IEEE Communications Society Summer School
Tianjin University, Tianjin, China
August 19-22, 2023

Theme: Smart Industrial Internet of Things (Smart IIoT)

Dates: August 19, 2023 (Saturday) – August 22, 2023 (Tuesday)

Location: Multimedia Conference Room A102, Building 1895,
Tianjin University Peiyang Campus
135 Yaguan Road, Jinnan District
Tianjin, China

Introduction:
The global Industrial Internet of Things (IIoT) market size was valued at USD 321.81 billion in 2022 and is expected to expand at a compound annual growth rate (CAGR) of 23.2% from 2023 to 2030. Research advances in smart devices, information processing, and intelligent networks will play a key role to promote IIoT in more areas. According to GSMA, China will account for one-third of the global IIoT market by 2025. Tianjin is the birthplace of the Chinese industrial revolution. Modern industry in China started from Tianjin in 1860s. As the leading city of various industries, Tianjin is the industrial hub of North China and its gateway to the world. The Tianjin Museum of Modern Industry collects a full set of exhibits to demonstrate Tianjin’s contributions to the industrial development.

The 2023 IEEE Communications Society Tianjin Summer School focuses on the latest research, development, and applications of Smart Industrial Internet of Things (Smart IIoT). The summer school program includes seminars, invited talks, and posters to share the research trends and development status of Smart IIoT technologies and applications. The speakers are from many areas of the world including China, USA, UK, Australia, and Norway. Students will have opportunities to interact with professors and researchers in this area. Sessions such as Science Walk Talk, student poster, and face-to-face open discussion are designed to promote communications between students and professors. In addition to the technical sessions, there is a tutorial on “Why, Can and How Research?”. It would tutor students on the basics of academic research and senior project. Through these sessions, this summer school will help students to have insight into the key enabling technologies of IIoT and understand various IIoT applications. It will also help students to see how their background and college education can fit into the large domain of IIoT.

Mode: Hybrid (on-site, online & live broadcast)

Expected Participants: 200 on-site and 100 online participants

Organized By: IEEE Communications Society Educational Service Board, IEEE Tianjin Section
Program Chair
Tie Qiu, Tianjin University, China

Program Co-Chairs
Wenbing Zhao, Cleveland State University, USA
Guangjie Han, Hohai University, China
Lei Wang, Dalian University of Technology, China
Xiaobo Zhou, Tianjin University, China

Student Poster Session Co-Chairs
Ning Chen, Tianjin University, China
Jiancheng Chi, Japan Advanced Institute of Science and Technology, Japan
Lawrence He, Princeton High School, USA
Songwei Zhang, Tianjin University, China

Invited Speakers
● Prof. Yan Zhang from University of Oslo, Norway
● Prof. Jinsong Han from Zhejiang University, China
● Prof. Lei Wang from Dalian University of Technology, China
● Prof. Xiaobo Zhou from Tianjin University, China
● Prof. Shui Yu from University of Technology Sydney, Australia
● Prof. Guangjie Han from Hohai University, China
● Prof. Geyong Min from University of Exeter, UK
● Prof. Wenbing Zhao from Cleveland State University, USA
● Prof. Jucheng Yang, Tianjin University of Science & Technology, China
● Prof. Tianyi Xu, Tianjin University, China

Student Poster Session
The IEEE ComSoc Tianjin Summer School encourages students to report their work related to Smart IIoT. The content of posters is not limited to research thoughts, proposals, thesis, algorithms, and results. Posters will be displayed during the lunch breaks and tea breaks.
### IEEE ComSoc Tianjin Summer School Agenda

**Saturday, August 19, 2023**

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Title of Presentation</th>
<th>Time (GMT+8)</th>
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</thead>
<tbody>
<tr>
<td>Prof. Shui Yu</td>
<td>University of Technology Sydney</td>
<td>Why, Can, and How Research?</td>
<td>PM 3:00-5:00</td>
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</tbody>
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**Sunday, August 20, 2023**

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Title of Presentation</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>Prof. Yan Zhang</td>
<td>University of Oslo</td>
<td>Digital Twin for Intelligent IoT</td>
<td>AM 9:00-10:10</td>
</tr>
<tr>
<td>Prof. Jinsong Han</td>
<td>Zhejiang University</td>
<td>Fine-Grained Wireless Sensing</td>
<td>AM 10:40-11:50</td>
</tr>
<tr>
<td>Prof. Geyong Min</td>
<td>University of Exeter</td>
<td>AI and Digital Twin for Future Intelligent</td>
<td>PM 2:00-3:10</td>
</tr>
<tr>
<td>Prof. Guangjie Han</td>
<td>Hohai University</td>
<td>Multi-Dimensional Dynamic Trust Management</td>
<td>PM 3:40-4:50</td>
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**Monday, August 21, 2023**

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<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Title of Presentation</th>
<th>Time</th>
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<tbody>
<tr>
<td>Prof. Jucheng Yang</td>
<td>Tianjin University of Science &amp; Technology</td>
<td>AI Generated Content: Technics and Applications</td>
<td>AM 9:00-10:10</td>
</tr>
<tr>
<td>Prof. Xiaobo Zhou</td>
<td>Tianjin University</td>
<td>Energy-efficient and Secure Service Migration in Multi-user Edge Cloud Systems</td>
<td>AM 10:40-11:50</td>
</tr>
<tr>
<td>Prof. Tianyi Xu</td>
<td>Tianjin University</td>
<td>Blockchain and Internet of Things</td>
<td>PM 2:00-3:10</td>
</tr>
<tr>
<td>Prof. Lei Wang</td>
<td>Dalian University of Technology</td>
<td>BlinkListener: “Listen” to Your Eye Blink Using Your Smartphone</td>
<td>PM 3:40-4:50</td>
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**Tuesday, August 22, 2023**

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<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Title of Presentation</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Wenbing Zhao</td>
<td>Cleveland State University</td>
<td>Public Blockchain: Theoretical Foundation and Applications</td>
<td>AM 9:00-10:10</td>
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</tbody>
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**Face-to-Face Discussion between Students and Professors**

**Awards & Closing Ceremony**

**Opening Remark by the IEEE ComSoc Leaders & the Organizing Chair**

Prof. Nirwan Ansari, Ms. Tara McNally, Prof. Tie Qiu

AM 8:40-9:00

**Science Walk Talk (Tianjin University Guided, on-site only)**

AM 8:20-8:40

**Lunch Time • Meet the posters**

PM 11:50-2:00

**Tea Break • Meet the posters**

PM 3:10-3:40

**Face-to-Face Discussion between Students and Professors**

AM 10:10-10:40

**Awards & Closing Ceremony**

AM 11:20-12:00