

# 第四届计算机科学与信息工程国际会议

4<sup>th</sup> International Conference on Computer Science  
and Information Engineering (ICCSIE2019)

## 会议手册

### Conference Program

Final Version



北京西郊宾馆

Beijing Xijiao Hotel

2019年9月28日 September 28, 2019

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# 大会简介

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为加强国内高等院校、科研机构与国际计算机业界的学术交流,提高国内计算机科研、教育和应用的水平,由北京工业大学、国际应用科学与技术协会 (IAAST) 联合主办的第四届计算机科学与信息工程国际会议 (ICCSIE2019) 定于 2019 年 9 月 28 日在北京召开。

本届大会将邀请国内外高校、研究机构、政府部门及企事业单位的相关专家、学者莅临参会,并通过特邀报告、专题讲座的形式就计算机科学与信息工程领域中的最新学术进展和热点问题进行深入探讨。

# Conference Introduction

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ICCSIE2019 is organized by Beijing University of Technology and International Association of Applied Science and Technology (IAAST).

The International Conference on Computer Science and Information Engineering is an annual conference that brings together researchers and scientists from computer science and information technology, researchers from various application areas to discuss problems and solutions in the area, to identify new issues, and to shape future directions for research. This conference provides opportunities for the delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration.

# 欢迎辞

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尊敬的各位同道、各位朋友：

第四届计算机科学与信息工程国际会议 (ICCSIE2019) 定于2019年9月28日在北京西郊宾馆召开。

我谨代表本届大会筹委会和北京工业大学，对参加此次会议的各位学界同道及嘉宾表示热烈的欢迎。

本届大会由北京工业大学、国际应用科学与技术协会 (IAAST) 联合主办，旨在加强国内高等院校、科研机构与国际计算机业界的学术交流，提高国内计算机科研、教育和应用的水平。

大会邀请了国内外高校、研究机构、政府部门及企事业单位的相关专家、学者莅临参会，并通过特邀报告、专题讲座的形式就计算机科学与信息工程领域中的最新学术进展和热点问题进行深入探讨。

最后，我代表组委会衷心感谢大家的参与，感谢各单位、组织的支持。衷心预祝各位代表与会期间有所收获，身体健康，心情愉快！预祝本届大会取得圆满成功！

何泾沙 教授

ICCSIE2019 大会主席

# Welcome Speech

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Distinguished Delegates and Friends,

4<sup>th</sup> International Conference on Computer Science and Information Engineering (ICCSIE2019) will be held in Beijing during Sep.27<sup>th</sup>-28<sup>th</sup>, 2019. On behalf of the organizing committee of the conference and Beijing University of Technology, I hereby express a warm welcome to each delegate and guest attending the conference.

The conference aims to bring together researchers and scientists from computer science and information technology, researchers from various application areas to discuss problems and solutions in the area, to identify new issues, and to shape future directions for research.

The conference topics include but not limited to Computer Architecture & Embedded System, System Modeling/Simulation & Process Control, Database Technology, Microelectronics, Electronic Information Engineering & Communications Engineering, and Information Warfare Technology, and Wireless Communication, etc.

There have been many famous experts and scholars invited attending the conference, and some of them will give special speeches and reports concerning latest research results and innovative technology in related fields, and in the meantime, delegates will conduct wide and in-depth discussion and exchange. We sincerely hope that the conference will be a high-level academic platform for all delegates to learn academic development trend, widen research thoughts and strengthen friendship.

Beijing, also known as Peking, is the capital of the People's Republic of China and one of the most populous cities in the world. The city is the country's political, cultural, and educational center, and home to the headquarters for most of China's largest state-owned companies. Beijing is a charming city with a long history and lots of modern buildings. There are many famous heritage sites in Beijing, such as the Forbidden City, the Summer Palace, and the Great Wall.

Finally, on behalf of organizing committee, I express my gratitude to everybody who attends the conference, and each unit and organization for the support. I sincerely wish each delegate can benefit from the conference, and wish a complete success for the conference!

Jingsha He  
Chairman of ICCSIE2019

# 大会组织机构

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## 主办单位

北京工业大学

国际应用科学与技术协会 (IAAST)

## 支持单位

Clausius 科学出版社

台湾国立清华大学

澳大利亚南昆士兰大学

中国矿业大学

加拿大安大略理工大学

## 大会主席

何泾沙, 教授, 北京工业大学



# ICCSIE2019 Organization

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## **Organized by**

Beijing University of Technology

International Association of Applied Science and Technology (IAAST)

## **Supported by**

Clausius Scientific Press

National Tsing Hua University

University of Southern Queensland, Australia

China University of Mining and Technology

Ontario Tech University, Canada

## **Conference Chair**

Jingsha He, Professor, Beijing University of Technology

## **Technical Committee Members**

Prof. Biplob Ray, Deakin University, Australia

Dr. Przemyslaw Falkowski-Gilski, Gdansk University of Technology, Poland

Prof. Yusri Yusof, Universiti Tun Hussein Onn Malaysia, Malaysia

Prof. Farzin ASADI, Kocaeli University, Turkey

Dr. Hongfei Zhu, Chongqing University of Posts and Telecommunications, China

Prof. Ravipudi Venkata Rao, S. V. National Institute of Technology, India

Dr. Gorka Urbikain Pelayo, Universidad País Vasco, Spain

Dr. Wenlan Qiu, University of Houston, USA

Prof. Harish Kumar Sahoo, Govt. University, India

Assoc. Prof. ȘtefanȚălu, The Technical University of Cluj-Napoca, Romania

Assoc. Prof. Kuan Yew Wong, UniversitiTeknologi Malaysia, Malaysia

Dr. Sulayman K. Sowe, National Institute of Information and Communications Technology, Japan

Prof. Xiangyu Wang, Curtin University, Australia

Dr. Zhenghao Shi, Xi'an University of Technology, China

Dr. Yongqiang Zhao, Northwestern Polytechnical University, China

Dr. Harish Kumar Sahoo, IIIT Bhubaneswar, Govt. University, India

Prof. S. SMYS, Information Technology Karpagam College of Engineering, India

Dr. Reza Rahimi, Cloud Storage Lab, Huawei Innovation Center, USA

Prof. Xiao Gaoxi, Nanyang Technological University, Singapore

Assoc. Prof. Nameer N. EL-Emam, Philadelphia University, Amman, Jordan

Assoc. Prof. Siddhartha Bhattacharyya, RCC Institute of Information Technology, India

Dr. Young SeobJeong, Korea Advanced Institute of Science and Technology, Korea

Prof. Zhuxing Yang, National Cheng Kung University, Taiwan

Dr. Lavika Goel, Birla Institute of Technology Science, India

Assoc. Prof. Olga Shabalina, Volgograd State technical University, Russia

Dr. Pooja Singh, Department of Mathematics, VJTI, Mumbai, India

## 组织单位介绍

### 北京工业大学简介

北京工业大学创建于1960年，是一所以工为主，工、理、经、管、文、法、艺术、教育相结合的多科性市属重点大学。1981年成为国家教育部批准的第一批硕士学位授予单位，1985年成为博士学位授予单位，1996年通过国家“211工程”预审，正式跨入国家二十一世纪重点建设的百所大学的行列。2017年9月，学校正式进入国家一流学科建设高校行列。

学校现有二级教学科研机构27个，已覆盖工学、理学、经济学、管理学、文学、法学、艺术学、教育学等8个学科门类；拥有3个国家重点学科、21个北京市重点学科、18个北京市重点建设学科；20个一级学科博士学位授权点、33个一级学科硕士学位授权点；另拥有18个博士后流动站以及工程硕士、工商管理、建筑学、城市规划、应用统计、社会工作、教育、艺术、公共管理、金融、法律11个类别的专业学位硕士授予权，其中工程硕士包含17个培养领域；64个本科专业（其中2个为北京市属高校一流专业）。7个学科跻身2019年QS世界大学排行榜前500，在QS发布的2019年中国大陆大学排名中位居第33名，化学、材料科学、工程、环境与生态4个学科进入ESI前1%。

学校建有国家工程实验室2个、“111计划”引智基地3个、国家级产学研中心1个、国际合作研究中心1个、教育部工程研究中心2个、教育部重点实验室5个、教育部战略研究中心1个、省部共建国家级重点实验室培育基地1个、北京市级科研基地45个、行业重点实验室4个。

教职工3201人，其中，专任教师1916人，包括正高职称393人、副高职称699人，博士生导师346人，硕士生导师1171人，外籍教师88人；享受政府特殊津贴专家45人，科学院院士1人，工程院院士9人，国家杰出青年基金获得者13人，国家高层次人才特殊支持计划（简称“万人计划”）入选者6人，百千万人才工程国家级入选者12人，“国家自然

“科学基金优秀青年科学基金”获得者 16 人。

在校生 24442 人，其中，学历教育学生中全日制研究生 7450 人（博士生 1275 人，硕士生 6175 人），非全日制研究生 677 人，普通本专科生 14050 人，成人教育本专科生 1847 人，非计划招生高等教育学生中在职人员攻读博士硕士学位 418 人。在校留学生 1072 人。

建校 59 年来，学校秉持“不息为体，日新为道”的校训精神，牢记大学使命，坚守大学理想，以创新面对未来，以改革把握机遇，已逐步发展成为培养高素质创新人才的重要基地，成为推动区域社会经济发展不可或缺的智库力量，成为展现北京市属高校发展建设成果的示范窗口，16 万余名毕业生在社会各条战线上正发挥着骨干作用。

新思想引领新征程，新时代呼唤新作为。北京工业大学将坚持以习近平新时代中国特色社会主义思想为指引，深入学习宣传贯彻党的十九大精神和全国全市教育大会精神，在北京市委、市政府的坚强领导下，坚持“立足北京，服务北京，辐射全国，面向世界”办学定位和“内涵、特色、差异化”发展战略，面向国家和北京市的重大需求，加快推进“双一流”建设，为建设国际知名、有特色、高水平研究型大学，为实现“两个一百年”奋斗目标、实现中华民族伟大复兴的中国梦而不懈奋斗！

## 北京工业大学信息学部简介

北京工业大学信息学部于 2016 年 9 月 2 日正式成立，由原电子信息与控制工程学院、计算机学院、软件学院、微电子学院整合组建而成。

**学院设置：**下设电子科学与技术学院（微电子学院）、信息与通信工程学院、自动化学院、计算机学院、软件学院。

**学科设置：**拥有电子科学与技术、控制科学与工程、计算机科学与技术、软件工程四个一级学科博士学位授权点及博士后流动站，以及信息与通信工程一个一级学科硕士学位授权点。

**专业设置:** 现有电子信息工程、通信工程、自动化、电子科学与技术、计算机科学与技术、信息安全、物联网工程、软件工程、数字媒体技术九个本科专业。

**学生规模:** 目前有在校生 5859 人, 其中本科生 2754 人, 全日制硕士研究生 1338 人、非全日制工程硕士 1573 人, 博士生 140 人, 留学生 54 人。

**师资队伍:** 现有专任教师 303 人, 其中教授 48 人, 副教授 123 人。学部拥有中国工程院院士 2 人, 国家级教学名师 1 人, 国家杰出青年科学基金获得者 2 人、国家级百千万人才工程入选者 2 人、国家优秀青年基金获得者 1 人, 以及北京市教学名师等一批知名专家学者。

**研究方向:** 学部在光电子器件与微纳技术、微电子技术 with 集成电路、智能多媒体与语音信号处理、人工智能与机器人技术、计算智能与智能控制、智能感知与自动化技术、脑信息处理与网络智能、嵌入式软件技术、可信计算与信息安全、物联网感知大数据技术、多媒体及人工智能、无线接入与绿色通信等方向具有一定的优势。

**科研水平:** 近五年来, 学部先后承担包括国家 973 计划项目、国家自然科学基金重点项目、国家科技支撑计划项目等一批高水平课题, 累计到校经费达到 3 亿多元; 发表高水平学术论文 (SCI/EI 收录) 1300 余篇, 获得授权专利 540 余项, 多项研究成果获得国家级、省部级科研奖励。

**科研平台:** 拥有光电子技术教育部重点实验室、可信计算北京市重点实验室、计算智能与智能系统北京市重点实验室、嵌入式系统北京市重点实验室、多媒体与智能软件技术北京市重点实验室和数字社区教育部工程研究中心、北京物联网软件与系统工程技术研究中心。

## **Introduction to Beijing University of Technology**

Beijing University of Technology (BJUT) was founded in 1960. It is a key university under the administration of the Beijing Municipal Government, which has established multi-disciplinary academic structure. The structure offers various programs and also involves in diversified academic research in the fields of science, engineering, economics, management, liberal arts and law. It is ranked as one of the 100 key universities for the 21<sup>st</sup> century. In 2017, it is ranked as National First-class Discipline Construction University. Its mission is relying on Beijing, merging into Beijing, inspiring China and orienting itself to the world. In fulfilling this mission, the university has become a base for cultivating qualified high-level personnel, for scientific and technological innovation and for research and development.

Currently the university has 1916 full-time teaching staff, including 393 professors, 699 associate professors or senior engineers, 10 academicians, 6 national outstanding contribution specialists, 45 specialists enjoying special allowance of the government, and about 88 international teachers. Currently there are 14,050 undergraduate students and 7450 postgraduate students.

The campus of the university occupies an area of 960,000 square meters. Centering around such areas as electronic information, bioengineering and new medicine, optical-mechanical-electronic integration, new materials, environmental protection and resources, urban contrition and administration and the requirement of industries, the university has substantially adjusted and optimized its academic structure and established 16 colleges. The fields above are listed as pillar industries characterized by advanced and new technology in Beijing, hence tremendous support from local government. The university offers 64 Bachelor's Degree Programs, 33 Mater's Programs, 20 Doctor's Degree Programs, 18 postdoctoral research programs. It has 3 State Key Disciplines-Optics Structural Engineering and Material Science respectively, 21 Beijing Key disciplines, 18 disciplines receiving privileged support from Beijing municipality, 5 key labs of Ministry of Education, 45 key labs or research bases of Beijing municipality. In addition, the university is home to National Research Center of Precision and Supprecision Process Engineering, National Center of Laser Processing, Sino-German Center of Laser Technology, Engineering Research Center of Digital Community, Engineering Center of Advanced Manufacture Technology on Automobile Components, Ministry of Education.

## **Introduction to Information Department of BJUT**

Under the joint efforts of all teachers of the department, the scientific research work of the department has been steadily promoted. According to the unified deployment of the department, based on the first-level team of scientific research, each college established a research institute and completed the three-level institutional reform of the department.

In 2017, 65.05 million yuan was spent on scientific research. It has obtained 271 authorized patents and 288 software Copyrights. It has applied for 70 projects of national natural

science foundation of China, 18 projects of national natural science foundation of China, 47 projects of Beijing natural science foundation of China and 15 projects of national natural science foundation of China. Teachers of the department were awarded 4 provincial and ministerial awards and national social power awards. 1 new Beijing scholars: Jun-Fei Qiao, "nova" of science and technology plan 1 list: Katharine wang, Beijing pacesetter project 1: Hu Yongli, Beijing high school high "a plan" 1 youth talent: Ke, Beijing outstanding talent training support 2 people: Jian Meng, Li Jiafeng.

## **Introduction to International Association of Applied Science and Technology**

International Association of Applied Sciences and Technology (IAAST) is a registered (Reg.No.35848437) scientific and educational organization that dedicated to promote research into and understanding of applied sciences and engineering technology, and improving the solution of technical difficulties in engineering technology application. These goals are accomplished through various activities, conferences, workshops, training and publications.

The IAAST members are research scientists, engineers, professors, scholars, managers, and technology students, etc. who worked in science and engineering technology research. It plays an influential role and promotes developments in relevant engineering technology in the world.

The mission of IAAST is to foster and conduct collaborative interdisciplinary research in state-of-the-art methodologies and technologies within its areas of expertise.

We welcome into membership all those, no matter he is from whatever country, discipline or level of technical knowledge, who want to improve their understanding of applied science frontiers, engineering technology, and support its better improvement. All members receive the same benefits. IAAST harnesses the research, knowledge, expertise and enthusiasm of its members to promote the professional management and practice in the world.

IAAST organizes conferences, workshops and provides sponsor or technical co-sponsor to various conferences, workshops where technical, theoretical, scholarly, and applied papers are presented and discussed. IAAST can publish some double-blind refereed academic journals and some Books in engineering technology and application. All papers in our conference proceedings will be published by the well-known press, such as Elsevier, IEEE, Academic Press, Springer, ASME, American Scientific Publishing, and SPIE, TTP and will be submitted to the major indexing services for indexing.

# Introduction to Clausius Scientific Press (CSP)

## *Education, Science, Technology, Innovation and Life*

### **Open Access**

CSP (<http://www.clausiuspress.com> or <http://www.clausiuspress.ca>) is a scientific publisher aiming at serving the scientific community by providing researchers with the best environment to get their works published, referenced, read and cited. Our vision is to build up the powerful platform for our authors and readers, develop the best reputation of any journal in the publishing industry by collecting and publishing the high-quality papers. CSP publishes peer-reviewed, high quality conference articles, journals and books, primarily in electronic format on the Internet but also in print and other media.

### **Journals for Computer & Electrics are as follows:**

[Advances in Computer, Signals and Systems](#)

[Automation and Machine Learning](#)

[Big Data Analysis and Cloud Computing](#)

[Cloud and Service-Oriented Computing](#)

[Collaborative and Social Computing](#)

[Computing, Performance and Communication Systems](#)

[Crypto and Information Security](#)

[Data and Knowledge Engineering](#)

[Electrical Insulation and Dielectrics](#)

[File and Storage Technologies](#)

[Frontiers in Computer Vision and Pattern Recognition](#)

[Frontiers in Genetic and Evolutionary Computation](#)

[International Journal of Computer and Communications Security](#)

[International Journal of Network and Communication Technology](#)

[Internet of Things \(IoT\) and Engineering Applications](#)

[Journal of Artificial Intelligence Practice](#)

[Journal of Cluster and Grid Computing](#)

[Journal of Cognitive Informatics and Cognitive Computing](#)

[Journal of Communication, Control and Computing](#)

[Journal of Computer Architecture and Design](#)

[Journal of Database Systems](#)

[Journal of Electrotechnology, Electrical Engineering and Management](#)

[Journal of High-Voltage](#)



[Journal of Image Processing Theory and Applications](#)  
[Journal of Modeling, Analysis and Simulation](#)  
[Journal of Multimedia Techniques](#)  
[Journal of Network Computing and Applications](#)  
[Journal of Networking, Architecture and Storage](#)  
[Journal of Neural Information Processing](#)  
[Journal of Parallel and Distributed Processing](#)  
[Journal of Software Engineering and Metrics](#)  
[Journal of Ubiquitous and Future Networks](#)  
[Journal of Virtual Reality and Artificial Intelligence](#)  
[Journal of Web Systems and Applications](#)  
[Journal of Wireless Sensors and Sensor Networks](#)  
[Knowledge Discovery and Data Mining Letters](#)  
[Knowledge Representation and Automated Reasoning](#)  
[Lecture Notes on Wireless Networks and Communications](#)  
[Mobile Computing and Networking](#)  
[Natural Language Processing and Speech Recognition](#)  
[Optical Network Design and Modeling](#)  
[Power Systems Computation](#)  
[Programming Languages and Operating Systems](#)  
[Review of Information Display Techniques](#)  
[Vehicle Power and Propulsion](#)  
[Visual Communications and Image Processing](#)  
[Visualization Techniques](#)

## 特邀嘉宾 Plenary Speakers

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### 何泾沙

北京工业大学教授，博士生导师、北京市特聘教授、湖北“楚天学者计划”主讲教授

**研究领域：**计算机网络、信息安全、3D 打印、大数据与云计算安全、数字取证

毕业于美国马里兰大学，先后任职于美国 IBM Corp. (资深计算机科学家)、MCI Communications Corp. (高级工程师)、GRIC Communications, Inc. (首席工程师) 等，先后获取美国发明专利 12 项。2003 年通过北京市高层次人才项目引进到北京工业大学任教授。截止 2017 年 3 月，在国内外学术期刊和国际会议上共发表论文 261 篇，其中已被 SCI 收录 21 篇，EI/ISTP 收录 184 篇，获中国发明专利 58 项，主持了包括国家自然科学基金项目、863 课题等 30 多个科研项目。

### Jingsha He

Professor of Beijing University of Technology & leading professor for "Chutian Scholar Program" of Hubei Province

**Research field:** Computer networks; information safety; 3D printing; big data and cloud computing security; digital forensics

Graduated from University of Maryland, he has worked in IBM Corp., MCI Communications Corp., GRIC Communications, Inc., etc. in America, and got 15 American patents for invention. In 2003, he was introduced to Beijing University of Technology. Until now, he has published 261 papers in international journals and conference proceedings, and got 58 Chinese patents for invention, presided over more than 30 projects as well, such as National Natural Science Foundation of China, 863 projects, etc.



## Chuck Easttom

美国首都科技大学量子计算与密码学研究实验室主任，博士

**研究领域：** 计算机安全、取证、密码学

Chuck Easttom 在取得网络安全博士学位后，撰写了 27 本专著，包括几本计算机安全、密码学相关的专著，他的这些专著被 60 多所高校采用。他还发表了多篇关于数字取证、密码学和应用数学的学术论文，拥有 16 个计算机科学领域的专利。目前，他还在攻读生物工程与生物技术专业的博士学位。除了担任美国首都科技大学量子计算与密码学研究实验室主任，Chuck Easttom 博士还担任该校博士学位论文委员会主任。此外，Chuck Easttom 博士还是 IEEE、ACM、IACR（国际密码研究协会）、INCOSE（国际系统工程委员会）的资深会员，American Journal of Science and Engineering 主编以及 6 本国际期刊的审稿人。

## Chuck Easttom

Director of the Quantum Computing and Cryptography Research Lab for Capitol Technology University, USA.

**Research field:** Computer security, forensics, and cryptograph.

Dr. Chuck Easttom is the author of 27 books, including several on computer security, forensics, and cryptography. His books are used at over 60 universities. He has also authored scientific papers on digital forensics, cyber warfare, cryptography, and applied mathematics. He is an inventor with 16 computer science patents. He holds a Doctor of Science in cyber security (dissertation topic: a study of lattice-based cryptographic algorithms for post quantum computing) and three master's degrees (one in applied computer science, one in education, and one in systems engineering). He is currently working on a second doctorate in a bit different field, bio-engineering and nanotechnology (dissertation topic "The effects of nonlinear dynamics on nanotechnology and bioengineering"), due to complete summer 2020. He is the director of the Quantum Computing and Cryptography Research Lab for Capitol Technology University. He is a Senior Member of the IEEE and a Senior

Member of the ACM as well as a member of IACR (International Association of Cryptological Research) and INCOSE (International Council on Systems Engineering). He is also a Distinguished Speaker of the ACM (Association of Computing Machinery). and a frequent speaker at conferences. He is a reviewer for six scientific journals and the Editor in Chief for the American Journal of Science and Engineering. He is an adjunct professor teaching graduate courses in computer science, cybersecurity, and related areas as well as chairing doctoral dissertation committees.



## **K. K. THYAGHARAJAN**

印度 R.M.D.工程学院电子与通信工程学院（学术）院长，教授

**研究领域：** 计算机视觉，语义网，图像与视频处理，多媒体流媒体，视频编码，基于内容的信息检索，微控制器与机器学习

K.K. Thyagarajan 教授于 2007 年获得印度安娜大学信息与通信工程博士学位，拥有长达 30 年的教学经验，历任校长、院长、教授等，曾获印度泰米尔纳德邦国家科学技术委员会基金。他撰写并出版了五本关于 Flash MX 2004 的著作。K.K. Thyagarajan 教授已在国内外期刊上发表论文 100 多篇，担任多本国际期刊的审稿人、编委，应邀参加了多个国内外会议，并两次获得 SSN 机构颁发的卓越教师奖。此外，他还获得由金奈金星国际基金会颁发的杰出教师奖(多媒体及图像处理)，加尔各答国际慈善研究基金会颁发的印度环球教育卓越奖以及珍珠基金会马杜赖颁发的最佳管理奖，并因科技贡献突出而入选世界名人录。

## **K. K. THYAGHARAJAN**

Professor and Dean (Academic) of Electronics and Communication Engineering, R.M.D. Engineering College

**Research field:** Computer vision, semantic web, Image & video processing, multimedia streaming, video coding, content-based information retrieval, microcontrollers and e-learning.

K.K. Thyagarajan obtained his Ph.D. degree in Information and Communication Engineering from College of Engineering Guindy, Anna University, India in 2007. He is in teaching profession for more than three decades and served at various levels including Principal, Dean and Professor at various Engineering Colleges in Tamil Nadu-INDIA. He has written 5 books in Computing including “Flash MX 2004” published by McGraw Hill (India). He is a grant recipient of Tamil Nadu State Council for Science and Technology. He has been invited as chairperson and delivered special lectures in many National and International conferences and workshops. He is reviewer and editorial board member for many International Journals and Conferences. He has published more than 100 papers in National & International Journals and Conferences. He has been recognized as a Teacher Par Excellence twice by the management of SSN institutions. He received Distinguished Faculty (Multimedia and Image Processing) Award from Venus International Foundation Chennai, INDO GLOBAL EDUCATION EXCELLENCE AWARD from International Benevolent Research Foundation Kolkata, and Best Administrator award from PEARL Foundation Madurai. He has been recognized by Marquis Who's Who in the World for his contribution to the technical society.



## 余科根

中国矿业大学特聘教授，博士生导师

**研究领域：**无线定位技术、室内定位与导航、GNSS 遥感、信号处理

2003 年获得澳大利亚悉尼大学博士学位，长期专注于无线定位与导航以及导航卫星反射遥感领域的研发工作；2015 年入选湖北省“百人计划”，获湖北省特聘专家称号；2013-2017 连续 5 年担任三个国际 SCI 期刊 (IEEETVT、IEEETAES、EURASIPJASP) 编委，先后于 2016 年和 2017 年担任在加拿大蒙特利和澳大利亚悉尼召开的国际传输大会 (IEEE VTS) 定位与导航分会主席；2011-2019 连续 8 年担任澳大利亚麦考瑞大学兼职教授；发表 SCI 学术论文 60 余篇；合写和主编 4 本定位导航及应用英文学术专著，参与 6 本英文学术专著中章节的撰写，分别由 Wiley、Wiley-IEEE Press、Springer 等海内外知名出版社出版；根据 Web of Science 统计，学术论文 SCI 引用频次 900 余次。

## Kegen Yu

Distinguished Professor of China University of Mining and Technology.

**Research field:** wireless positioning technology, indoor positioning and navigation, GNSS remote sensing, signal processing.

Kegen Yu obtained his Ph.D. degree in University of Sydney in 2003, and hereafter, he was engaged in the research of wireless positioning, GNSS remote sensing and signal processing. In 2005, he was selected a specially-invited expert in Hundred Talents Program of Hubei Province. From 2013 to 2017, he served as an editorial board member of IEEE TVT, IEEE TAES and EURASIP JASP for 5 years. In 2016 and 2017, he served as the session chair of Positioning and Navigation in IEEE VTS held in Monterey and Sydney superlatively. From 2011 to 2019, he holds the post of adjunct professor in Macquarie University, Australia. He has published more than 60 papers and 4 academic monographs. According to the data of web of science, his papers have been cited more than 900 times.



## Hossam A. Gabbar

加拿大安大略理工大学，教授

**研究领域:** 自主联网汽车、智能交通快速充电基础设施、智能能源电网、智能控制系统、能源系统安全设计与运行综合优化、燃气电网一体化

Hossam A. Gabbar 是加拿大安大略理工大学能源系统与核科学学院的全职教授，并被任命为工程与应用科学学院的教授，他不仅是能源安全与控制实验室的创始人，还是高级等离子体工程实验室的创建者。

Gabbar 教授在智能能源电网、智能与自主交通、智能安全与控制系统、先进等离子体系统及其在核能和清洁能源系统中的应用等领域拥有领先的研究成果。2016 年，Gabbar 教授获得安大略理工大学先进研究奖。

2001 年，毕业于日本冈山大学，获得安全工程博士学位，2001 至 2004 年，加入东京工业大学，2004 至 2008 年，Gabbar 博士入职日本冈山大学，并晋升为产业创新科学部副教授。2007 至 2008 年，Gabbar

博士担任多伦多大学客座教授。截至目前，Gabbar 教授已发表 220 多个学术成果，包括专利、书籍、期刊和会议论文等，并应邀参加了多个知名国际会议。

## **Hossam A. Gabbar**

Professor, Ontario Tech University, Canada.

**Research field:** Connected autonomous vehicles, fast charging infrastructures for smart transportation, smart energy grids, intelligent control systems and safety design and operation synthesis and optimization of energy systems, and integrated gas-power grids.

Dr. Gabbar is a full Professor in the University of Ontario Institute of Technology (UOIT) in the Faculty of Energy Systems and Nuclear Science, and cross appointed in the Faculty of Engineering and Applied Science, where he has established both the Energy Safety and Control Lab (ESCL) and Advanced Plasma Engineering Lab. He is the recipient of the Senior Research Excellence Award for 2016, UOIT. He is leading national and international research in the areas of smart energy grids, smart and autonomous transportation, intelligent safety and control systems, advanced plasma systems and their applications on nuclear and clean energy systems. Dr. Gabbar obtained his B.Sc. degree in 1988 with first class of honor from the Faculty of Engineering, Alexandria University (Egypt). In 2001, he obtained his Ph.D. degree from Okayama University (Japan) in the area of Safety Engineering. From 2001 till 2004, he joined Tokyo Institute of Technology (Japan). From 2004 till 2008, he joined Okayama University (Japan) as a tenured Associate Professor, in the Division of Industrial Innovation Sciences. From 2007 till 2008, he was a Visiting Professor at the University of Toronto. He has more than 220 publications, including patents, books / chapters, journal and conference papers. He has been invited and participated in world-known conferences and delivered plenary talks on number of scientific events and invitations to international universities. He has supervised and hosted undergraduate, graduate, postdocs, visiting researchers and scholars from different countries including: Japan, India, Qatar, Egypt, Mexico, Malaysia, China, Brazil, Chile, UAE, and Colombia.



## **Dave Chatterjee**

雅典佐治亚大学特里商学院管理信息系统系，副教授（终身教授）

**研究领域:** 技术感知、数据治理、内部控制、信息安全与性能度量

Dave Chatterjee 博士是雅典佐治亚大学特里商学院终身教授，他在国内外期刊上发表的论文被引用近 2000 次，产生了广泛的影响。作为全球领先的财富 500 强企业公认的网络安全与变革管理专家，Chatterjee 博士不仅担任著名国际期刊 Journal for Organizational Computing and Electronic Commerce 资深编辑，而且担任企业与社区网络安全协作委员会首席信息安全官。Chatterjee 曾主持 CXO 专题讨论会，举办企业培训、研讨会、网络研讨会以及提供咨询服务，他曾接受电台、电视台的采访，并应邀出席了許多国际会议。

## Dave Chatterjee

Associate Professor, Department of Management Information Systems, Terry College of Business, The University of Georgia, Athens, GA.

**Research field:** Technology sense-making, data governance, internal controls, information security, and performance measurement.

Dr. Dave Chatterjee is a tenured professor at the Terry College of Business, The University of Georgia. An accomplished scholar and technology thought leader, Dr. Chatterjee's interest and expertise lie in the various facets of technology management – from technology sense-making to implementation and change management, data governance, internal controls, information security, and performance measurement. His work has been published in prestigious peer-reviewed journals, cited close to 2000 times (1943 times as on Dec 28, 2018), and has significantly influenced practice. Recognized worldwide as a cybersecurity and change-management expert for leading Fortune 500 companies, Dr. Chatterjee serves as senior editor of the Journal for Organizational Computing and Electronic Commerce, a prestigious international research journal, with full oversight over cybersecurity research. He also serves on the Corporate and Community Boards of Cybersecurity Collaborative, a confidential forum for chief information security officers (CISOs). Dr. Chatterjee is a noted speaker, delivering talks around the world, moderating CXO panel discussions, conducting corporate training, workshops, and webinars, providing consulting and advisory services, and authoring papers. He has appeared on radio and TV interviews and is frequently quoted by news media outlets on major technology-related developments. He has presented at numerous national and international conferences. For nearly 10 years, Dr. Chatterjee navigated the Atlanta chapter of a premier international community of senior information technology practitioners, reputed academics, and other thought leaders through a period of significant growth. He was elected Chairman of the Board for seven consecutive years.





## 戴万阳

南京大学数学系教授

**研究领域：**排队理论、随机过程、网络与控制、计算机建模

戴万阳先生在美国乔治亚理工大学获得博士学位，曾任美国电信（现称诺基亚）贝尔实验室（AT&T（现称诺基亚）贝尔实验室）永久科学家与研究员。现任南京大学数学系特聘教授，同时还担任美国量子计算与区块链 SIR 论坛（工业 6.0 论坛）主席、江苏省概率统计学会会长，江苏省大数据区块链与智能信息专项委员会主席。他曾获得各种学术奖项，并曾在 30 多个国际会议上做特邀报告，且担任多本国际期刊的主编或编委。

## Wanyang Dai

Professor, Department of Mathematics, Nanjing University, China.

**Research field:** queuing theory, random process, network and control, computer modeling.

Wanyang Dai received his Ph.D. from Georgia Institute of Technology, USA. He was an MTS and principal investigator in AT&T Bell Labs (currently Nokia Bell Labs), USA. He is currently a distinguished professor in China based Nanjing University, President & CEO of U.S. based (Quantum-Computing & Blockchain) SIR Forum (Industrial 6.0 Forum), President of Jiangsu Probability & Statistical Society in China, Chairman of Jiangsu Big Data-Blockchain and Smart Information Special Committee in China. He received various academic awards and presented over 30 keynote/plenary speeches in IEEE and other international conferences. He has been serving as an editor-in-chief or an editorial board member for various international journals.



## Jharna Majumdar

印度班加罗尔 Nitte Meenakshi 理工学院教授、机器人研究中心主任

**研究领域：**实时图像和视频处理、数据和视频分析、机器人和自主系统、人工智能、机器学习、人工神经网络和深度学习

从 1990 年至 2007 年, Majumdar 博士分别在印度国防研究与发展组织担任高级科学家、班加罗尔航空开发机构航空图像采集部门担任负责人。1983 年至 1989 年,她就职于德国 ForschungsZentrumInformatik, 从事机器人和自动化相关的研究, 2002 年, 她就职于斯坦福国际研究中心。Majumdar 博士已发表了 180 多篇论文, 获得 4 项发明专利, 并获得大量的科研奖项, 如 2002 年获得由斯坦福国际研究中心院长颁发的奖章, 2004 年获得由印度总理颁发的卓越表现奖, 2011 年 IEEE 奖项以及 2016 年获得由印度科技展望团队颁发的 CESEM 奖。现在她是印度航空协会会员, 印度工程师学会院士、印度计算机学会终身会员。她负责的印度空间研究组织的研究项目, 来自 7 个工程学院的学生创建的印度第一个最小 PICO 卫星 (重约 850 克) 已于 2010 年 7 月 10 日成功地发射升空。

## Jharna Majumdar

Dean R & D, Prof. Dept of M Tech Comp Sc & Engg. and Head, Centre for Robotics Research at the Nitte Meenakshi Institute of Technology, Bangalore, India.

**Research field:** Real Time Image and Video Processing, Data and Video Analytics, Robotics and Autonomous Systems, Artificial Intelligence, Machine Learning, ANN and Deep Learning.

Dr. Majumdar served Defense Research and Development Organization, Govt. of India from 1990 to 2007 as Senior Scientist 'G' and Head of Aerial Image Exploitation Division, Aeronautical Development Establishment, Bangalore, India. Dr. Majumdar worked as a Research Scientist on

'Robotics and Automation' at the Forschungs Zentrum Informatik, Karlsruhe, Germany from 1983 to 1989 and as a Research Scientist at the Stanford Research International California, USA in 2002. Dr. Majumdar published more than 180 reviewed technical papers, has 4 Patents and received a large number of awards for her research. Some of her awards are: Award from President, Stanford Research International (SRI International), California, USA in 2002, Performance Excellence Award from the Prime Minister of India 2004, IEEE Award 2011 and CESEM award from the Vision Group on Science and Technology, Bangalore, India in 2016, etc. She is a Fellow of the Aeronautical Society of India, Fellow of the Institution of Engineers and Life Member of the Computer Society of India. Her project with the Indian Space Research Organization (ISRO) and the students from 7 Engineering Colleges to build the first Smallest Satellite in India (STUDSAT) of PICO Category (weighing 850 Gram) has taken off to the orbit successfully on July 10 2010.



### **Intan Zaurah Mat Darus**

马来西亚理工大学机械工程学院副教授、本科研究办公室学术发展副主席

**研究领域:** 仪器测量与控制, 动力系统建模与仿真, 软计算技术, 进化算法, 人工智能, 机器人和自动化系统

Intan Zaurah Mat Darus 于 1998 年在英国威尔士大学卡迪夫学院获得学士学位, 2004 年在英国谢菲尔德大学获得自动控制与系统工程博士学位。目前她担任如下这些期刊的编委 Journal of Low Frequency Noise, Vibration and Active Control, Journal of Artificial Intelligence Research (AIR), Jurnal Mekanikal and Journal of Institute Engineer Malaysia (IEM), 并且已成功发表 140 多篇期刊、会议论文, 主持或参与了 30 多个机器人与自动化, 人工智能, 进化算法, 仪器仪表, 测量与控制等领域的研究、产业合作及顾问项目。此外, 她还获得多项马来西亚科技创新部颁发的科研服务奖项、以及首尔国际发明博览会研究奖。自 2004 年以来, 她指导了 60 多名研究生。

### **Intan Zaurah Mat Darus**

Associate Professor of School of Mechanical Engineering and Associate Chair of Academic Development in the Office of Undergraduate Studies, Universiti Teknologi Malaysia.

**Research field:** instrumentation measurement and control, modelling and simulation of dynamical system, soft computing techniques, evolutionary algorithms, artificial intelligent, robotic and automation system.

She received her First-Class B.Eng. (Hons.) degree in Mechanical Engineering from the University of Wales College Cardiff, Wales, United Kingdom in 1998 and later her Ph.D.in Automatic Control and Systems Engineering from the University of Sheffield, United Kingdom in 2004. She is currently the International editorial board member of the Journal of Low Frequency Noise, Vibration and Active Control, Journal of Artificial Intelligence Research (AIR), Jurnal Mekanikal and Journal of Institute Engineer Malaysia (IEM). Associate Professor Dr Intan Z. Mat Darus has published over 140 indexed journal and conference papers and funded over 30 research and industrial collaboration and consultancy projects in the area of robotic and automation, artificial intelligent, evolutionary algorithm, instrumentation, measurement and control. She gained several research and service awards including from the Ministry of Science and Technology and Innovation Malaysia and several research awards from Seoul International Invention Fair. She has supervised over 60 postgraduate research students since 2004. Associate Professor Dr Intan Z. Mat Darus has 20 years of program development and teaching experience in the First and Master Degree levels at the Universiti Teknologi Malaysia since 1999.

# 会议信息 Conference Information

## 会议时间 Dates

2019年9月27日-28日

September 27<sup>th</sup>-28<sup>th</sup>, 2019

## 大会报到 Registration

日期/Date	时间/Time	地点/Location
2019年9月27日下午 Sep. 27 <sup>th</sup> , 2019	14:00-19:00	北京西郊宾馆大堂 Lobby of Beijing Xijiao Hotel

## 乘车路线 Transportation

首都国际机场→北京西郊宾馆 Beijing Capital International Airport → Beijing Xijiao Hotel	乘坐机场线至三元桥站，转地铁10号线至知春路站，转地铁13号线至五道口站，步行840米至北京西郊宾馆 Take Airport Line to Sanyuanqiao Station, transfer Subway Line 10 to Zhichunlu Station, transfer Subway Line 13 to Wudaokou Station (Exit A), and then walk to Hotel
北京西站→北京西郊宾馆 Beijing West Railway Station → Beijing Xijiao Hotel	乘坐地铁9号线至国家图书馆，转地铁4号线大兴线至西直门站，转地铁13号线至五道口站，步行840米至北京西郊宾馆 Take Subway Line 9 to National Library Station, transfer Subway Line 4 (Daxing Line) to Xizhimen Station, transfer Subway Line 13 to Wudaokou Station (Exit A), and then walk to Hotel
北京站→北京西郊宾馆 Beijing Railway Station → Beijing Xijiao Hotel	乘坐地铁2号线至西直门站，转地铁13号线至五道口站，步行840米至北京西郊宾馆 Take Subway Line 2 to Xizhimen Station, transfer Subway Line 13 to Wudaokou Station (Exit A), and then walk to Hotel

## 代表标识 Participant Identification

参会证是参会代表的标识。请在参加会议活动和使用茶点时佩戴参会证。没有佩戴参会证者将无法进入会场参会。

- 佩戴蓝色和绿色参会证者为会议正式代表
- 佩戴红色参会证者为会议工作人员
- Please wear your participant cards for all the conference activities.
- Blue and Green: Participants
- Red: Staff

## 会议语言 Language

大会交流语言为英文和中文

The official languages of ICCSIE2019 are English and Chinese.

## 住宿安排 Accommodation

考虑到酒店接待能力，所有参会学者建议入住**北京西郊宾馆 (北京市海淀区王庄路18号)**，住宿费标准520-540元/晚 (含早餐)。

本届会议会务组已与以上酒店签订协议，入住可享受协议价。如需预定房间，可联系会务组尤老师 (邮箱[iccsieconf@163.com](mailto:iccsieconf@163.com), 电话: 15515536262)

所有参会者亦可自行预定北京西郊宾馆周边的快捷酒店。

All foreign participants will be recommended to live in **Beijing Xijiao Hotel**.

Address: No.18, Wangzhuang Road, Haidian District, Beijing City, China

Any question on accommodation, please contact [iccsieconf@163.com](mailto:iccsieconf@163.com) TEL: 86-15515536262.

## 会议重要活动 Important Events

### 开幕式 Opening Ceremony

时间: 2019年9月28日上午9:00-9:10

地点: 北京西郊宾馆

Time: 9:00-9:10 a.m., Sep.28<sup>th</sup>, 2019

Venue: Beijing Xijiao Hotel

## 学术交流须知 Scientific Information

### 学术报告顺序

学术交流将按照大会最终日程册进行，请发言的代表注意自己的发言日期和时间并提前做好准备。

Order of presentation will be arranged based on **Final Conference Program of ICCSIE2019**, so delegates who give presentations should prepare your speeches in advance.

### 幻灯片 PPT

请做报告嘉宾于**2019年9月10日之前**将准备好的中英文PPT发送至会务组邮箱 [iccsieconf@163.com](mailto:iccsieconf@163.com)，若涉及研究成果保密，请至少提前发送报告概要至会务组。

All delegates who give presentations should send PPT in English version before **September 10, 2019** to [iccsieconf@163.com](mailto:iccsieconf@163.com).

# 会议地点 Venue

北京西郊宾馆

地址：北京市海淀区王庄路18号 100089

Beijing Xijiao Hotel

Address: No.18, Wangzhuang Road, Haidian District, Beijing City, China





# 会议议程

## ICCSIE2019 日程安排

日期	时间	事项	地点
9月28日 星期六上午	8:30-9:00	会议报到	北京西郊宾馆会议中心
	开幕式		
	9:00-9:10	领导致辞	
	特邀报告		
	9:10-9:40	Chuck Easttom	
	9:40-10:05	何泾沙	
	10:05-10:30	K. K. THYAGHARAJAN	
	10:30-10:40	集体合影 & 茶歇	
	10:40-11:10	余科根	
	11:10-11:35	Hossam A. Gabbar	
	11:35-12:00	戴万阳	
12:00-13:30	午餐	北京西郊宾馆自助餐厅	
9月28日 星期六下午	主题报告		北京西郊宾馆会议中心
	13:30-13:50	Sujit K. Bose	
	13:50-14:10	Jharna Majumdar	
	14:10-14:30	Intan Zaurah Mat Darus	

	14:30-16:20	CC12058-李军 CC12103- Abraham Campbell CC12096-汤文茹 CC12110-李扶松 CC12064-Cherry A. Collera CC12093-李明霜 CC12115-高凡 CC12098-贾臻 CC12123-闻利群 (注：如需调整报告顺序，请及时联系会务组)	
	16:20-16:30	闭幕式	

# Conference Schedule

Date	Time	Item	Location
Sep. 28 Saturday	8:30-9:00	Registration	Convention Center of Beijing Xijiao Hotel
	<b>Opening ceremony</b>		Convention Center of Beijing Xijiao Hotel
	9:00-9:10	Welcome speech	
	<b>Keynote Speech</b>		
	9:10-9:40	<b>Chuck Easttom</b>	
	9:40-10:05	<b>Jingsha He</b>	
	10:05-10:30	<b>K. K. THYAGHARAJAN</b>	
	<b>10:30-10:40</b>	<b>Group photo &amp; tea break</b>	
	10:40-11:10	<b>Kegen Yu</b>	
	11:10-11:35	<b>Hossam A. Gabbar</b>	
	11:35-12:00	<b>Wanyang Dai</b>	
12:00-13:30	<b>Lunch</b>	Cafeteria of Beijing Xijiao Hotel	
Sep. 28 Saturday	<b>Invited Speech</b>		Convention Center of Beijing Xijiao Hotel
	13:30-13:50	<b>Sujit K. Bose</b>	
	13:50-14:10	<b>Jharna Majumdar</b>	

<b>Sep. 28 Saturday</b>	14:10-14:30	<b>Intan Zaurah Mat Darus</b>	
	14:30-16:20	<p>Oral presentation of accepted papers</p> <p>CC12058-Jun Li</p> <p>CC12103- Abraham Campbell</p> <p>CC12096-Wenru Tang</p> <p>CC12110-Fusong Li</p> <p>CC12064-Cherry A. Collera</p> <p>CC12093-Mingshuang Li</p> <p>CC12115-Fan Gao</p> <p>CC12098-Zhen Jia</p> <p>CC12123-Liqun Wen</p>	
	16:20-16:30	Closing ceremony	