



EAI SPNCE 2023

November 2023, China - Guangzhou

The rapid development of new-generation communication and electronic information technologies, such as 5G, the Internet of Things (IoT), and artificial intelligence (AI), has found extensive applications in various fields of economic and social development. However, these emerging communication and computing systems have also become significant targets for hacker attacks, facing serious threats to network and information security. In response to this, Guangdong Polytechnic Normal University will host the 2023 Conference on Next-Generation Computing Environment Security and Privacy (EAI SPNCE 2023). Distinguished academicians and expert scholars in the field of network and information security from both domestic and international arenas are invited to deliver keynote speeches, engaging in discussions on the crucial topic of cybersecurity governance in cyberspace. The aim is to provide valuable suggestions and strategies for the global development of cybersecurity in cyberspace.

General Chair:	Jun Cai, Guangdong Polytechnic Normal University
General Co-Chair:	Zhili Zhou, Guangzhou University
Program Committee Chairs:	Haibo Hu, Hong Kong Polytechnic University Kongyang Chen, Guangzhou University
Publication Chair:	Jianzhen Luo, Guangdong Polytechnic Normal University
Local Arrangement Chair:	Jianhua Yang, Guangdong Polytechnic Normal University
Workshop Chair:	Weiwei Lin, South China University of Technology
Sponsorship Chair:	Zhengyu Zhu, Guangdong Polytechnic Normal University
Publication Chair:	Li Hu, Guangzhou University Chang Chen, Beijing Jiaotong University
Web Chair:	Anli Yan, Guangzhou University
Steering Committee Chair:	Ding Wang, Nankai University
Organizers:	European Alliance for Innovation (EAI)
Hosted by:	School of Cybersecurity, Guangdong Polytechnic Normal University

EAI SPNCE 2023 Schedule

November 24, 2023 (Friday)	
14:00-21:30	Sign-in Address: Room 101, Training Building, West Campus, Guangdong Polytechnic Normal University
November 25, 2023 (Saturday)	
08:30-08:50	Sign-in Address: Room 101, Training Building, West Campus, Guangdong Polytechnic Normal University
8:50-9:20	<p style="text-align: center;">Conference Opening Ceremony</p> <ol style="list-style-type: none"> 1. Introduction of the conference by the Chair Jun Cai 2. Group Photo
Keynote speak 1 09:20- 9:45	<p style="text-align: center;">Digital Twin Network</p> <p>Professor Yan Zhang, Tenure Professor at the University of Oslo, Norway, Fellow of the Norwegian Academy of Technological Sciences, IEEE Fellow, globally recognized as a 'Highly Cited Scientist.'</p>
Keynote speak 2 09:45-10:10	<p style="text-align: center;">The Solution MIN and Its DID Application for the Concept of Human Cyberspace Destiny Community – The World's First Solution to Address the Three Persistent Issues in the TCP/IP Architecture.</p> <p>Professor Hui Li, Foreign Member of the Russian Academy of Sciences, Peking University</p>
10:10-10:25	Tea Break
Keynote speak 3 10:25-10:50	<p style="text-align: center;">Information Steganography Using Magic Matrix</p> <p>Professor ZhenCheng Zhang, Fellow of the European Academy of Sciences, IEEE Fellow, Feng Chia University</p>

Keynote speak 4 10:50-11:15	Next-generation Networks for Machine Learning Professor Kai Chen, Hong Kong University of Science and Technology	
Keynote speak 5 11:15-11:40	Security and Challenges of Large Models Professor Hao Wang, Second-level Professor, National High-level Talent, Xidian University	
Keynote speak 6 11:40-12:05	Multimedia Steganography and Forensics Methods Based on Deep Learning/Generative Adversarial Networks Professor Xiangui Kang, Sun Yat-sen University	
12:05-14:00	Lunch	
Keynote speak 7 14:00-14:25	Model Privacy and Security in Machine Learning at Scale Professor Haibo Hu, Hong Kong Polytechnic University	
Keynote speak 8 14:25-14:50	The key of Discriminative AI: A View of Representation Learning Associate Professor Yan Yan Leng, Macau University of Science and Technology	
Keynote speak 9 14:50-15:15	Advances in Face Anti-Spoofing Professor Alex Kot, Fellow of the Singapore Academy of Engineering, IEEE Fellow, Nanyang Technological University	
15:15-15:30	Tea Break, Poster Paper Session	Chair Kongyang Chen
	Address: Lobby, Ground Floor, Training Building, West Campus, Guangdong Polytechnic Normal University	
	An integration-enhanced ZNN approach for chaotic combined synchronization with external disturbances Chenfu Yi, Mingdong Zhu, Jingjing Chen	
	Overview of Vehicle Edge Computing and Its Security Shaodong Han, Maojie Wang, Guihong Chen	
	Speech Emotion Recognition Based on Recurrent Neural Networks with Conformer for Emotional Speech Synthesis	

	<p>Xin Huang, Chenjing Sun, Jichen Yang, Xianhua Hou</p> <p>A Novel Polar Code-Based Key Encapsulation Mechanism with Non-Permutation Equivalent Public Key</p> <p>Huiling Zhang, Zhiqiang Lin, Jingang Liu, Haixiong Zhou</p> <p>VoIP steganalysis using shallow multiscale convolution and transformer</p> <p>Yi Liao, Jinghui Peng, Shanyu Tang</p> <p>Route Privacy-Preserving Authentication Scheme based on PUF in VANETs</p> <p>Hanwen Deng, Yining Liu, Dong Wang</p> <p>Research on Face Recognition System Based on RLWE Homomorphic Encryption</p> <p>YuLin Wang, HaiLin Huang, ZiHao Fang, YuQi Zhao, JinHeng Wang</p> <p>ConFlow: Contrast Network Flow Improving Class Imbalanced Learning in Network Intrusion Detection-Jianliang Ruan, Lan Liu, Pengcheng Wang, Jun Lin, Junhan Hu</p> <p>Anomaly Detection of Unstable Log Data Based on Contrastive Learning</p> <p>Lan Liu, Zhihao Huang, Kangjian He, Jun Lin</p> <p>Consortium Blockchain Storage Optimization Based on Fountain Codes</p> <p>Jianhong Li, Qi Chen, Xianmin Wang, Guoyu Yang, Zihan Jiang, Teng Huang, Li Hu</p>	
15:30-18:00	<p style="text-align: center;">Oral Paper Presentations</p> <p>Location: Training Building, Ground Floor, Conference Room</p> <p>A lightweight anomaly detection method for industrial processes based on event correlation behavior</p> <p>Yan Cai, Jianzhen Luo, Jun Cai, Wanhan Fang</p> <p>Stable NICE Model-Based Image Generation for Generative Steganography</p> <p>Xutong Cui, Zhili Zhou, Jianhua Yang, Chengsheng Yuan, Weixuan Tang</p>	<p style="text-align: center;">Chair</p> <p style="text-align: center;">Jianhua Yang</p> <p style="text-align: center;">Zhi Zhou</p>

	<p>Computer-generated Image Forensics Based on Vision Transformer with Forensic Feature Pre-processing Module Yifang Chen, Guanchen Wen, Yong Wang, Jianhua Yang, Yu Zhang</p>	
	<p>Detection of Speech Spoofing Based on Dense Convolutional Network Yong Wang, Xiaozong Chen, Yifang Chen, Shunsi Zhang</p>	
	<p>EncoderMU: Machine Unlearning In Contrastive Learning Zixin Wang, Bing Mi, Kongyang Chen</p>	
	<p>Image copy-move forgery detection in the social media based on a prior density clustering and the point density Cong Lin, Hai Yang, Ke Huang, Yufeng Wu, Yamin Wen, Yuqiao Deng</p>	
	<p>An Incentive Mechanism and An Offline Trajectory Publishing Algorithm Considering Sensing Area Coverage Maximization and Participant Privacy Level Qing Cao, Yunfei Tan, Guozheng Zhang</p>	
	<p>HybridFL: Hybrid approach toward privacy-preserving Federated Learning Sheraz Ali, Saqib Mamoon, Areeba Usman, Chuan Zhao</p>	<p>Chair Jianzhen Luo</p>
	<p>Two-stage Multi-lingual Speech Emotion Recognition for Multi-lingual Emotional Speech Synthesis Xin Huang, Zuqiang Zeng, Chenjing Sun, JiChen Yang</p>	
	<p>NoCrypto: A Web Mining Behavior Detection Method Based on RGB Images Hui Wang, Yu Zhang, Ming Xiao Pan, Yi Wei Huang</p>	
	<p>Feedback Feed-forward Iterative Learning Control for Non-affine Nonlinear discrete-time Systems with Varying Trail Lengths Sixian Xiong, Yun-Shan Wei, Mengtao Lei</p>	
	<p>Open-Closed-Loop Iterative Learning Control Based on Differential Evolution Algorithm for Nonlinear System Mengtao Lei, Yun-Shan Wei, Sixian Xiong</p>	

	The Design of a Multi-application micro-operating system platform in the context of big data Wenpan Mo, Zhicheng Shen	
18:30-20:00	Dinner	
November 26, 2023 (Sunday)		
Open Academic Exchange		