The 8th International Conference on Networks, Communication and Computing

ICNCC 2019

CONFERENCE ABSTRACTS

Henan University of Science and Technology
Luoyang, China
December 13-15, 2019
www.icncc.org

Co-organized by

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Chengdu Zonghang Exhibition & Service Co., Ltd
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### Daily Schedule Overview

#### Dec. 13, 2019

- **10:00-17:00**
  - Registration
  - Conference Materials Pick-up

#### Dec. 14, 2019

**Venue: JinKaiYue Hotel 金凯悦酒店**

**Venue: Room 522, Library of Henan University of Science and Technology (Kaiyuan Campus) 河南科技大学开元校区图书馆 522 室**

<table>
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<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
<th>Host</th>
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<tbody>
<tr>
<td>8:30-8:35</td>
<td><strong>Opening Remarks</strong>&lt;br&gt;Prof. Shuzhong Song&lt;br&gt;Vice-President, Henan University of Science and Technology, China</td>
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<tr>
<td>8:35-8:40</td>
<td><strong>Welcome Address</strong>&lt;br&gt;Prof. Jianwei Zhang&lt;br&gt;Zhengzhou University of Light Industry, China</td>
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<td>8:40-8:45</td>
<td><strong>TPC Chair Address</strong>&lt;br&gt;Prof. Lei Shu&lt;br&gt;Nanjing Agricultural University, China &amp; University of Lincoln, UK</td>
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<td>8:45-8:50</td>
<td><strong>Group Photo of Core Committee Members &amp; Keynote Speakers</strong></td>
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<tr>
<td>8:50-9:35</td>
<td><strong>Keynote Speech I</strong>&lt;br&gt;“Robot Cognition and Learning”&lt;br&gt;Prof. Fuchun SUN&lt;br&gt;Qinghua University, China</td>
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<tr>
<td>9:35-10:20</td>
<td><strong>Keynote Speech II</strong>&lt;br&gt;“A New False Data Injection Attack on Smart Grid”&lt;br&gt;Prof. Jiankun Hu&lt;br&gt;University of New South Wales Canberra, Australia</td>
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<tr>
<td>10:20-10:50</td>
<td><strong>Group Photo</strong></td>
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<td>10:50-11:35</td>
<td><strong>Keynote Speech III</strong>&lt;br&gt;“Future Agriculture - Outlook of Photovoltaic Farm IoTs”&lt;br&gt;Prof. Lei Shu&lt;br&gt;Nanjing Agricultural University, China &amp; University of Lincoln, UK</td>
<td>-</td>
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<tr>
<td>11:35-12:20</td>
<td><strong>Keynote Speech IV</strong>&lt;br&gt;“Power IoT System in Smart City”&lt;br&gt;Prof. Quanbo Ge&lt;br&gt;Tongji University, China</td>
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**Host**

Prof. Zhumu Fu<br>Henan University of Science and Technology, China

Host<br>Henan University of Science and Technology, China

Host<br>Henan University of Science and Technology, China

Host<br>Prof. Qingtao Wu<br>Henan University of Science and Technology, China

Host<br>Prof. Jianwei Zhang<br>Zhengzhou University of Light Industry, China

Host<br>Prof. Jianwei Zhang<br>Zhengzhou University of Light Industry, China
### Dec. 15, 2019

#### Sunday

<table>
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<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9:30-10:30</td>
<td><strong>Oral Session III</strong> - [Room 1, 2nd Floor] Data Mining and Soft Computing</td>
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<tr>
<td></td>
<td><strong>Oral Session IV</strong> - [Room 2, 7th Floor] Computer Network and Information Engineering</td>
</tr>
<tr>
<td>10:30-11:20</td>
<td><strong>Coffee Break</strong></td>
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<tr>
<td></td>
<td><strong>Poster Session II</strong> - [Room 1, 2nd Floor] Intelligent Control System and Application</td>
</tr>
<tr>
<td>12:00-13:00</td>
<td><strong>Lunch</strong> - [Bishuidao Dining Hall, 1st Floor]</td>
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**Venue:**

**JinKaiYue Hotel**

金凯悦酒店
Welcome Address

It gives us immense pleasure to invite you to The 8th International Conference on Networks, Communication and Computing (ICNCC 2019) during the period December 13-15, 2019 at Luoyang, Henan University of Science and Technology, China. The conference focuses on the trending, highly popular, but exciting and extremely challenging areas from our keynote speakers of leading scientists and a variety of authors around the world. The outcome of our deliberations will play a crucial role in progress achieved in these areas.

The conference brings together researchers looking for opportunities for conversations that cross the traditional discipline boundaries and allows them to resolve multidisciplinary challenging problems that only a venue of this nature can offer. It is the clear intent of the conference to offer excellent mentoring opportunities to participants. Through this amazing event we trust that you will be able to share the state-of-the-art developments and the cutting-edge technologies in these broad areas.

Special thanks are extended to our colleagues in program committee for their thorough review of all the submissions, which is vital to the success of the conference, and also to the members in the organizing committee and the volunteers who had dedicated their time and efforts in planning, promoting, organizing and helping the conference. Last but not least, our special thanks go to invited keynote speakers as well as all the authors for contributing their latest researches to the conference.

This conference program is highlighted by four keynote speakers: Prof. Fuchun SUN, Qinghua University, China, Prof. Jiankun Hu, University of New South Wales Canberra, Australia, Prof. Lei Shu, Nanjing Agricultural University, China / University of Lincoln, UK and Prof. Quanbo Ge, Tongji University, China. And three tutorial speakers: Prof. Qiyue Yu, Harbin Institute of Technology, China, Prof. Panlong Yang, University of Science and Technology of China, China and Prof. Deze Zeng, China University of Geosciences, Wuhan, China

We hope this success can develop into persistent success annually, in which there are presenters from all corners of the globe and all major countries.

We sincerely hope you have an excellent time during ICNCC 2019 in picturesque Luoyang.

Conference Committee
Luoyang, China
Organizing Committee

**Conference Chair**
Prof. Shuzhong Song, Vice-President, Henan University of Science and Technology, China

**Conference Co-Chairs**
Prof. Qingtao Wu, Dean of School of Information Engineering, Henan University of Science and Technology, China
Prof. Jianwei Zhang, Director of Office of Academic Research, Zhengzhou University of Light Industry, China

**Technical Program Committee Leading Chair**
Prof. Lei Shu, Nanjing Agricultural University, China / University of Lincoln, UK

**Technical Program Committee Chairs**
Prof. Zhimu Fu, Assistant Dean of School of Information Engineering, Henan University of Science and Technology, China
Prof. Guoqiang Zheng, Assistant Dean of School of Information Engineering, Henan University of Science and Technology, China
Assoc. Prof. Zhifeng Zhang, Assistant Dean of Software Engineering College, Zhengzhou University of Light Industry, China
Prof. Yusheng Sun, Dean of Software Engineering College, Zhengzhou University of Light Industry, China
Dr. Yuhua Li, Software Engineering College, Zhengzhou University of Light Industry, China

**Publicity Chairs**
Prof. Jianwei Ma, Assistant Dean of School of Information Engineering, Henan University of Science and Technology, China
Prof. Zhiyong Zhang, Head of Department of Computer Science, School of Information Engineering, Henan University of Science and Technology, China
Dr. Ye Liu, Nanjing Agricultural University, China

**Publicity Co-Chair**
Dr. Mohamed Amine Ferrag, Guelma University, Algeria

**International Technical Program Committee**
Hui Liang, Zhengzhou University of Light Industry, China
Shaolin Zhu, Zhengzhou University of Light Industry, China
Bo Wang, Zhengzhou University of Light Industry, China
Haiyan Sun, Zhengzhou University of Light Industry, China
Local Information

Located in west Henan Province, Luoyang is in the middle reaches of the Yellow River and encircled by mountains and plains. It is the cradle of Chinese civilization, as it was the capital city of 13 ancient dynasties from Xia Dynasty (21st-16th century BC). Boasting the world heritage site Longmen Grottoes and adjacent location to the famous Shaoling Temple, it is a popular destination in central China.

Weather in Luoyang

Luoyang weather in December is cold and dry. The average daytime temperature is 8°C (46°F), and the average night temperature is -3°C (27°F). You should pay attention to the big temperature difference between day and night. With an average of 12mm, the precipitation of this month is low, so the air is dry.

Average daily minimum temperature  
-3 °C  

Average daily highest temperature  
8 °C

Conference Venues

Registration on Dec.13 & Afternoon Session on Dec.14

Jinkaiyue Hotel (Luoyang Sports Center)
金凯悦大酒店(洛阳体育中心店)
洛阳市洛龙区开元大道与望春门街交叉口东南角

Morning Ceremony & Keynote Speeches on Dec. 14

Library of Henan University of Science and Technology (HAUST), Kaiyuan Campus
263, Kaiyuan Avenue, Luoyang, China.
河南科技大学图书馆(开元校区)

Emergency Calls

Fire: 119  
Police: 110  
Ambulance: 120
Key Points

Oral Presentation

◆ Timing: a maximum of 15 minutes in total, including 3 minutes for Q&A. Please make sure your presentation is well timed.
◆ All oral session rooms are equipped with data projectors with a standard VGA connector. The speakers could also bring and use their own laptops or other presentation devices. Please check the compatibility of your laptop and the project before the session starts.
◆ It is suggested that you email a copy of your presentation to your personal inbox as a backup in case for some reason the files can’t be accessed from your flash drive.
◆ Videos: If your Power Point files contain videos please make sure that they are well formatted and connected to the main files.

Poster Presentation

◆ Poster size is 60cm x 80cm.
◆ Posters are required to be condensed and attractive.

Dress Code

◆ Please wear formal clothes or national characteristics of clothing.

IMPORTANT NOTES

◆ Participants staying at Jinkaiyue Hotel will be picked up at 7:50am on Dec.14 by bus. Please arrive on time.
◆ ALWAYS take care of your belongings during the conference.
◆ ALWAYS wear your participation badge during the conference. There will be NO access for people without a badge.
◆ NEVER discard your badge at will. There’s a risk of irrelative people who use it for unknown purpose.
◆ Accommodation is not provided, and it’s suggested make an early reservation.

Disclaimer: The conference organizer does not assume any responsibility for the loss of personal belongings of the participants.

参会须知:
◆ 14 号早上 7:50 会议大巴将在金凯悦酒店门口迎接参会者一同前往会场，请准时上车。
◆ 请妥善保管好您的贵重物品。
◆ 参会期间，请您佩戴与会中会采用的会证以便工作人员可识别身份，未佩戴者禁止进入会场。
◆ 请勿随意丢弃会证，以免非相关人员进入会场。
◆ 会务组不提供住宿，建议您提前预定。

免责声明：会务方对与会者个人财产的丢失不承担任何责任。
Abstract:
Intelligent robot is developing to the cognitive level, emphasizing its ability to understand and interact with the object and environment. This talk discusses the key technologies involved in cognitive robots from three aspects: how intelligent robots can actively perceive, learn and reason the physical world, how to interact with humans and the environment to realize cognitive understanding, and how to make dynamic response according to the changes of the environment. It is pointed out that cognitive learning of intelligent robot is a closed-loop learning process from perception to behavior, and then from behavior to perception. Next, this talk systematically analyzes the wide application of smart operations in the fields of manufacturing, kitchen furniture and art, and introduces the visual tactile sensor developed by our team and its function and performance in robot smart operation. Finally, the future development of intelligent robot is also discussed.

Biography:
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 China Artificial Intelligence Society and executive director of China Automation Society. His research interests include robotic perception and intelligent control. He has won the Champion of Autonoumous Grasp Challenges in IROS2016 and IROS 2019. He is now IEEE/CAAI Fellows.

Keynote Speech II

Prof. Jiankun Hu
University of New South Wales Canberra, Australia

Presentation:
A New False Data Injection Attack on Smart Grid

Abstract:
Smart grid is an emerging energy system, which has been heralded as a technological paradigm shift that can effectively address the issue of limited fossil fuel reserve in earth and also can reduce carbon emissions. However, modern cyber interconnected and computerized energy infrastructure has become the most targeted national critical infrastructure for cyberattacks. A recent high-profile cyberattack on the Ukraine power grid has compromised three power control centres, taking down 30 substations and leaving over 225,000 Ukrainians without power. Other high-profile attacks include penetrations over two US nuclear plants and the Struxnet attack over Iranian nuclear plant. Recently a new type of cyberattack called the false-data-injection attack has been discovered which can evade the widely deployed bad data detection method in the emerging smart grid (SG). Most existing works on false data injection attacks are based on the DC model while real-life industrial systems are actually AC model based. We have investigated the applicability of existing research works on the industrial scale system and discover a new false data injection attack that can penetrate industrial scale bad data detection mechanism.

Biography:
Dr. Jiankun Hu is a full professor of Cyber Security at School of Engineering and IT, University of New South Wales Canberra, Australia (also named Australian Defense Force Academy). He has obtained the Bachelor degree, Automation and Control, 1983, from Hunan University, P.R. China; Ph.D. Control Engineering, 1993, from Harbin Institute of Technology, P.R. China. He has also obtained his Masters from the Software Engineering, Monash University Australia in 2001. He was awarded German Alexander von Humboldt Foundation Fellowship. He is the invited expert of Australia Attorney-General’s Office on identity management, and served at the Panel of Mathematics, Information and Computing Sciences (MIC), ARC ERA (The Excellence in Research for Australia) Evaluation Committee 2012. He has served as Co-Chair for Network Security Symposiums of IEEE ICC and IEEE Globecom. He is an associate editor at IEEE Transactions on Information Forensics and Security. Prof. Hu has been awarded 9 ARC (Australia Research Council) grants. His research interest includes data-driven cyber security (intrusion detection), fingerprint recognition/forensics, bio-cryptography,machine learning and applied cryptography. His research works have been published at many top venues such as IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Information Forensics and Security, IEEE Transactions on Smart Grid, IEEE Transactions on Parallel and Distributed Systems (TPDS), and IEEE Transactions on Computers.
Abstract:
Our living world will witness a lot of serious problems in the next 10 or event 20 years, e.g., 1) the depletion of global petroleum energy, 2) the deterioration of global climate, 3) the explosive growth of urban population in human society, 4) the aging of rural labor force and the urbanization of young labor force, 5) the persistence of long-term environmental pollution in agricultural production. How to develop agriculture to cope with these serious problems has become the focus of scholars in the world’s top agricultural universities. In this report, we comprehensively consider these serious problems. Based on the continuous attention and support to the development of new energy industry in the world, we analyze the current situation of the development of new energy in China, and propose a new agricultural production mode: new energy agriculture - "Photovoltaic Farm", which will be one of the effective ways to solve many problems in the current global agricultural development by integrating frontier technologies of smart agriculture, smart grid, Internet of Things, cloud (fog) computing and artificial intelligence. We also further combine our research field to deeply analyze and excavate many research problems that may arise after the combination of "Photovoltaic Farm" and Internet of Things technology. We believe that the "Photovoltaic Farm Internet of Things" will be the most effective management tool to achieve this new agricultural production mode, and it will also be a new research direction in the field of Internet of Things, which integrates agriculture, energy and information technology.

Biography:
Lei Shu (M’07-SM’15) is currently a Professor with Nanjing Agricultural University, China, and a Lincoln Professor with the University of Lincoln, U.K. He is also the Director of the NAU-Lincoln Joint Research Center of Intelligent Engineering. His main research field is wireless sensor networks and Internet of Things. He has published over 400 papers in this research field. His current H-index is 51 in Google Scholar Citation. He is serving as the TC vice-chair of IEEE Industrial Electronics Society, TC on Cloud and Wireless Systems for Industrial Applications, and he is also serving as the vice-chair for IEEE Industrial Electronics Society, Nanjing Chapter. He is serving as associate editor for IEEE Transactions of Industrial Informatics, IEEE Communication Magazine, IEEE Network Magazine, IEEE Systems Journal, IEEE Access, and IEEE/CAA Journal of Automatica Sinica, Sensors. He has also served over 50 various Co-Chair for international conferences/workshops, such as IWCMC, ICC, ISCC, ICNC, Chinacom, especially the Symposium Co-Chair for IWCMC 2012, ICC 2012, the General
Keynote Speech IV

Prof. Quanbo Ge
Tongji University, China

Presentation:
A New False Data Injection Attack on Smart Grid

Abstract:
The city is having a property with unified logic in the big data and AI period. Industrial ecology, business scenario and service, and government management model should be deeply affected by advanced information technology based on 5G and IoT cloud platform. Most of enterprises all focus on the application of data-driven intelligent method, so it leads the bad evaluation on data source and its potentially negative influence. Especially, we are short of the study on data quality evaluation and the importance for commerce activities is ignored all the along. The system constructed by data production and feedback process is non-standard and complex when data gets to the platform from collection devices, sensing and communication. Thereby, it is necessary and difficult in scientific application research to detect and identify the quality problem from the business end data. Most of current researches tried to do case analysis and experience summary and analyzed the reasons of special error production for given device styles. It is short of systemic and theoretical work and cannot adapt the timely analysis requirement with massive data. This talk mainly discusses abnormal alarm and fault analysis on IoT devices such as intelligent electric meter and gateway by introducing intelligent technology in the smart city background. Actually, it tries to solve some problems existed in power IoT system by using the fusion of knowledge, data and model driven ways. The content mainly includes hardware development, location of system faults, and evaluation on communication quality, and abnormal time sequence processing and so on. Meanwhile, related work on city brain is briefly introduced. For the hardware development, some power monitoring device and system have been designed. Secondly, the fault identification method based on data-driven model is presented by using fault characters of power system. Thirdly, the communication quality evaluation begins for fault state space of single IoT device, and it can automatically provide the fault reason and solution from the evolving case of distribution status. The abnormal processing on time sequence includes filling missing data and abnormal identification based on prediction frame. The works mentioned above form a general system to solve IoT data quality problem in smart scene. It is greatly helpful for smart video analysis and service, and provides a base for businesses such as smart power, transportation, and security and so on.

Biography:
Quanbo Ge is a researcher and a Ph.D supervisor in Tongji University of China. He was also a young candidate of the “Ten-thousand Talents Program” in Zhejiang Province of China and was
one of excellent postdoctoral fellows in Zhejiang Province (2017). From Jan.2012 to Jan.2013, he was a visiting scholar of the Department of Electronics and Computer Engineering in the University of Minnesota. He received the 4th Young Scientist Award of China Automation Society and is supported by Zhejiang Outstanding Youth Science Fund in 2016. His main research interests include smart Kalman filtering, information fusion, energy internet and autonomous unmanned system and so on. He has published more than 30 SCI papers including IEEE TAC, IEEE TNNLS, IEEE TIE, IEEE TSMC:Systems, IET CTA, and AMC and so on. The work has been supported by more than ten projects such as NSFC, Zhejiang Province Nature Science Foundation, and China Postdoctoral Science Foundation and so on. Dr. Ge is also one of deputy directors of the CYA of the China Automation Association (CAA), a member of the Intelligent Automation Committee of CAA, and one of deputy secretaries of the Hybrid Intelligent Committee and so on.
Abstract:
The core of the NOMA techniques is to combine modulation and coding to achieve a higher spectrum efficiency. In our work, multiple access techniques are viewed as generalized coding schemes to support both multiuser separation and coding gain. In this sense, traditional coding schemes, e.g., low-density parity-check (LDPC) code, can be viewed as a special case. Note that still a big difference exists between multiple access techniques and LDPC codes. In particular, both binary and non-binary LDPC codes are generated based on finite field theory; whereas multiple access works based on not necessarily a finite field. This work presents a mathematical framework, called "multiuser coding", to unify multiple access and traditional coding theories. To verify the proposed framework, we propose a uniquely decodable mapping (UDM) based codebook for futuristic multiple access communications. A three-dimensional Tanner graph based message passing algorithm (MPA) is introduced for multiuser detection. Simulation results show that the proposed scheme can support a large number of users with a promising performance.

Biography:
Dr. Qiyue Yu, received her B. Eng., M. Eng., and Ph.D. degrees from Harbin Institute of Technology (HIT), China, in 2004, 2006, and 2010, respectively.
She is currently a full professor at the school of Electronics and Information Engineering, HIT. During Apr. 2007-Mar. 2008, she studied in Adachi Lab, Tohoku University, Japan and was a research assistant of Tohoku University Global COE program. In 2010, she was invited to City University of Hong Kong to research on multi-user MIMO technology. And she was invited to University of Southern Queensland to do researches on the distributed antenna system in Jan.-Mar. 2014. During Sept.2015-Sept.2016, she was a visiting scholar in University of California, Davis. Her research interests include modulation and coding, information theory, multi-access techniques and MIMO for broadband wireless communications.
“AI Enabled IOT: From Battery Reliance to Battery-less Paradigm, and From the Limited to the Infinity”

Prof. Panlong Yang
University of Science and Technology of China, China

Abstract:
The IOT system has advanced to the scale of “billions”, and it has been marked as one of the most important metric in National Key Development Project. As one of the most import supportive technology, IOT is vitally important for the success of “Made in China 2025” and “Smart City”. It should be noted that, with the progress of pervasive and scalable IOT networks, the limited number/type of sensors and low quality data in sensor, limited scalability, and inability in the energy harvesting are three major concern of the IOT network. In this talk, we would introduce three pillar technologies on sensing intelligence, communication intelligence and energy intelligence. We will introduce the most recent research work in our group, and share ideas with the audience. We hope the introduction on the related research work could inspire more talented researchers to focus the area on AI enabled IOT.

Biography:
Prof. Panlong Yang is at University of Science and Technology of China. He has been supported by the NSF Jiangsu in Distinguished Young Scholarship and honored as distinguished lecture of CCF in 2015. He has published over 150 papers including 40 papers in CCF A class. Since 2012, he has supervised 14 master and Ph.D candidate students, including two excellent dissertation winners in Jiangsu Province and PLA education system. He has been supported by National Key Development Project and NSFC projects. He has nominated by ACM MobiCom 2009 for the best demo honored mention awards, and won best paper awards in IEEE MSN and MASS. He has been served as general chair of BigCom and TPC chair of IEEE MSN. Also, he has been served as TPC member of INFOCOM (CCF Class A) and associate editor of Journal of Communicationof China.
Abstract:
The heavy reliance on hardware hinders the innovation in information systems ranging from the most front-end devices to the most back-end servers. It has been shown as a compelling trend toward software defined system (SDS) where all resources can be managed in a software-defined way. Thanks to the recent development in information technologies, many enabling technologies or concepts, such as software defined networking (SDN), network function virtualization (NFV), cloud radio access networks (CRAN), for SDS are available already. The main philosophy of SDS is the decoupling and centralization of control plane. Other than letting the information systems run on built-in policies or rules, the decoupling makes the control of information systems more open and flexible.

Meanwhile, the success of AlphaGo ignites the recent hotness in the research of AI. The core technique in the design of AlphaGo is deep reinforcement learning, which combines deep learning and reinforcement learning. The power of reinforcement learning has been widely witnessed in a variety of domains with complex control problems, e.g., robotics, games, manufacturing, financial, etc., with no exception to information systems. Much recent attention has been paid to applying reinforcement learning to address the management and control problems in information systems such as spectrum allocation, routing plan, TCP congestion window size setting.

The openness of SDS imposes the possibility of applying reinforcement learning to orchestrate the behaviors of information systems towards self-running intelligent systems, which shall be the ultimate goal to-be-pursued. Therefore, in this tutorial, we will first provide a brief lecture on the key enabling technologies of SDS and reinforcement learning. Then, we will provide an insight to the application of reinforcement learning in resource allocation and optimization in SDS.

Biography:
Deze Zeng currently is a full professor in School of Computer Science, China University of Geosciences, Wuhan, China. He received his Ph.D. and M.S. degrees in computer science from University of Aizu, Aizu-Wakamatsu, Japan, in 2013 and 2009, respectively. He
received his B.S. degree from School of Computer Science and Technology, Huazhong University of Science and Technology, China in 2007. His current research interests include: network function virtualization, software-defined networking, cloud computing and edge computing. He has authored 2 books and over 100 papers in refereed journals and conferences in these areas. He also received 3 best paper awards from IEEE/ACM conferences and the IEEE Systems Journal Annual Best Paper Award of 2017. He serves in editorial boards of Journal of Network and Computer Applications, Frontiers of Computer Science, and guest editors of many prestigious journals. He has been the in organization or program committees of many international conferences including ICPADS, ICA3PP, CollaborateCom, MobiQuitous, ICC, Globecom. He is a member of IEEE and senior member of CCF.
Presentations at a Glance

Oral Presentation

◆ Best Paper Competition

S037: Energy Management Strategy of FCHEV Based on ECMS Method
S027: Training Model Of Safe Escape From Fire Based On Virtual Reality
S038: Handoff Rate Analysis of Aircraft in the Aeronautical Network
S029: A New Two-Stage Image Retrieval Algorithm with Convolutional Neural Network
S030: A Multiple Feature Fusion Based Image Retrieval Algorithm

◆ Session I: Communication Network and Information Processing

S026: A Distributed Algorithm for Controller Placement in Software Defined Vehicular Networks
S080: A P-Cycle Protection Algorithm Based On Capacity Balance for Power Optical Communication Multicast Service
S004: Random Forest Prediction with Improved Feature Selection to Shared Bicycle Demand
S083: A Wireless Sensor Network Clustering Algorithm for Smart Grid Service Demand
S044: Joint Optimization of Server Placement and Content Caching in Mobile Edge Computing Networks

◆ Session II: Computer Theory and Application Technology

S040: Semi-supervised Flexible Joint Distribution Adaptation
S089: Throughput-aware Flying Communication Relay Network for Disaster Area Search and Rescue
S056: Unsupervised Transfer Softmax Regression
S050: DSRNet: A Novel Feature Extraction Network Achieving Trade-off between Accuracy and Speed
S010: Quality Detection of Magnetic Ring Surface Based-on Machine Vision

◆ Session III: Data Mining and Soft Computing

S1001: Research on Data Mining in Medical Data Visualization
S041: Network Alarm Analysis Based on Data Mining and LSTM
S014: Research on Modular Process Configuration based on Improved Genetic Algorithm
S054: A Decentralized Context-aware Cross-domain Authorization Scheme for Pervasive Computing

◆ Session IV: Computer Network and Information Engineering

S094: Cognitive-based Hybrid Collaborative Filtering with Rating Scaling on Entropy to Defend Shilling Influence
S071: Dynamic Update Cache Scheme Based on Feedback Times for Device-to-Device Caching Networks
S025: A 3D Model Authentication Scheme Based on Secret Sharing in Cloud Environment
S021: Indoor Robot Path Planning Based on an Improved Probabilistic Road Map Method
Poster Presentation

◆ Session I: Data Engineering and Soft Computing

S062: Research on Harmonic Detection Algorithm Based on Magnetic Nanoparticles
S031: Research and Application of Improved CHAMELEON Algorithm Based on Condensed Hierarchical Clustering Method
S005: Infrared Target Recognition Based on Improved Convolution Neural Network
S093: Spark Performance Optimization Analysis in Memory Tuning on GC Overhead for Big Data Analytics
S016: Multi-scale Correlation Filtering Visual Tracking via CNN Features
S046-A: Sentiment Analysis based Point-of-Interest Recommendation via Decentralized Computing
S032: Research on Cooperative Game Theory based on complexity of network structure
S1002: Object Recognition Based on Improved Zernike Moments and SURF
S063: A Method of Expanding EEG Data Based on Transfer Learning Theory
S079: Optimizing Task Execution for Mobile Edge Computing

◆ Session II: Intelligent Control System and Application

S006: Robust Tracking Control for Quadrotor UAV using Sliding Mode Control Algorithm
S078: Performance Analysis of XQAM in Log-Normal Turbulence with Pointing Error and Non-zero Boresight
S035: Dynamic Path Planning of Mobile Robot Based on Improved Ant Colony Optimization Algorithm
S068: Collaborative Convolution AutoEncoder for Recommendation Systems
S009: Fuzzy Optimization Control of Airborne Photoelectric Pod Based on Genetic Algorithm
S011: Energy Coupling Control of Underactuated Three-Dimensional Bridge Crane
S013: Research on Adaptive Front-lighting Systems with the Influence of Multiple Factors
S039: An Adaptive Sliding Mode Control Algorithm for Boost DC-DC Converter of FCHEVs
S007: Classification Method for Imbalanced Data set based on EKCStacking algorithm
S012: Complex Process Module Partitioning Method For Mass Customization
S086: Visualization and Analysis of Users’ Online Behavior in Campus Network
S067: An Improved Protocol Based on Directed Diffusion Routing Protocol with Network Coding