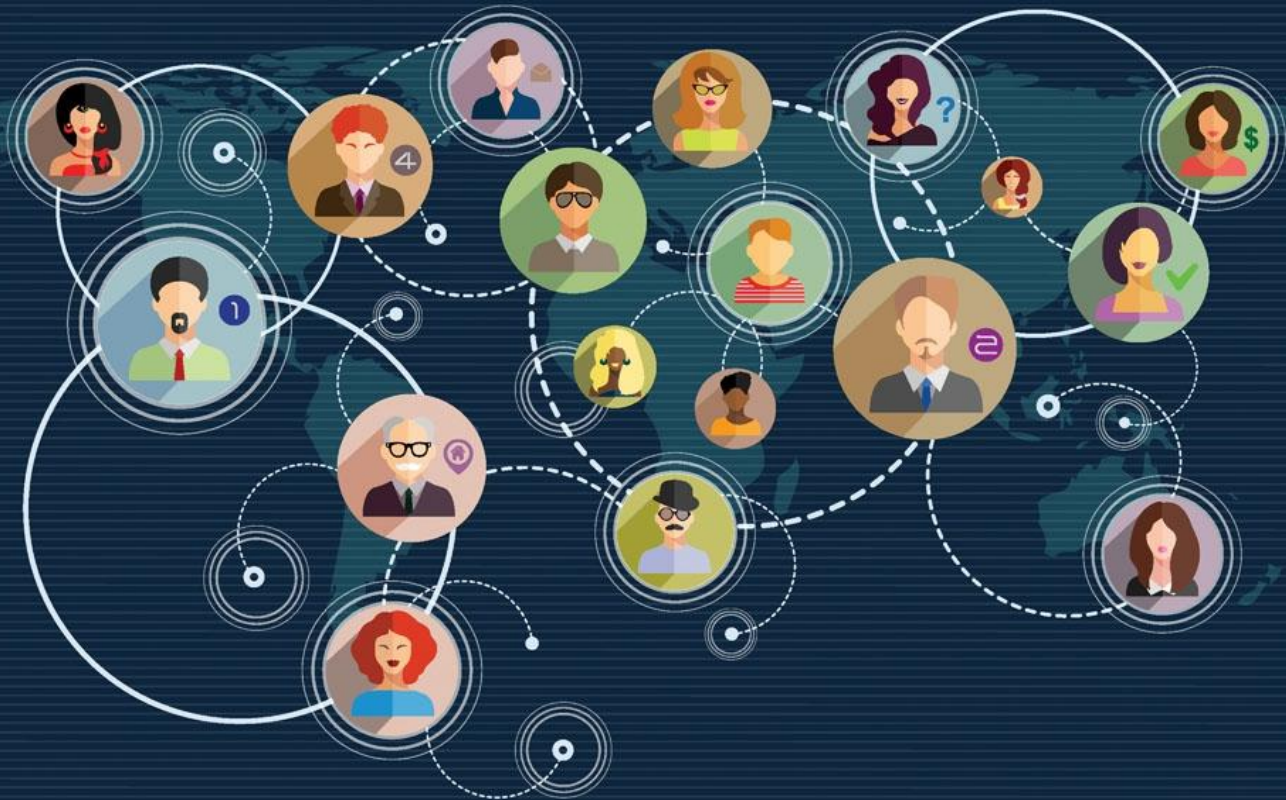




SocialSec 2021

7th International Symposium on Security and Privacy
in Social Networks and Big Data



FINAL PROGRAM

Conference Host

Fujian Normal University

Conference Organizer

College of Computer and Cyber Security

Fujian Provincial Key Laboratory of Network Security and Cryptology

Conference Co-Organizer

Zhong Xin Network Security

Fuzhou, Fujian, China

November 19-21, 2021

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INTRODUCTION

1. About SocialSec 2021

Social Networks and Big Data have pervaded all aspects of our daily lives. With their unparalleled popularity, social networks have evolved from the platforms for social communication and news dissemination, to indispensable tools for professional networking, social recommendations, marketing, and online content distribution. Social Networks, together with other activities, produce Big Data that is beyond the ability of commonly used computer software and hardware tools to capture, manage, and process within a tolerable elapsed time. It has been widely recognised that security and privacy are the critical challenges for Social Networks and Big Data applications due to their scale, complexity and heterogeneity.

The 7th International Symposium on Security and Privacy in Social Networks and Big Data (SocialSec 2021) will be held at Fujian Normal University in Fuzhou, China on November 19-21, 2021. It follows the success of SocialSec 2015 in Hangzhou, China, SocialSec 2016 in Fiji, SocialSec 2017 in Melbourne, Australia, SocialSec 2018 in Santa Clara, CA, USA, SocialSec 2019 in Copenhagen, Denmark and SocialSec 2020 in Tianjin, China. The aim of the symposium is to provide a leading edge forum to foster interactions between researchers and developers with the security and privacy communities in Social Networks and Big Data, and to give attendees an opportunity to interact with experts in academia and industry.

SocialSec 2021 is supported by the National Natural Science Foundation of China (No. U1905211, No. 61771140, No. 62171132, No. 62102088, U1805263), Fok Ying Tung Education Foundation (No. 171061).

2. About Fujian Normal University

Fujian Normal University (FNU), a century-old university based in Fuzhou, a historic cultural city known as “Land of Culture on the Coast”, is a time-honored and well-acclaimed provincial institution of higher learning. Founded as Fujian Superior Normal School in 1907 by the famous late-Qing scholar Chen Baochen, who once served as the teacher of China’s last emperor, the present day FNU went through a few changes-merging with the former Hwa-Nan Women’s College of Arts and Sciences, Fukien Christian University and Fujian Provincial Teachers School respectively-to form Fujian Teachers College in 1953. In 1972, the University was renamed Fujian Normal University and has been thus referred to since then. In 2012, the Ministry of

Education and Fujian government began to jointly support the development of FNU. FNU was designated as provincial high-level university for prioritized construction in 2014 and as provincial first-class university in 2018.

3. About College of Computer and Cyber Security

In June 2021, Fujian Normal University established the College of Computer and Cyber Security (College of Software) on the basis of integrating the three disciplines of computer science and technology, cyber security and software engineering in the former College of Mathematics and Information.

The College has 119 working faculty members, including 21 professors, 33 associate professors and 3 senior experimentalists; 12 doctoral supervisors and more than 40 master supervisors. They have been awarded more than 10 honors such as Young Changjiang Scholars, Excellent Young Scientists Fund, the Fok Ying Tung Education Foundation, Leading Talents of Science and Technology Innovation in Fujian Province, Hundred People Plan, Hundred Million Talents, Fujian Teaching Master, Fujian Youth May Fourth Medal, etc.

4. About Fujian Provincial Key Lab of Network Security and Cryptology

Fujian Provincial Key Lab of Network Security and Cryptology was established in March 2005, and was selected as one of the first batch of key laboratories for higher education in Fujian Province in June 2006. It successfully passed the acceptance of Fujian Provincial Department of Education in November 2008, was selected as one of the key laboratories in Fujian Province in March 2013, and successfully passed the evaluation of Provincial Department of Science and Technology in March 2015. In 2017, the laboratory and Fujian Province enterprises engaged in information security declared and approved the technology development base of Fujian Province network and information security industry.

The laboratory has an existing area of 1460 square meters and it has invested more than 56 million in construction funds. The research areas involve cyberspace security, computer science and technology, mathematics, software engineering, information and communication engineering. There is 1 primary discipline of cyberspace security authorized to offer doctoral degree program, and there are 3 master's degree programs in cyberspace security, computer science and technology, software engineering. It has 2 innovation teams in Fujian Province. There are 38 researchers, including 17 professors (4 Minjiang Scholars Chair Professors, 1 Distinguished Professor), 12 associate professors, 32 PhD holders, 1 Young Changjiang Scholar, 2 talents of Fujian Province Double Hundred Special Support Program, and 3 talents of Fujian Province New Century Excellent Talents in Higher Education.

COMMITTEES

■ General Co-chairs

Name	Affiliation	Country or Region
Jie Wu	Temple University	USA
Yang Xiang	Swinburne University of Technology	Australia
Li Xu	Fujian Normal University	China

■ Program Committee Co-chairs

Name	Affiliation	Country or Region
Limei Lin	Fujian Normal University	China
Yuhong Liu	Santa Clara University	USA
Chia-Wei Lee	National Taitung University	Taiwan

■ Publicity Co-chairs

Name	Affiliation	Country or Region
Xiangjian He	University of Technology Sydney	Australia
Zhiwei Lin	Queen's University Belfast	UK
Hui Tian	Huaqiao University	UK

■ Publication Co-chairs

Name	Affiliation	Country or Region
Dajin Wang	Montclair State University	USA
Jianxi Fan	Soochow University	China
Zhiyong Yu	Fuzhou University	China

■ Local Co-chairs

Name	Affiliation	Country or Region
Ayong Ye	Fujian Normal University	China
Hui Lin	Fujian Normal University	China
Xiaoding Wang	Fujian Normal University	China

■ Web Co-chairs

Name	Affiliation	Country or Region
Manli Yuan	Fujian Normal University	China

■ Program Committee Members

Name	Affiliation	Country or Region
Shaoying Cai	Hunan University	China
Aniello Castiglione	University of Naples Parthenope	Italy
Jiageng Chen	Central China Normal University	China
Yang Chen	Fudan University	China
Jintai Ding	University of Cincinnati	USA
He Fang	University of Western Ontario	Canada
Steve Furnell	University of Plymouth	UK
Yanze Huang	Fujian University of Technology	China
Julian Jang-Jaccard	Massey University	New Zealand
Sokratis Katsikas	Norwegian University of Science and Technology	Norway
Kwok Yan Lam	Nanyang Technological University	Singapore
Joseph Liu	Monash University	Australia
Xiaolong Liu	Fujian Agriculture and Forestry University	China
Ximeng Liu	Fuzhou University	China
Wenjuan Li	City University of Hong Kong	Hong Kong
Bo Luo	The University of Kansas	USA
Xiapu Luo	Hong Kong Polytechnic University	Hong Kong
Gerardo Pelosi	Politecnico di Milano	Italy
Chiara Pero	University of Salerno	Italy
Yizhi Ren	Hangzhou Dianzi University	China
Seonghan Shin	National Institute of Advanced Industrial Science and Technology	Japan
Hung-Min Sun	National Tsing Hua University	Taiwan
Zhiyuan Tan	Edinburgh Napier University	UK
Feng Wang	Fujian University of Technology	China
Jianfeng Wang	Xidian University	China
Lei Wang	Shanghai Jiao Tong University	China
Wei Wang	Beijing Jiaotong University	China
Jinbo Xiong	Fujian Normal University	China
Lei Xue	Hong Kong Polytechnic University	Hong Kong
Guomin Yang	University of Wollongong	Australia
Wun-She Yap	Universiti Tunku Abdul Rahman	Malaysia
Xiucui Ye	University of Tsukuba	Japan
Kuo-Hui Yeh	National Dong Hwa University	Taiwan
Xun Yi	RMIT University	Australia
Haibo Zhang	University of Otago	New Zealand
Jing Zhang	Fujian University of Technology	China
Lei Zhang	East China Normal University	China
Cliff Zou	University of Central Florida	USA

■ General Co-chairs



Jie Wu

- **Jie Wu** is the Director of the Center for Networked Computing, Temple University
- Editorial board member for IEEE TMC, IEEE TSC, JPDC, and JCST
- General chair/co-chair for IEEE IPDPS'08, IEEE DCROSS'09, IEEE ICDCS'13, ACM MobiHoc'14, ICPP'16, IEEE CNS'16, WiOpt'21, and ICDCN'22
- Program chair/co-chair for IEEE MASS'04, IEEE INFOCOM'11, CCF CNCC'13, and ICCCN'20
- AAAS Fellow, IEEE Fellow
- 2011 CCF Overseas Outstanding Achievement Award



Yang Xiang

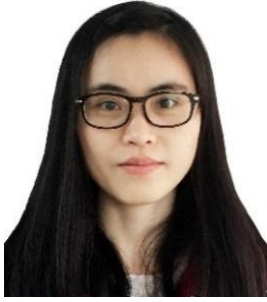
- **Yang Xiang** is the Dean of Digital Research & Innovation Capability Platform, Swinburne University of Technology, Australia
- Editor-in-Chief of the SpringerBriefs on Cyber Security Systems and Networks
- Associate Editor of IEEE TDSC, IEEE IoT, ACM Computing Surveys, IEEE TC and IEEE TPDS
- Coordinator, Asia for IEEE Computer Society Technical Committee on Distributed Processing (TCDP)
- IEEE Fellow



Li Xu

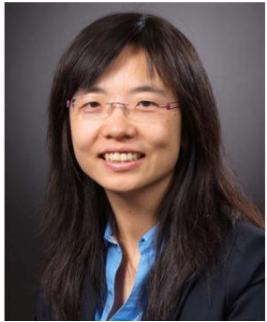
- **Li Xu** is currently the Dean of the College of Computer and Cyber Security, Fujian Normal University
- Director of the Fujian Province Key Lab of Network Security and Cryptography
- PC chair or member at more than 30 international conferences
- Senior member of CCF and CIE in China
- 150 publications in refereed journals and conferences
- Chairman of CCF Fuzhou Branch

■ Program Committee Co-chairs



Limei Lin

- **Limei Lin** is currently an associate professor with the College of Computer and Cyber Security, Fujian Normal University
- PI of 2 National Natural Science Foundations of China
- 40 publications in IEEE TDSC, IEEE TPDS, IEEE TC, and IEEE TR
- Research interests include cyber security, network reliability and machine learning



Yuhong Liu

- **Yuhong Liu** is currently an associate professor with the Department of Computer Engineering, Santa Clara University
- 40 publications in IEEE TIFS, IEEE TII, GLOBECOM
- IEEE Senior Member
- Research interests include trustworthy computing and cyber security of emerging applications, such as online social media, the Internet of Things, and Blockchain



Chia-Wei Lee

- **Chia-Wei Lee** is currently an associate professor with the Department of Computer Science and Information Engineering, National Taitung University
- 30 publications in IEEE TDSC, IEEE TPDS, IEEE TC, and IEEE TR
- Research interests include graph theory and algorithms, interconnection networks, and system-level diagnosis

DETAILS OF THE CONFERENCE

I. Conference Time

November 19-21, 2021, Friday-Sunday

II. Conference Venue

Fujian Normal University (Qishan Campus) in Fuzhou, China

III. Conference Registration

Time: November 19, 2021, Friday

Venue: Room 507, Building of College of Computer and Cyber Security,
Fujian Normal University, Fuzhou, China

IV. Conference Form

Online and Offline Synchronization

V. Online Conference ID (Tencent Conference Platform)

November 20 (Saturday): 946 422 608

November 21 (Sunday): 324 428 771

VI. Team for Conference Affairs

Limei Lin	Fujian Normal University	Tel:15060431658
Yuhang Lin	Fujian Normal University	Tel:17350569233
JianKang Song	Fujian Normal University	Tel:15955565901
Ziyi Wan	Fujian Normal University	Tel:15195960758
Jiaru Wang	Fujian Normal University	Tel:15059750150

VII Campus Map



★ : Building of College of Computer and Cyber Security

VIII Accommodation recommendation

- 1) Like Much Hotel (Qishan campus store of Fujian Normal University)
Address: No.22 XueFu South Road, High-tech Zone (opposite the south gate of Fujian Normal University)
Cost: ¥ 200~400 per day
- 2) Juchunyuan Hotel
Address: Building 6, Block B, Xintong International Center, No.79 Wulong Jiangnan Avenue, Nanyu Town
Cost: ¥ 300~500 per day

IX. Transportation guide

- 1) Changle airport-Fujian Normal University (Qishan Campus)
Airport Express Amitabha Hotel special line:
Changle International Airport Bus Station-Airport Express Amitabha Hotel Station;
then transfer to Bus No. 26, PuShang Avenue stop - Minjiang Teachers College Stop.
- 2) Fuzhou Railway Station-Fujian Normal University (Qishan Campus)
Subway Line 1: Nanmendou Subway Station;
then transfer to Metro Line 2 - Dongyu FujianNormal University Station.
- 3) Fuzhou South Railway Station-Fujian Normal University (Qishan Campus)
Metro Line 1: South Railway Station - Nanmendou Station;
Transfer to Metro Line 2: Nanmendou Station - Dongyu Fujian Normal University Station, walk about 200 meters to north gate of Fujian Normal University.

X. Warm Reminder

- 1) Please be present at symposium and attend relevant activities on time.
- 2) Please ensure that your mobile phone is always silent at the conference hall.
- 3) Please take good care of your personal documents, valuables, etc.
- 4) Please contact the conference staff for assistance with other conference services.

MEETING AGENDA

Saturday, November 20		
Time	Contents	Conductor
Meeting place: Jiwang building 507		
Tencent Meeting Number: 946 422 608		
8:10-8:30	Opening Ceremony	Li Xu Jie Wu Chia-Wei Lee
8:30-9:30	Blockchain, Big Data, and AI for Smart Industrial Internet (Jie Li)	Yuhong Liu
9:30-10:30	Dynamic Opinion Maximization in Social Networks (Xingwei Wang)	
10:30-10:45	Tea Breaks	
10:45-11:10	Distribution Key Scheme for Secure Group Management in VANET Using Polynomial Interpolation (Ankit Kumar, Kamred Udham Singh, Sun-Yuan Hsieh, V D AmbethKumar and Abhishek Kumar)	Yuexin Zhang
11:10-11:35	Modeling Dynamics of Covid-19 Infected Population with PSO (Guangdong Huang and Aihua Li)	
11:35-12:00	Migration Privacy Protection Based on Scheduling Algorithm for Online Car-hailing (Qian Ding, Jing Zhang, Liwei Lin and Zhiping Xu)	
12:00-14:00	Lunch	
14:00-14:25	Privacy-Enhanced Federated Learning with Weighted Aggregation (Jiale Guo, Ziyao Liu, Kwok-Yan Lam, Jun Zhao and Yiqiang Chen)	Ayong Ye
14:25-14:50	A Survey of Adversarial Examples and Deep Learning Based Data Hiding (Zijing Feng, Chengyu Liu, Xiangmin Ji and Xiaolong Liu)	
14:50-15:15	Trajectory Privacy Protection Scheme for Different Travel Modes (Yanzi Li, Jing Zhang, Peng Gao and Sitong Shi)	
15:15-15:30	Tea Breaks	
15:30-15:55	Detecting Fake Accounts in Online Social Networks with Graph Attention Network (Yuhang Lin, Yanze Huang and Limei Lin)	Xiaoding Wang
15:55-16:20	Social Distance Detection Using Wireless Signal in Social Networks (Chi-Yu Liu and Chia-Wei Lee)	
16:20-16:45	Graph Matching based Privacy-Preserving Scheme in Social networks (Hongyan Zhang, Xiaolin Li, Jiayu Xu and Li Xu)	
16:45-17:10	Anonymizing Global Edge Weighted Social Network Graphs (Jiaru Wang, Jiankang Song, Ziyi Wan, Yanze Huang, Yuhang Lin and Limei Lin)	
17:10-19:00	Dinner	

Sunday, November 21		
Time	Contents	Conductor
Meeting place: Jiwang building 507		
Tencent Meeting Number: 324 428 771		
8:00-9:00	IoT Security and Privacy Using Machine Learning (Xiangjian He)	Aihua Li
9:00-9:25	Fault Tolerant Safety Routing of Data Center Networks Based on Balanced Hypercube (Xinxin Zhang, Li Xu and Aihua Li)	
9:25-9:50	Performance Evaluation of Fault Tolerant Routing Algorithm in Data Center Networks (Ningning Liu, Weibei Fan and Jianxi Fan)	
9:50-10:05	Tea Breaks	
10:05-10:30	Thinking and Practice on the Construction of Data Security Supervision System (Haowei Ruan)	Jing Zhang
10:30-10:55	An Efficient Adaptive Fault Diagnosis Algorithm for Highly Scalable Data Center Networks (Xiangke Wang, Yudu You, Xiaoyan Li, Ximeng Liu and Yang Yang)	
10:55-11:20	A New Measure of Network Robustness: Network Cluster Entropy (Jiafei Liu and Shuming Zhou)	
11:20-11:45	Rumor Detection with Bi-Directional Graph Attention Networks (Xiaohui Yang and Hailong Ma)	
11:45-12:10	Realization of Safety Reinforced Terminal Equipment for Secondary System of Substation (Xiaoming Wang, Ke Zhou and Congyun Wu)	
12:10-13:30	Lunch	

【Warm Reminder】

We have created a WeChat group for participants of SocialSec 2021 to better communicate and learn from each other. Welcome to join this group. The group QR code is as shown in the following.

