



**ICNISC 2021**  
**PROGRAM BOOK**

**July 23rd-25th, 2021**  
**Tencent Meeting**

# **7th Annual International Conference on Network and Information Systems for Computers [ICNISC 2021]**

July 23<sup>rd</sup>-25<sup>th</sup>, 2021  
<http://www.icnisc.org/>

The 7th Annual International Conference on Network and Information Systems for Computers [ICNISC 2021] will be held from July 23-25, 2021, Guiyang, China. The aim of ICNISC 2021 is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in computer networks and information system. It provides opportunities for the delegates to exchange new ideas and application experiences, to establish business or research relations and to find global partners for future collaboration. We look forward to welcome you in ICNISC 2021 and wish you a fruitful and enjoyable stay in.

Contact:

Email: [icnisc@vip.163.com](mailto:icnisc@vip.163.com)

Phone: (+86) 15342214945

# TIME CONVERTER OF THE CONFERENCE

Due to the COVID-19 situation and travel restrictions, ICNISC 2021 will be converted into a virtual conference, which will be held via the Tencent Meeting. The English version and Chinese Link of Tencent Meeting App will be send to the authors before July 9th, 2021.

## Tencent Meeting:

Join conference via weblink, the link has been listed on the assigned sessions.

Meeting ID: 232 536 175

Meeting ID: 733 183 261

Meeting ID: 859 766 607

Meeting ID: 698 357 328

Meeting ID: 859 766 607

Meeting ID: 670 431 390

The Meeting ID and Password has been sent to the attendees via email. Please download the Meeting App and test if you need any help.

## Time Converter Link:

Beijing time: July 24<sup>th</sup> at 09:00 AM-CST (UTC +8)

<https://www.timeanddate.com/worldclock/converter.html?iso=20210724T010000&p1=33&p2=3711&p3=176>

Time Difference Calculator	Conference Date		Local time zone
Beijing, China CST (UTC +8)	July 24, 2021	Saturday	09:00AM
Da Nang, Vietnam* ICT (UTC +7)	July 24, 202	Saturday	08:00AM
New Delhi, India* IST (UTC +5:30)	July 24, 202	Saturday	06:30AM

## Time Zone Converter – Time Difference Calculator

Provides time zone conversions taking into account Daylight Saving Time (DST), local time zone and accepts present, past, or future dates.

Sort By: -- Custom --

<b>Beijing, China</b> CST (UTC +8)	六, 24 七月 2021	09:00	●
<b>Da Nang, Vietnam</b> ICT (UTC +7)	六, 24 七月 2021	08:00	●
<b>New Delhi, India</b> IST (UTC +5:30)	六, 24 七月 2021	06:30	●

# SCHEDULE OF THE CONFERENCE

**Test Time:** July 23rd 2021 (Friday) 14:00-23:00 (GMT+08:00, BEIJING)

**Keynote Time:** July 24th, 2021 (Saturday) 09:00-12:30 (GMT+08:00, BEIJING)

**Oral Presentation:** July 24th, 2021 (Saturday) 14:00-18:00 (GMT+08:00, BEIJING)

**Oral Presentation & Poster Presentation:** July 25th, 2021 (Sunday) 08:00-18:00 (GMT+08:00, BEIJING)

<b>Date</b>	<b>Time</b>	<b>Activities</b>
July 23rd	14:00-23:00	Test Time
July 24th	9:00-9:10	Open Ceremony
July 24th	9:10-12:30	Keynote Speech
July 24th	14:00-18:00	Oral Presentation
July 25th	08:00-12:00	Oral Presentation
July 25th	14:00-18:00	Oral Presentation
July 25th	08:00-12:00	Poster Presentation
July 25th	14:00-18:00	Poster Presentation

# KEYNOTE SPEAKERS OF THE CONFERENCE

## KEYNOTE SPEAKER I



Prof. Yinglei Song, Professor in School of Electronics and Information Science, Jiangsu University of Science and Technology, China

**Biography:** Yinglei Song received his Ph.D. in computer science from the University of Georgia, USA in 2006. From year 2007 to 2012, he worked as an assistant professor of computer science at the University of Maryland Eastern Shore, USA. Currently he is working as a professor of information and computer science at the Jiangsu University of Science and Technology, China. He has published more than 80 papers in peer reviewed international journals and conferences. He was selected as one of the Specially Appointed Professors of Jiangsu Province in 2015. He is currently serving in the editorial boards of a number of well known international research journals. His research interests include image processing, machine learning, data mining, bioinformatics, design and analysis of algorithms.

**Speech Title:** Real-Time Image Processing with Efficient Dynamic Programming

## KEYNOTE SPEAKER II

Prof. Xiaoru Song, Professor, School of Electronic Information Engineering, Xi'an Technological University, China



**Biography:** Prof. Song Xiaoru received the B.E. degree from Henan University, China, in July 2003, and M.E. degree from Xi'an University of Science & Technology in March 2006, and the Ph.D. degree from Northwestern Polytechnical University in July 2014, respectively, all in Control Science and Control Engineering. She studied at the Engineering School of Texas. Her research topics mainly focus on Pattern recognition and intelligent system, Multi-sensor information fusion, Unmanned system navigation and control, Target detection and target recognition, and so on. In recent years, she has hosted and participated in a number of national key research and development projects, the National Natural Science Foundation of China, the National Defense Key Fund, and Shaanxi Province Key Research and Development Projects, etc. And she published more than 50 academic EI/SCI papers (SCI cited more than 60 times), including SCI journals More than a dozen papers (about 40 SCI citations). At the same time serving as a guest editor, reviewing experts for many international SCI and EI journals and Chinese core journals. More than 30 authorized invention patents have been accepted. At the same time, she won 1 third prize of Shaanxi Science and Technology Award and 2 Shaanxi Provincial Higher Education Science and Technology Award.

**Speech Title:** Things about Unmanned Systems

## KEYNOTE SPEAKER III



Prof. Anand Nayyar, Professor, Researcher and Scientist in Graduate School, Duy Tan University, Vietnam

**Biography:** Dr. Anand Nayyar received Ph.D (Computer Science) from Desh Bhagat University in 2017 in the area of Wireless Sensor Networks and Swarm Intelligence. He is currently working in Graduate School, Duy Tan University, Da Nang, Vietnam. A Certified Professional with 75+ Professional certificates from CISCO, Microsoft, Oracle, Google, Beingcert, EXIN, GAQM, Cyberoam and many more. Published more than 350 Research Papers in various National & International Conferences, International Journals (Scopus/SCI/SCIE/SSCI Indexed) with High Impact Factor. Member of more than 50+ Associations as Senior and Life Member and also acting as ACM Distinguished Speaker. He has authored/co-authored cum Edited 25+ Books of Computer Science. Associated with more than 500 International Conferences as Programme Committee/Chair/Advisory Board/Review Board member. He has 5 Australian Patents to his credit in the area of Wireless Communications and Artificial Intelligence. He is currently working in the area of Wireless Sensor Networks, MANETS, Swarm Intelligence, Cloud Computing, Internet of Things, Blockchain, Machine Learning, Deep Learning, Cyber Security, Network Simulation, Wireless Communications. Awarded 27+ Awards for Teaching and Research—Young Scientist, Best Scientist, Young Researcher Award, Outstanding Researcher Award, Excellence in Teaching and many more . He is acting as Editor-in-Chief of IGI-Global, USA Journal titled “International Journal of Smart Vehicles and Smart Transportation (IJSVST)”.

**Speech Title:** Future Wireless Communications Standards for IoT

## KEYNOTE SPEAKER IV



Prof. Dr. M. Seenivasan, Associate Professor and Wing Head,  
Department of Mathematics - DDE, Annamalai University, India

**Biography:** Dr. M. Seenivasan was awarded Ph.d degree by Annamalai University in the year 2012. He got the B.Sc. degree in Mathematics from St. Xavier's College, Palayamkottai. He did M.Sc, (Applied Mathematics) in Thiagarajar College of Engineering Madurai. He is currently working as Associate Professor and Wing Head, Department of Mathematics - DDE, Annamalai University. He has 19 years of teaching and 17 years of research experience. His area of research is Stochastic Processes and its Applications, Graph theory and Computer Networks. He has published more than 50 research articles in reputed international journals. He has guided 22 M.Phil scholars. At present, he is guiding Six Ph.D Research scholars. He is one of the editorial members of more than 20 international journals. He organized four international conferences in abroad and Ten international conferences within India. He Coordinated 10 Faculty Improvement Programmes in different fields. He acted as Invited speaker/Keynote Speaker in more than 30 International Conferences. He visited and organized the International Conference in Thailand, Malaysia, Singapore, Cambodia and USA.

**Speech Title:** Multi-Server Queueing Model with Server Breakdown



## KEYNOTE SPEAKER V

Prof. Hongzhi Wang, Harbin Institute of Technology, China



**Biography:** Hongzhi Wang, Professor, PHD supervisor of Harbin Institute of Technology, the secretary general of ACM SIGMOD China, CCF outstanding member, a member of CCF databases and big data committee. Research Fields include big data management and analysis, database systems, knowledge engineering and data quality. He was “starring track” visiting professor at MSRA and postdoctoral fellow at University of California, Irvine. Prof. Wang has

been PI for more than 10 national or international projects including NSFC key project, NSFC projects and National Technical support project, and co-PI for more than 10 national projects include 973 project, 863 project and NSFC key projects. He also serves as a member of ACM Data Science Task Force. He has won First natural science prize of Heilongjiang Province, MOE technological First award, Microsoft Fellowship, IBM PHD Fellowship and Chinese excellent database engineer. His publications include over 300 papers including VLDB, SIGMOD, SIGIR papers, 6 books and 3 book chapters. His PHD thesis was elected to be outstanding PHD dissertation of CCF and Harbin Institute of Technology. He serves as the reviewer of more than 20 international journal including IEEE TKDE and PC member of over 30 internal conference. His papers were cited more than 1800 times. His personal website is <http://homepage.hit.edu.cn/wang>.

**Speech Title:** Industrial Big Data Analysis: Thinking and Exploration

## MEETING TIMETABLE

Date	Time	Activities	Attendee	Meeting Room
July 23rd	14:00-23:00	<b>Test Time</b>	Conference Secretary	232 536 175
July 24th	9:00-9:10	Open Ceremony	Organizer	232 536 175
July 24th	9:10-9:50	Keynote Speech I	Prof. Yinglei Song	232 536 175
July 24th	9:50-10:30	Keynote Speech II	Prof. Xiaoru Song	232 536 175
July 24th	10:30-11:10	Keynote Speech III	Prof. Anand Nayyar	232 536 175
July 24th	11:10-11:50	Keynote Speech IV	Prof. M. Seenivasan	232 536 175
July 24th	11:50-12:30	Keynote Speech V	Prof. Hongzhi Wang	232 536 175
Lunch Time				
July 24th	14:00-18:00	Oral Presentation	C406, C453, C459, C467, C472, C483, C490, C1192, C1226, C1231, C405, C404, C405, C407, C408, C410, C413	232 536 175
July 24th	14:00-18:00	Oral Presentation	C414, C415, C416, C417, C419, C420, C421, C422, C425, C426, C427, C428, C429, C430, C431, C432	733 183 261

July 25th	08:00-12:00	Oral Presentation	C433, C434, C435, C436, C438, C439, C440, C441, C442, C445, C447, C448, C449, C450, C451, C452	859 766 607
July 25th	08:00-12:00	Oral Presentation	C455, C456, C457, C458, C462, C463, C464, C465, C466, C468, C469, C470, C471, C473, C475, C476	698 357 328
July 25th	14:00-18:00	Oral Presentation	C477, C479, C481, C482, C484, C485, C487, C489, C491, C492, C494, C495 C496, C497, C498, C499	859 766 607
July 25th	14:00-18:00	Oral Presentation	C502, C1114, C1119, C1121, C1122, C1129, C1142, C1150, C1161, C1164, C1169, C1180, C1181, C1185, C1209, C1219	698 357 328

July 25th	08:00-18:00	Poster Presentation	C411, C437, C446, C460, C478, C486, C493, C500, C501, C1155, C1176, C1201, C1278, C1225, C1236, C1244, C1249, C1259, C1264, C1271, C1287, C1291, K1197, K1198, K322, K323, K324, K325, K327, S142, Z534, Z535	670 431 390
Only Attend the conference			Jian Yu, Lei Wei, Xingwang Zhao, Quchao Cheng, Jiaojie Li, Guochao Shen, Qingmin Du, Yixiang Dai, Encai Ji, Yong Yao, Yihan Yang, Bingjie Liu, Shanli Ye, Ye Yao, Yian Zhu, Bin Tian, Lian Li, Lixiang Zhang, Chunyu Che, Bin Lian, Jianfeng Jiang, Kang Si, Jun Wei, Xiao He, Donghang Liu, Peng Li	All Sessions
TPC Attend the conference		ICNISC 2021 Committee list	They can attend all sessions	All Sessions

## Session #1 List of Keynote Speeches:

July 24th, 2021 9:10—12:30 (40 mins for every Keynote Speech)

Tencent Meeting (Room 1):

Meeting ID: 232 536 175

Join conference via weblink: <https://meeting.tencent.com/s/nNAfhjR5tzCL>

<b>Session #1</b>	<b>Time</b>	<b>Speech Title</b>	<b>Keynote Speaker</b>
<b>Keynote Speech I</b>	9:10—9:50	Real-Time Image Processing with Efficient Dynamic Programming	Prof. Yinglei Song
<b>Keynote Speech II</b>	9:50—10:30	Things about Unmanned Systems	Prof. Xiaoru Song
<b>Keynote Speech III</b>	10:30—11:10	Future Wireless Communications Standards for IoT	Prof. Anand Nayyar
<b>Keynote Speech IV</b>	11:10-11:50	Multi-Server Queueing Model with Server Breakdown	Prof. M. Seenivasan
<b>Keynote Speech V</b>	11:50-12:30	Industrial Big Data Analysis: Thinking and Exploration	Prof. Hongzhi Wang

## Session #2 List of Oral Presentation:

July 24th, 2021 14:00—18:00 (Oral Presentation: 10 min presentation and 5 min question time)

Tencent Meeting (Room 1):

Meeting ID: 232 536 175

Join conference via weblink: <https://meeting.tencent.com/s/nNAfhjR5tzCL>

Information Security Architecture Design of CBTC System ..... C406

*Hongli Zhao and Lili Li*

Machine Learning Forecasting of Foreign Exchange Markets Trend Based on Order Flow and US Economic News..... C453

*Shahrokh Firouzi, Xiangning Wang and Ali Totonchfardmotlagh*

Attribute Information Extracting Method for Air Quality Assessment of Buildings ..... C459

*Xiaozhi Du, Yurong Duan and Wei Huang*

Improved Chinese Word Segmentation Algorithm of Quantitative Units in Elementary Mathematics Application Problems..... C467

*Mingli Bai and Mingwen Wang*

Optimal Design of Collecting Module in Monitoring System ..... C472

*Xiubo Liang and Gangzhe Shi*

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*Kailin Zhang, Zhiyang Yu and Liqin Qu*

Semantic Face Completion Based on DCGAN with Dual-discriminator ..... C1192

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*Qiaoqiao Xiong, Saihong Tang, Yiting Li and Qipeng Chen*

- Imaging Multivariate Time-Series to Improve Fault Detection: Application on Tennessee Eastman Process..... C404  
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*Chiyuan Qu, Zhuhao Lu and Tianyun Hu*
- CycHash: A Novel Deep Learning to Hash for Image Retrieval and Video Retrieval... C407  
*Zhuangping Qi, Lei Liu, Huijie Liu and Li Li*
- A Survey of Chinese Character Recognition Research Based on Deep Learning..... C408  
*Chunxia Zhang, Longxue Li and Xudong Li*
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*Hongliang Huang, Weiyu Tang, Juntao Yang and Lidong Wang*
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*Jianfeng Tang, Xiang Xu and Juan Qiu*

July 24th, 2021 14:00—18:00 (Oral Presentation: 10 min presentation and 5 min question time)

Tencent Meeting (Room 2):

Meeting ID: 733 183 261

Join conference via weblink: <https://meeting.tencent.com/s/x6LmafHXo1F8>

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*Shuo Cui, Jiangbo Yin, Jun Wang and Peixin Xu*

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July 25th, 2021 08:00—12:00 (Oral Presentation: 10 min presentation and 5 min question time)

Tencent Meeting (Room 3):

Meeting ID: 859 766 607

Join conference via weblink: <https://meeting.tencent.com/s/t36jGbGHuEbQ>

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July 25th, 2021 08:00—12:00 (Oral Presentation: 10 min presentation and 5 min question time)

Tencent Meeting (Room 4):

Meeting ID: 698 357 328

Join conference via weblink: <https://meeting.tencent.com/s/1UZrXVAZOy36>

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July 25th, 2021 14:00—18:00 (Oral Presentation: 10 min presentation and 5 min question time)

Tencent Meeting (Room 3):

Meeting ID: 859 766 607

Join conference via weblink: <https://meeting.tencent.com/s/t36jGbGHuEbQ>

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July 25th, 2021 14:00—18:00 (Oral Presentation: 10 min presentation and 5 min question time)

Tencent Meeting (Room 4):

Meeting ID: 698 357 328

Join conference via weblink: <https://meeting.tencent.com/s/1UZrXVAZOy36>

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*Yonghe Xiao*

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