets Overlapping Community Detection

Qiqi Zhao, Huifang Ma, Zhixin Li, Lijun Guo

3:30pm-4:00pm: Coffee Break

4:00pm-5:30pm: Parallel Sessions

Session A4: Brain Computer Integration
Room:
Chair: Lijun Guo

1. Adaptive Game AI-Based Dynamic Difficulty Scaling via the Symbiotic Game Agent
   Siphesihle Philezwini Sithungu and Elizabeth Marie Ehlers
2. Coarse-to-Fine Classification with Phase Synchronization and Common Spatial Pattern for Motor Imagery-based BCI
   Wenfen Ling, Feipeng Xu, Qiaonan Fan, Yong Peng,   Wanzeng Kong
3. Ballistocardiogram artifact removal for concurrent EEG-fMRI recordings using blind source separation based on dictionary learning
   Yuxi Liu, Jianhai Zhang, Bohui Zhang, Wanzeng Kong
4. Comparison of Machine Learning and Deep Learning Approaches for Decoding Brain Computer Interface: an fNIRS Study
   Jiahao Lu, Hongjie Yan, Chunqi Chang, Nizhuan Wang

Session B4: Social Computing

Room:
Chair: Huifang Ma

1. Stochastic Blockmodels Meets Overlapping Community Detection
   Qiqi Zhao, Huifang Ma, Zhixin Li, Lijun Guo
2. Overlapping Community Detection Combining Topological Potential and Trust Value of Nodes
   Xiaohong Li, Weiying Kong, Weiyi Wei, Enli Fu, Huifang Ma
3. Scientific Paper Recommendation Using Author's Dual Role Citation Relationship
   Donglin Hu, Huifang Ma, Yuhang Liu, Xiangchun He
4. A Genetic Algorithm for Travel Itinerary Recommendation with Mandatory Points-of-Interest
   Phatpicha Yochum, Liang Chang, Tianlong Gu, Manli Zhu, Hongliang Chen

Conference Venue

Hotel Name: Hangzhou Shujiang Hotel (杭州曙江大酒店)

Location: No. 1, Avenue 2, Hangzhou Economic and Technological Development Zone, Jianggan District, Hangzhou, China.

(杭州电子科技大学)

1. From **Airport → Hangzhou Shujiang Hotel**

Public Transit：Take the airport bus Xiasha line from Hangzhou Xiaoshan International Airport Bus Station and get off at Shengtai Kaiyuan Mingdu Hotel Station, walk 865 meters to Hangzhou Shujiang Hotel. (about half an hour)

2. From **Hangzhou East High Speed Railway Station → Hangzhou Shujiang Hotel**

Public Transit：Take Subway Line 1 (Xiasha Riverside direction) to Wenze Road Subway Station Exit B, walk 237 meters to Hangzhou Shujiang Hotel. (about half an hour)

Baidu Map：https://j.map.baidu.com/f6/6an