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August 14th-16th, 2026

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CONTACT US

Email Address: csesecretary@163.com
Wechat / Phone: +86-13061927147 (Chinese Service)
WhatsApp (English Service)

SCHEDULE OF THE CONFERENCE

The Conference Schedule: Chinese Time Zone (GMT+8, Beijing Time)
The time: https://time.is/Beijing
Time Zone Converter: https://www.timeanddate.com/worldclock/converter.html

August 14th, 2026, 09:00-18:00: Check in/Test the Meeting App
August 15th, 2026, 09:00-18:00: Keynote Speech and Invited Talks
August 16th, 2026, 09:00-18:00: Invited Talks & Oral Presentation & Poster Presentation

The conference will be held in a **hybrid format** due to the conference dates conflicting with university graduation periods.
In-Person: All presentations and activities will be held at JUNYI Dynasty Hotel, 87 Luoyu Road, Hongshan District, Wuhan, China
Keynote Speech, Invited Talk, Oral Presentation: 09:00-18:00, Moon Lake Hall on the 6F
Poster Presentation: 09:00-18:00, Green Island Hall on the 6F

Online: The conference will be hosted on the Tencent Meeting platform.
Check in/Test the Meeting App: August 14th, 2026, 09:00-11:00 and 16:00-18:00
The Conference Link: https://meeting.tencent.com/dm/Gm5D8VmsJp9K
Tencent Meeting ID: 731-554-190
Password: 0814

Keynote Speech and Invited Talks: August 15th, 2026, 09:00-17:00
The Conference Link: https://meeting.tencent.com/dm/9Y3VferDNHYu
Tencent Meeting ID: 998-800-205
Password: 0815

Invited Talks & Oral Presentation I: August 16th, 2026, 09:00-18:30
The Conference Link: https://meeting.tencent.com/dm/vpqyH8lb0tbc
Tencent Meeting ID: 116-366-922
Password: 0816

Oral Presentation II: August 16th, 2026, 10:00-17:30
The Conference Link: https://meeting.tencent.com/dm/Jz032dHrZLAn
Tencent Meeting ID: 791-642-254
Password: the password has been sent to the Designated Attendees

Oral Presentation III: August 16th, 2026, 10:00-17:30
The Conference Link: https://meeting.tencent.com/dm/WcZaQ4k2nP8D
Tencent Meeting ID: 992-698-425
Password: the password has been sent to the Designated Attendees

Poster Presentation: August 16th, 2026, 10:00-17:30

The Conference Link: https://meeting.tencent.com/dm/tsuSuuXXOjmH
Tencent Meeting ID: 856-403-504
Password: the password has been sent to the Designated Attendees

Tencent Meeting App Download Link (Mainland China Participants**):**
https://meeting.tencent.com/download/index.html

VooV Meeting App Download Link (Participants from outside Mainland China**):**
https://voovmeeting.com/download-center.html

August 15th, 2026 Conference Schedule

09:00-09:10	Open Ceremony
09:10-10:00	Keynote Speech I: Prof. Simon K.S. Cheung
10:00-10:50	Keynote Speech II: Prof. Prof. Tao Yu
10:50-11:40	Keynote Speech III: Prof. Anand Nayyar
11:40-12:10	Invited Talk I: Mr. Ishan Kumar
12:10-14:00	Lunch Time, 5F
14:00-14:50	Keynote Speech IV: Prof. Lu Leng
14:50-15:40	Keynote Speech V: Prof. Pascal Lorenz
15:40-16:30	Keynote Speech VI: Prof. Ma. Jabbar
16:30-17:00	Invited Talk II: Prof. Wen-Cheng Lai

August 16th, 2026 Conference Schedule

09:00- 09:30	Invited Talk III: Mr. Selva Lakshman Murali
09:30-10:00	Invited Talk IV: Mr. Saurabh Kakkar
10:00-12:00	Oral Presentation and Poster Presentation
12:00-14:00	Lunch Time, 5F
14:00-18:30	Oral Presentation and Poster Presentation

Session #1Keynote Speech and Invited Talk

The Conference Link: https://meeting.tencent.com/dm/9Y3VferDNHYu
Tencent Meeting ID: 998-800-205
Password: 0815

09:00-17:00, August 15th, 2026

(50 Mins for Keynote Speech/30 Mins for Invited Talk, Including 5-10 Mins for Answers)

Session #1	Time	Speech Title	Keynote Speaker/ Invited Speaker
Keynote Speech I	09:10-10:00	Analysis and Control of Use Cases with Shared Resources: A Formal Method based on Compositional Marked Graphs	Prof. Simon K.S. Cheung
Keynote Speech II	10:00-10:50	PhyLock: A Dual-Domain Encrypted Continuous-Wave Phase Ranging Architecture for Physical-Layer-Secure Near-Field Authentication	Prof. Tao Yu
Keynote Speech III	10:50-11:40	Securing the Next Generation of Intelligence: Threats, Attacks, and Defenses in Large Language Models	Prof. Anand Nayyar
Invited Talk I	11:40-12:10	AI-Driven Design Verification: Transforming the Future of Chip Development	Mr. Ishan Kumar
Keynote Speech IV	14:00-14:50	Advanced Information Aggregation	Prof. Lu Leng
Keynote Speech V	14:50-15:40	Architectures of Next Generation Wireless Networks	Prof. Pascal Lorenz

Keynote Speech VI	15:40-16:30	The Science of Deepfakes: From Creation to Detection	Prof. Ma. Jabbar
Invited Talk II	16:30-17:00	Evaluation of Delayed Offloading and Throughput in Mobile Cloudlet	Prof. Wen-Cheng Lai

Session #2 Invited Talk

The Conference Link: https://meeting.tencent.com/dm/vpqyH8lb0tbc
Tencent Meeting ID: 116-366-922
Password: 0816

09:00-10:00, August 16th, 2026

(30 Mins for Invited Talk, Including 5-10 Mins for Answers)

Session #2	Time	Speech Title	Invited Speaker
Invited Talk III	09:00-09:30	Autonomous Physical Design: A Survey of Machine Learning Algorithms, Formulations, and Measured PPA Outcomes Across the RTL-to-GDS Stack	Mr. Selva Lakshman Murali
Invited Talk IV	09:30-10:00	Trustworthy Generative AI for Regulated Enterprise Systems: Explainability, Governance, and Data Engineering from Financial Risk to Computer Science Practice	Mr. Saurabh Kakkar

Keynote Speakers

Keynote Speaker I

Beijing Time (UTC+8), Saturday, August 15, 09:10-10:00

Prof. Dr. Simon K.S. Cheung, Chief Information Officer, Hong Kong Metropolitan University, Hong Kong, China

Biography: Dr. Simon K.S. Cheung obtained his BSc and PhD in Computer Science and Master of Public Administration from City University of Hong Kong and University of Hong Kong respectively. A BCS Fellow, IET Fellow, IMA Fellow, HKIE Fellow and HKCS Fellow, Dr. Cheung is the Chief Information Officer of Hong Kong Metropolitan University. He has been working in higher education (with HKMU, HKU, HKBU and CUHK) for 36 years in IT management, while also undertaking academic duties such as teaching, research, course development and programme accreditation. He is active in research, with 1 research monograph, 36 edited books and 200 refereed journal articles, book chapters and conference papers in two distinct areas, namely, educational IT, and software and systems engineering. He serves in the advisory board and editorial board for reputable international journals. Awards in recognition of his achievements include the Outstanding Research Publication Award and President's Award for Distinguished Achievement from Hong Kong Metropolitan University, Outstanding Achievement in Computer Science and IT from Shenzhen Science and Technology Association, Outstanding CIO Award from Hong Kong IT Joint Council, and Honour for Excellence, CIO Award from CIO Asia.

Speech Title: Analysis and Control of Use Cases with Shared Resources: A Formal Method based on Compositional Marked Graphs

Abstract: Use case driven system design is a software engineering approach where the whole system development lifecycle is dictated and driven by use cases. When there involve competition of shared resources among use cases (called conflicting use cases), erroneous situations such as deadlocks may occur. Therefore, analysis of these use cases for detection and avoidance of deadlocks has long been a difficult challenge, especially with a large volume of use cases. This keynote introduces a formal and theoretical sound method to identify conflicting use cases that would lead to deadlocks, based on compositional marked graphs. A subclass of Petri nets, marked graphs are used for modelling use cases where shared resources are represented by resource places. By composing them via their common resource places, the resulting augmented marked graph can be effectively analyzed in order to identify all potential deadlocks. Accordingly, control measures

can be applied to avoid occurrence of these erroneous situations. Two versions of the Dining Philosophers problem are used for illustration.

Keynote Speaker II

Beijing Time (UTC+8), Saturday, August 15, 10:00-10:50

Prof. Tao Yu, China Academy of Management Science, China

Biography: Professor Tao YU is a renowned domestic research expert in radio positioning technology and an industry leader. He is one of the top 100 pioneers of scientific and technological innovation in the new era in China in 2023. So far, he has published more than 200 papers, published two academic monographs, and applied for more than twenty invention patents. The two monographs are: (1) In 2017, the academic monograph "Technology of Passive Detection Location" funded by the national key publishing fund was published by the National Defense Industry Press. (2) In 2022, the English monograph "Passive Location Method Based on Phase Difference Measurement" was published by Bentham Press. In addition, three English monographs (co-authored) have been published so far.

Speech Title: PhyLock: A Dual-Domain Encrypted Continuous-Wave Phase Ranging Architecture for Physical-Layer-Secure Near-Field Authentication

Abstract: Proximity-based authentication systems—encompassing automotive digital keys, smart door locks, and contactless payment terminals—demand both high-precision distance measurement and robust resistance to relay attacks. Existing solutions often face a dilemma: they either lack physical-layer security mechanisms (e.g., BLE RSSI) or rely on expensive, deployment-constrained dedicated hardware (e.g., UWB), hindering large-scale adoption.

This paper presents PhyLock, a Dual-Domain Encrypted Continuous-Wave Phase Ranging (DE-CWPR) method that establishes a fundamentally new paradigm: "encryption as ranging." Unlike conventional approaches that treat ranging and security as independent layers, PhyLock™ deeply embeds cryptographic mechanisms into the physical-layer waveform itself.

The architecture operates across two coordinated dimensions. In the frequency domain, a coarse-to-fine strategy first obtains an initial distance estimate using fixed frequency differences, then constrains a dynamic frequency difference interval for refined measurement. A cryptographically seeded pseudorandom generator produces session-unique frequency differences, rendering the ranging signal unpredictable to unauthorized receivers. In the phase domain, random phase offsets—derived from the same pseudorandom sequence—are deliberately introduced to obfuscate phase observations while preserving the phase difference invariance required for distance computation.

A four-phase closed-loop protocol (secure wake-up, session key negotiation, encrypted ranging, and verification) ensures long-term security through periodic key refresh. The entire architecture is designed for low-cost commodity hardware, requiring only standard radio frequency integrated

circuits with frequency synthesis and phase detection capabilities.

PhyLock achieves sub-centimeter ranging accuracy (±3 mm in near-field static scenarios) while providing cryptographic-grade protection against relay attacks, signal interception, and statistical analysis. This work offers a practical physical-layer security solution for next-generation near-field authentication applications.

Keynote Speaker III

Time Converter: https://www.timeanddate.com/worldclock/meeting.html
Beijing Time (UTC+8), Saturday, August 15, 10:50-11:40
Vietnam Time (UTC+7), Saturday, August 15, 09:50-10:40

Prof. Anand Nayyar, School of Computer Science, Duy Tan University, Da Nang, Vietnam

Biography: Dr. Anand Nayyar is Professor, Scientist, Vice-Chairman (Research), and Director of the IoT and Intelligent Systems Lab at the School of Computer Science and Artificial Intelligence, Duy Tan University, Vietnam. He received his Ph.D. in Computer Science from Desh Bhagat University in 2017, with research interests in Wireless Sensor Networks, Swarm Intelligence, Network Simulation, Artificial Intelligence, IoT, Cloud Computing, and Intelligent Systems.

Dr. Nayyar has published more than 260 research papers in international journals and conferences, along with numerous book chapters and books in Computer Science. His research has received significant international recognition, with over 25,000 citations and an H-index of 81 on Google Scholar. He is a Senior Member of IEEE and ACM and has served as a reviewer, program committee member, and chair for numerous international conferences.

He currently serves as an Associate Editor and editorial board member for several international journals and has reviewed thousands of research articles. His current research focuses on emerging technologies including Artificial Intelligence, Internet of Things, Cyber Security, Blockchain, Healthcare Informatics, and Wireless Communications.

Speech Title: Securing the Next Generation of Intelligence: Threats, Attacks, and Defenses in Large Language Models

Abstract: Large Language Models (LLMs) are rapidly transforming enterprise systems, cybersecurity operations, education, research, customer support, and content generation. However, their growing adoption also introduces a new class of security, privacy, and trust challenges that traditional cyber defense mechanisms are not fully equipped to address. This keynote explores the evolving landscape of LLM security, focusing on critical threats such as prompt injection, jailbreak attacks, adversarial manipulation, training data poisoning, backdoor attacks, model inversion, sensitive information disclosure, insecure plugins, excessive agency, overreliance, and model theft. The talk will examine how attackers exploit the probabilistic and instruction-following nature of LLMs to generate harmful outputs, bypass safety controls, leak confidential information, or manipulate decision-making systems. Real-world scenarios across customer service, insurance claims, underwriting, and enterprise knowledge bases will highlight the practical impact of these risks. The keynote will also discuss the OWASP Top 10 for LLM applications, red teaming methodologies, black-box and white-box testing approaches, and emerging LLMSecOps practices.

Finally, the session will present effective mitigation strategies, including prompt-layer firewalls, adversarial training, input validation, response monitoring, differential privacy, secure architecture, access control, and continuous model governance to build safer, trustworthy, and resilient AI systems.

Invited Talk I

Time Converter: https://www.timeanddate.com/worldclock/meeting.html
Beijing Time (UTC+8), Saturday, August 15, 11:40-12:10
Santa Clara, USA Time (UTC-7), Friday, August 14, 20:40–21:10

Ishan Kumar, Senior Verification Engineer, Nvidia, Santa Clara, United States

Biography: Ishan is a Design Verification AI Engineer at NVIDIA, where he works on developing and validating next-generation GPU and AI hardware technologies. He earned his Bachelor's degree in Electronics and Communication Engineering from BITS Pilani, India, and later completed his Master's degree in Computer Engineering from Texas A&M University, USA.

At NVIDIA, Ishan focuses on ensuring the reliability and correctness of complex hardware designs through advanced verification methodologies and AI-driven automation. His work includes developing UVM/System Verilog-based verification environments, creating AI-assisted verification workflows, automating regression analysis, implementing functional coverage strategies, debugging RTL designs, and leveraging Python and machine learning techniques to improve verification efficiency**.** His interests lie at the intersection of hardware design, artificial intelligence, and automation, with a passion for building scalable solutions that enhance engineering productivity.

Outside of work, Ishan enjoys playing chess and tennis. Chess strengthens his analytical thinking and strategic problem-solving skills, while tennis helps him stay active and maintain a healthy work-life balance. He is passionate about continuous learning, emerging technologies, and applying AI to solve challenging engineering problems.

Speech Title: AI-Driven Design Verification: Transforming the Future of Chip Development

Abstract: As modern semiconductor designs continue to grow in complexity, traditional design verification methodologies face increasing challenges in achieving comprehensive coverage while meeting aggressive product development timelines. At the same time, the rapid advancement of artificial intelligence (AI) is creating new opportunities to transform how verification is performed, making it more intelligent, automated, and efficient.

This talk explores how AI is reshaping the design verification landscape for next-generation chip development. Beginning with an overview of the chip design and verification lifecycle, the session highlights the critical role verification plays in ensuring the correctness,

reliability, and performance of today's complex GPU and AI accelerator architectures. It then examines how AI techniques can be integrated into verification workflows to improve productivity, reduce manual effort, and accelerate bug discovery.

The discussion will cover practical applications of AI in design verification, including intelligent test generation, regression analysis, coverage optimization, failure triage, debug assistance, and automated root-cause analysis. The talk will also discuss how data-driven approaches and large language models are enabling engineers to automate repetitive tasks, analyze vast amounts of verification data, and make more informed decisions throughout the development cycle.

Beyond current applications, the session will provide insights into emerging trends, challenges, and opportunities at the intersection of AI and hardware engineering. It will conclude with perspectives on the future of AI-assisted verification and the evolving skill set expected of engineers entering the semiconductor industry. Attendees will gain an understanding of how AI is transforming chip development and how these innovations are shaping the next generation of hardware design and verification.

Keynote Speaker IV

Beijing Time (UTC+8), Saturday, August 15, 14:00-14:50

Prof. Dr. Lu Leng, School of Software, Nanchang Hangkong University, China

Biography: LU LENG received his Ph.D degree from Southwest Jiaotong University, Chengdu, P. R. China, in 2012. He performed his postdoctoral research at Yonsei University, Seoul, South Korea, and Nanjing University of Aeronautics and Astronautics, Nanjing, P. R. China. He was a visiting scholar at West Virginia University, USA, and Yonsei University, South Korea. Currently, he is a full professor, doctoral supervisor, the dean of Institute of Computer Vision at Nanchang Hangkong University. Prof. Leng has published more than 150 international journal and conference papers, including more than 80 SCI papers and three highly cited papers. He has been granted several scholarships and funding projects, including six projects supported by National Natural Science Foundation of China (NSFC). He serves as a reviewer of more than 100 international journals and conferences. His research interests include computer vision, biometric template protection, biometric recognition, medical image processing, data hiding, etc.

Prof. Leng was selected as one of the "World's Top 2% Scientists" four times, and awarded Jiangxi Youth May-4th Medal. He is an outstanding representative of "Innovation Talent" of Jiangxi Enterprise in "Science and Technology China", "Jiangxi Hundred-Thousand-Ten-thousand Talent Project", and "Jiangxi Voyage Project".

Speech Title: Advanced Information Aggregation

Abstract: Information Aggregation is the process of combining data or information from multiple dispersed sources into a single high-value output, which aims at optimizing decision-making, reducing redundancy, and improving system efficiency. This speech will introduce some advanced information aggregation technologies that can eliminate single-source bias, enhance the robustness and representativeness of results, and reduce data volume to ease subsequent analytical burdens, thereby providing strong support for accurate judgments in complex scenarios.

Keynote Speaker V

Time Converter: https://www.timeanddate.com/worldclock/meeting.html
Beijing Time (UTC+8), Saturday, August 15, 14:50-15:40
France Time (CEST, UTC+2), Saturday, August 15, 08:50–09:40

Prof. Pascal Lorenz,University of Haute Alsace, France

Biography: Prof. Pascal Lorenz received his M.Sc. and Ph.D. degrees from the University of Nancy, France, in 1990 and 1994, respectively. He has been a Professor at the University of Haute-Alsace, France, since 1995. His research interests include Quality of Service (QoS), wireless networks, high-speed networks, and communication systems.

Prof. Lorenz has authored and co-authored 3 books, 3 patents, and more than 200 international publications in peer-reviewed journals and conferences. He is a Senior Member of IEEE and has held several leadership positions within IEEE Communications Society. He has served as editor, guest editor, and technical committee member for numerous international journals and conferences, including IEEE ICC, GLOBECOM, and WCNC. He was also an IEEE Communications Society Distinguished Lecturer during 2013–2014.

Speech Title: Architectures of Next Generation Wireless Networks

Abstract: Internet Quality of Service (QoS) mechanisms are expected to enable wide spread use of real time services. New standards and new communication architectures allowing guaranteed QoS services are now developed. We will cover the issues of QoS provisioning in heterogeneous networks, Internet access over 5G networks and discusses most emerging technologies in the area of networks and telecommunications such as IoT, SDN, Edge Computing and MEC networking. We will also present routing, security, baseline architectures of the inter-networking protocols and end-to-end traffic management issues.

Keynote Speaker VI

Time Converter: https://www.timeanddate.com/worldclock/meeting.html
Beijing Time (UTC+8), Saturday, August 15, 15:40-16:30
Vietnam Time (UTC+7), Saturday, August 15, 14:40–15:30

Prof. Ma. Jabbar, Dept of AI & ML, Vardhman College of Engineering, Vardhaman College of Engineering, Hyderabad, Telangana, India

Biography: Prof. Dr. MA.Jabbar is a Professor and Head of the Department AI&ML, Vardhaman College of Engineering, Hyderabad, Telangana, India. He obtained Doctor of Philosophy (Ph.D.) from JNTUH, Hyderabad, and Telangana, India. He has been teaching for more than 20 years. His research interests include Artificial Intelligence, Big Data Analytics, Bio-Informatics, Cyber Security, Machine Learning, Attack Graphs, and Intrusion Detection Systems.

Speech Title: The Science of Deepfakes: From Creation to Detection

Abstract: The fast development of Generative Artificial Intelligence has changed the way digital information is generated, enabling the creation of incredibly realistic synthetic images, videos and sounds, known as deepfakes. These technologies have major opportunities for entertainment, education, healthcare and digital media but also pose enormous difficulties around misinformation, identity theft, financial fraud, cybercrime and public trust. In this presentation, we take a holistic view of deepfakes from development to detection and where the technology has evolved over the past 5 years. It addresses the core concepts of deepfake creation such Generative Adversarial Networks (GANs), Autoencoders and Diffusion Models. The increasing societal influence is discussed with real-world cases from different countries. The discussion also discusses recent worldwide regulatory actions, including regulations established by including policies adopted by the European Union, the United States, India, and China, to promote transparency and responsible use of AI-generated media.

This Talk also covers current progress in deepfake detection using deep learning architectures such as CNNs, Transformers, attention-based models, multimodal learning, and cross-dataset generalization. This Talk also will also touch on the speaker's academic contributions including novel deepfake detection frameworks such as Gabor-Xception, Enhanced Xception, WAF-X-Net and methods to evaluate robustness across datasets. The talk will conclude with future research directions such as multimodal forensics, provenance verification, real-time detection, explainable AI, and policy driven governance and emphasize that to effectively mitigate deepfake, an integrated approach is needed that combines technological innovations, regulatory frameworks, and raising public awareness to help build digital trust in the AI era.

Invited Talk II

Beijing Time (UTC+8), Saturday, August 15, 16:30-17:00

Prof. Wen-Cheng Lai, Ming Chi University of Technology, Taiwan

Biography: Wen-Cheng Lai (Senior Member, IEEE) is currently an Assistant Professor with the Department of Electrical Engineering, Ming Chi University of Technology, New Taipei City, Taiwan. He has been involved in the RF, Analog IC Integrated Design, Computer and Communications and Artificial Intelligence. He joined USS, Compal Electronics, Inc., Micro Star Intl Co., Ltd, and Quanta Computer Inc laptop PC design as an senior engineer from 1998 to 2006, respectively, and he worked with Hon Hai (Foxconn) Precision Industry Co., Ltd as smart phone senior design engineer from 2006 to 2007. From 2008 to 2013, he was a Manager of Core Technology Division with Toshiba Corp,. From 2014 to 2017, he served in Director with AsusTek Computer Inc, and China Radio Association. And he was an Assistant Professor with the Dept of Electrical Engineering, National Penghu University of Science and Technology from 2018 to 2020. He was an Assistant Professor with the Dept of Electronic Engineering, National Yunlin University of Science and Technology from 2020 to 2023. He received the World Ranking Top 2% Scientists (2020~ until now) from Stanford University and Scopus Database.

Speech Title: Evaluation of Delayed Offloading and Throughput in Mobile Cloudlet

Abstract: Mobile edge is strongly influenced by its battery life contemporary it holds tiny embedded capacity and energy dissipation. also leads to an issue. Since surge count in the usage of mobile computing and cloud technology introduced with titled Mobile Cloud Computing (MCC). The offloading and throughput are emerged in MCC to attain low latency completion of computations along with considerable extent endorse of remote servers. The performance of such task is degraded due to delayed offloading in completion of task. This proposed threshold based multilevel offloading algorithm scheme and throughput were used for accelerating to offloading procedure simultaneously experiment network traffic and power dissipation. of embedded mobile and alignment concept simulated using python programming. This article presents throughput analysis for mobile cloudlet.

Invited Talk III

Beijing Time (UTC+8), Sunday, August 16, 09:00-09:30
Austin, Texas, USA Time (UTC-5), Saturday, August 15, 20:00–20:30

Selva Lakshman Murali, Senior Engineer, Samsung Austin Semiconductor, Austin, Texas, United States

Biography:Accomplished Research Engineer specializing in cutting-edge semiconductor circuit and physical design, with an established track record of innovation at industry-defining leaders, including Samsung and AMD. Demonstrated expertise in driving next-generation hardware advancements, focusing heavily on Power, Performance, and Area (PPA) optimizations for complex integrated circuits and advanced process nodes.

Combines deep foundational research with commercial silicon engineering to solve critical bottlenecks in VLSI design, physical implementation, and architectural efficiency. Recognized as a thought leader and inventor in the solid-state and electronic design automation (EDA) fields, holding two patents for novel circuit design methodologies. A frequent contributor to the broader research community, with approximately 90 Google Scholar citations reflecting the enduring impact of his work on modern chip design and PPA enhancement strategies.

Adept at bridging the gap between theoretical experimentation and high-volume manufacturing requirements. Passionate about leading technical investigations, streamlining physical design flows, and advancing semiconductor optimization to power high-performance computing, mobile, and next-generation compute architectures.

Speech Title: Autonomous Physical Design: A Survey of Machine Learning Algorithms, Formulations, and Measured PPA Outcomes Across the RTL-to-GDS Stack

Abstract: The scaling of CMOS technology to sub-3nm process nodes has exposed a fundamental limitation in conventional electronic design automation (EDA): the combinatorial optimization search space for full-chip physical design grows super-exponentially with transistor count, rendering heuristic-driven flows computationally intractable and structurally incapable of jointly optimizing power, performance, and area (PPA) across the design hierarchy. This work presents a systematic survey of machine learning (ML) methodologies being deployed across the RTL-to-GDS flow, with emphasis on algorithmic formulations, Markov Decision Process (MDP) constructions, and empirically validated PPA outcomes. We characterize six algorithmic families — reinforcement learning (PPO/SAC), graph neural networks (GNN), Bayesian optimization, Transformer-based large language models, physics-informed surrogate models, and generative AI — and map each to its corresponding design stage, reward signal formulation, and measured impact. Key results drawn from peer-reviewed literature and publicly disclosed industry deployments include: 97% post-route timing prediction accuracy at synthesis using GNNs (IEEE TCAD 2023), 10× quality-of-results convergence improvement via RL-guided synthesis recipe exploration (DAC 2023), sub-4% error on full-chip IR drop and thermal estimation using ML surrogates replacing SPICE (ICCAD 2023), and a cumulative 24%/28%/43% improvement in area, power, and worst negative slack respectively across a fully ML-augmented design flow.

Production deployments at Google (TPUv5), NVIDIA (Blackwell), AMD (Zen 5 at TSMC N4P), and TSMC (N2/N3 cuLitho) corroborate these findings at scale. Collectively, the evidence indicates

a structural transition from human-directed to algorithm-directed physical design, with full RTL-to-GDS autonomy credibly projected by 2030.

Invited Speaker IV

Beijing Time (UTC+8), Sunday, August 16, 09:30-10:00
Dallas, Texas, USA Time (UTC-5), Saturday, August 15, 20:30–21:00

Saurabh Kakkar, Director / Program Manager – Credit AI Analytics & Reg. Compliance, Santander Bank, Dallas, Texas, United States

Biography: Saurabh Kakkar is a technology, artificial intelligence, data, and risk transformation leader with more than 15 years of experience delivering enterprise-scale programs across global financial institutions, including Santander Bank, Credit Suisse, PwC, Citco Fund Services, and Ernst & Young. He currently serves as Director / Program Manager for the Basel Data Repository at Santander Bank, where he leads strategic initiatives involving regulatory data management, enterprise analytics, artificial intelligence, automation, and Basel III and CRR compliance. His work focuses on applying Generative AI, Large Language Models, Retrieval-Augmented Generation, Explainable AI, and advanced data engineering to improve regulatory interpretation, reporting accuracy, governance, and operational efficiency.

His professional and research interests include trustworthy AI, Explainable AI, responsible machine learning, AI governance, financial technology, regulatory technology, intelligent decision-support systems, predictive analytics, and enterprise digital transformation. He is also actively engaged in academic and professional activities as an author, researcher, peer reviewer, conference speaker, and evaluator of emerging research in artificial intelligence and computer science. His work aims to bridge the gap between academic innovation and practical, auditable, and responsible enterprise implementation.

Speech Title: Trustworthy Generative AI for Regulated Enterprise Systems: Explainability, Governance, and Data Engineering from Financial Risk to Computer Science Practice

Abstract: Generative Artificial Intelligence and Large Language Models are rapidly transforming enterprise decision-making, regulatory analysis, data management, and knowledge-intensive business processes. However, their adoption within regulated and high-impact environments introduces significant challenges related to explainability, accuracy, governance, data quality, model risk, privacy, bias, traceability, and supervisory auditability.

This invited talk presents a practical and research-oriented framework for designing trustworthy Generative AI systems for regulated enterprises. The presentation examines how Large Language Models, Retrieval-Augmented Generation, Explainable AI, and enterprise data engineering can be combined to create intelligent systems that are not only effective, but also transparent, controlled, traceable, and suitable for critical decision-making.

The talk will discuss key architectural components, including governed data pipelines, authoritative knowledge retrieval, prompt and model controls, human-in-the-loop validation, explainability mechanisms, risk-based testing, performance monitoring, and audit evidence. It will also highlight practical use cases in regulatory interpretation, financial risk management, compliance automation, enterprise reporting, and intelligent decision support.

Particular attention will be given to the gap between experimental AI prototypes and production-ready enterprise systems. The presentation will outline common implementation failures and propose a lifecycle approach covering design, validation, deployment, governance, monitoring, and continuous improvement.

Session #3 Oral Presentation I

The Conference Link: https://meeting.tencent.com/dm/vpqyH8lb0tbc
Tencent Meeting ID: 116-366-922
Password: 0816

10:00—18:30, August 16, 2026

(10 mins presentation and 5 mins question time)

Session #3	Time	Paper Title	Author
B397	10:00-10:15	SSE-DCIR: A Secure and Efficient Cross-Network Data Retrieval Scheme Based on SSE and Dynamic Searchable Encryption	Chao Han, Xinyuan Lan, Chunxiang Xu, Zhaohang Luo
B1121	10:15-10:30	Enhancing Safety and Robustness of LLM for Flight Path Planning via Prompt Engineering and RAG	Junyi Gao, Wenjin Hou, Hong Wen, Feng Hou, Juntao Mao, Wenjun Luo, Yuzheng Chen
B398	10:30-10:45	MD-SSE: Master Data Semantic Mapping Tree-Based Searchable Symmetric Encryption for Cross-Domain Semantic-Consistent Retrieval	Chao Han, Xinyuan Lan, Chunxiang Xu, Zhaohang Luo
B1130	10:45-11:00	BadTask: Task-Triggered Backdoor Attacks on Instruction-Tuned Large Language Models	Feng Hou, Hong Wen, Wenjin Hou, Junyi Gao, Juntao Mao, Wenjun Luo, Yuzheng Chen, Xinrui Hu
B381	11:00-11:15	Multi-level Contrastive-based Anomaly Detection in Attributed Networks	Xiaocong Chen, Chao Han, Xinyuan Lan, Qiao Kang, Shengjie Zhai, Xudong Li
B387	11:15-11:30	Research on Integrated Risk Assessment for Cyber Security of Intelligent Connected Vehicle	Hongrong Wang, Heng Zhang, Chenguang Lai, Weiming Hu
B399	11:30-11:45	ACMM-ER: Adaptive Cross-Modal Metadata Construction and Retrieval Algorithm Based on Neural Network Fusion and Embedding Learning	Xinyuan Lan, Chao Han

18	11:45-12:00	Design and Evaluation of a Domain-Aware Parser using Parsing Expression Grammars for Structured Text Normalization	Rahul Sadhwani
7	12:00-12:15	AquaSense IoT: Cloud-Integrated Framework for Real-Time Water Quality Monitoring and Control	A S M Ahsanul Sarkar Akib, Rabeya Khan, MD Sazibur Rahman, Md. Monirujjaman Monir, Khaled Islam, Samin Yaser, Mustanzid Ashraf Toha, Khandaker Shajib Jahan, Md. Abdus Salam, Md. Ahsan Habib
	12:15-14:00	Lunch Time	
C263	14:00-14:15	A Hierarchical Multi-Agent Judicial Reasoning Framework for Legal Judgment Prediction	Ruixin Guo, Yushen Guo, Hongjun Zheng, Hao Wang, Zhu Wang
26	14:15-14:30	A Socratic Questioning Chatbot for AI Ethics Education: Design, Implementation, and Evaluation of an LLM-Based Dialogic Learning System	Chunxuan Ji, Shuhan Zhang
28	14:30-14:45	Integration of Mapreduce Based Fuzzy Genetic and Kmean Algorithms for Large Scale Clustering	Wen-Cheng Lai, Pradeepa Sampath, Gowri Lakshmanan, Vimal Shanmuganathan, Kaliappan Madasamy, Amit Verma
31	14:45-15:00	Memory Farthest Better or Nearest Worse Optimizer for Feature Selection	Yuanyuan Han, Jie Peng, Juncheng Zhu, Kemanqi Zhang, Rongqiang Jiang, Yuchen Wei
65	15:00-15:15	Wireless Power Transfer for Sustainable Lunar Surface Operations: A Review of Technologies, Environmental Challenges, and Cooperative Energy Management	Guoliang Xue, Xiaozhou Yu, Qinbo Sun, Shihao Chen, Lingjuan Pu, Lixin Li

4	15:15-15:30	Research on Factors Influencing Maternal Mental Health Based on Association Rule Mining and Regression Analysis	Yuan He, Liangming Wen
9	15:30-15:45	Process Harmonization and Statistical Validation of Integrated Quality-Agile Delivery Frameworks in Organizational Project Ecosystems	Ruchika Sinha
16	15:45-16:00	Design of an Early Alert System for At-Risk Students using PICAB-Aligned Data and Python-Based Decision Rules	Joferson L. Bombasi, Arlene R. Caballero, Erlito M. Albina
19	16:00-16:15	A Sentiment Aware Cryptocurrency Trading Platform Using Social Media Analytics and Machine Learning	Anath Bandhu Chatterjee
23	16:15-16:30	Vulnerability Surface Analysis of the Model Context Protocol in Agentic Middleware: A 60-Day CVE Dissection with Neuromorphic Detection Frameworks and Distributed Tool Integrity Verification	Shubham Verma
11	16:30-16:45	Prioritized Governance Levers for Construction Project Success: A Global Practitioner Perception Study	Ruchika Sinha
58	16:45-17:00	Speech Enhancement with Manifold-Constrained Hyper-Connections	Maxim Nikonov, Alexey Shishkin
59	17:00-17:15	Automated Research Paper Summarization and Slide Generation using Agentic-AI	K. Nikhil Reddy, K. Srividya, K. Hosmitha, M.A. Jabbar

25	17:15-17:30	SAGA: A Geometric-Arbitrated Vision Framework for UAV Highway Infrastructure Inspection	Yang Zhou, Qing Luo
70	17:30-17:45	Enhancing VariPred for Missense Pathogenicity Prediction via Cross-validation and MCC-guided Checkpoint Selection	Daoling Huang, Guanliang He, Lingfeng Lv, Jie Kang, Ming Dai
71	17:45-18:00	MASC-Net: Teacher-Anchored Observation-Process Stability Learning for Incomplete Grouped Tabular Data	Lincong Dai, Yu Zhang, Chen Zhang, Xinyu Liu, Yun Zheng, Ming Dai, Lingzhi Yang, Xueji Zhang
61	18:00-18:15	Improving the Robustness and Interpretability of Malware Detection with Causal Deep Learning	Ming Dai, Wenqian Wang, Zengri Zeng, Zhenyi Li, Xinming Wang, Junxiong Zheng, Chong Zeng

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The Conference Link: https://meeting.tencent.com/dm/Jz032dHrZLAn
Tencent Meeting ID: 791-642-254
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10:00—17:30 August 16, 2026

(10 mins presentation and 5 mins question time)

Session #3	Time	Paper Title	Author
A601	10:00-10:15	Research on Simulation and Experimental Measurement of Spatial Phase Distribution of Goos-Hänchen Effect	Xueru Li, Zhe Wang, Fanwen Meng
A602	10:15-10:30	Research on AI-Empowered Pedagogical Reform in Programming Education	Ribo Ge
A604	10:30-10:45	Risk-Aware Cascaded Visual Recognition for Industrial Screw Glue-State Inspection	Yongli Wang, Jing Yang, Yan Wang, Benhua Zhao, Xin Liu, Wenxiong Feng, Zheng Li
B373	10:45-11:00	Dual-Anchor Dynamic Template Update with Lightweight Fusion for Long-term Object Tracking	Zhonghong Bu, Yunbo Hai, Yingen Shu, Pingping Yun, Xiaotao Duan
B376	11:00-11:15	Design of an Edge-Intelligence-Based Online Visibility Prediction System for Expressways	Lihui Zhao, Jiuzeng Wang, Haitao Shen, Yuanyuan Wang, Shengchao Wang, Yang Li
B378	11:15-11:30	Lightweight Forest Fire Smoke Detection Model	Yue Xu, Jianghua Li
B379	11:30-11:45	PS-YOLO: Enhanced YOLO11 for Apple Leaf Disease Detection	Xing Xin, Jianghua Li
B385	11:45-12:00	A Brief Analysis of the Impact of Artificial Intelligence Development on Current Social Life in China	Yucun Wang

	12:00-14:00	Lunch Time	
B392	14:00-14:15	Modeling and Simulation of a Nuclear-Powered Ship System Based on MATLAB/Simulink	Menglin Zhao, Guangjun Wu, Qian Zhou, Ling Liu, Chunhui Dai
B393	14:15-14:30	Study on Cascading Failure and Resilience Recovery of Airport Movement Area Transportation Network	Ruiling Mou, Guoqiang Wang, Jianrui Ma, Xiaoyan Luo, Donglin He
B402	14:30-14:45	A Compact and Efficient SHA-3 Hardware Architecture for Low-Resource Applications	Dejian Li, Yingnan Zang, Jiarun Liu, Yuan Guan, Baifeng Zhou, Bin Wei, Kang Li, Shunxian Gao, Meng Li, Bei Wang, Zhuang Xu, Yijun Cui
B403	14:45-15:00	Research on Farmland Environment Intelligent Monitoring System Based on Multi-Source Sensor Data Fusion	Changhong Wang
B404	15:00-15:15	Template-Guided Monocular–Stereo Cooperative Vision for Terminal Positioning of Mobile Robots	Hewei Qu, Penghui Yang, Tingjun Wang, Tengfei Chen
B405	15:15-15:30	Optimizing ML-KEM for Lightweight RISC-V Processors	Yingnan Zang, Xin Ye, Xinyi Zhang
B406	15:30-15:45	Design and Performance Analysis of Data Comparison System Based on Key Field Matching of Ordered Files	Hao Wang, Chunming Zhang, Jian Zhang
B407	15:45-16:00	Distribution Network Reconstruction with High Proportion of Distributed Photovoltaic and Massive Electric Vehicles	Zhiwei Wang

B408	16:00-16:15	Engineering Practice of Rapid Multi-Span Stringing Technology Across Tension Sections	Lei Sun, Lai Xu, Ruzhang Dai, Shunjun Xia, Jun Zhao
B411	16:15-16:30	Research on Physical Layer Secure Transmission Technology for Satellite Communications Based on Polarization Characteristics	Lili Zhao, Dexue Sun, Pengpeng Yu, Yaqin Li, Lin Sun, Xuesong Shi
B412	16:30-16:45	Adhesion Control of Locomotives Based on Super-Twisting Sliding Mode Control	Shichuan Zhang, Wenli Fan
A1105	16:45-17:00	A Construction Method of Hydropower Dispatching Knowledge Graph Based on Large Language Models	Ke Wan, Yujie Zhao, Cheng Peng, Huidong Shu
A1107	17:00-17:15	A Large Language Model and Knowledge Graph Based Simulation Modeling Method for Electronic Information Equipment	Jian Jiang, Bingfeng Liu, Longfei Cui, Wentai Chang

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The Conference Link: https://meeting.tencent.com/dm/WcZaQ4k2nP8D
Tencent Meeting ID: 992-698-425
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10:00—17:30, August 16, 2026

(10 mins presentation and 5 mins question time)

Session #3	Time	Paper Title	Author
L528	10:00-10:15	Development of a Financial Transaction Fraud Detection and Data Visualization System Based on B/S Architecture	Da Kuang, Zhiqing Hui
L530	10:15-10:30	Closed-Loop Multi-Objective Resource Optimization for Industry-Education Collaboration over Distributed Information Systems	Lili Guo
L532	10:30-10:45	A High-Precision Prediction Method for Ballistic Limit Based on Enhanced Features and Regularized Neural Network	Xingchuang Cui, Yu Zheng, Yan Li
L534	10:45-11:00	Research on the Application of Hyper-Converged Infrastructure Cloud Technology in IT Application Innovation Smart Healthcare Systems	Guangping Yang, Chengtai Yang
L535	11:00-11:15	Architecture Design of Digital Media Content Management and Communication System	Di Zhang, Fei Liu
L544	11:15-11:30	LLM-Empowered False Data Injection Attacks and the Robustness of Topology-Based Moving Target Defense in Smart Grids	Jingyi Yan, Ke Sun
W282	11:30-11:45	A Novel Personalized Federated Learning Model for Wireless Communication and Sensing	Zongrui Tian, Jiasheng Tian

W283	11:45-12:00	Research on Reliability Transmission Mechanism of BeiDou Short Message based on RRNS Hybrid Error Correction	Yan Wu, Ke Li, Yuhao Xiao, Yaoran Huo, Shun Pan, Na Tang
	12:00-14:00	Lunch Time	
B390	14:00-14:15	Development of a Large-Scale Injection Mold Quotation System Based on Fuzzy Mathematics Theory	Zhenshan Xu, Luxing Li, Yuxiang zhang
L520	14:15-14:30	Athlete Training Technique Evaluation and Simulation Based on Optical Imaging Technology and Accelerometer	Haili Meng
W289	14:30-14:45	Fault Prediction of Filter Rod Online Sampling and Detection System Based on GM (2,1) Model	Weilin Cao, Haihua Lu, Wei Peng, Shunkai Sun, Jingjie Liu, Haobo Cui, Qi Xu
W297	14:45-15:00	Exploration of Low-Power Design Principles and Implementation Schemes for Digital Integrated Circuits	Yuedong Gong, Yuanfeng Liu, Yi Tao, Xiaozong Huang, Hao Chen
W299	15:00-15:15	Technical Methods for Improving Temperature Measurement Accuracy of Infrared Thermal Camera	Xuyin Gong, Maolin Wang, Yuqin Wang, Hong Cao, Ying Zhao, Benwang Li, Lin Cheng, Chenyu Tang
W1105	15:15-15:30	Beyond One-Size-Fits-All: Industry-Specialized Multi-Agent Systems for Recruitment	Zihao Lu, Haibing Ma, Wanwan Zhu, Xiangxiang Kong, Qianyun Zhu
W1113	15:30-15:45	Research and Optimization of Noise Reduction Techniques in Digital Back-End Design	Jian Yu, Xiaozong Huang, Hao Chen, Yuanfeng Liu, Wen Hu, Jun Deng
W1121	15:45-16:00	MILENet: A Novel Multimodal Semantic Representation Framework for High-Precision Speech-to-Slot Label Generation	Lihan Ren, Hongxia Bie, Lemeng Qin

B183	16:00-16:15	Research and Application of Cigarette Filter Rod Scheduling Method	Shunkai Sun, Jianmin Shao, Yizhen Lin, Haitao Chen, Tao Rong, Feijiong Shi, Fanghong Zhong, Haibin Yao
M500	16:15-16:30	Automatic Hand Sanitizer Control System Based on STM32 Microcontroller Design	Dongpo Qu, Feng Qu
B1140	16:30-16:45	Dynamic Evaluation of Teaching Effectiveness Based on Generative AI and Learning Analysis	Yimin Zhang, Qisong Zhang
L518	16:45-17:00	Application of Cluster Analysis-based Optical Imaging Detection in Sports Injury Prevention for Tennis Players	Zaomei Yang
B1135	17:00-17:15	CADR: Dual-Anchor Subspace Filtering for Safe Federated LoRA Fusion	Yuzheng Chen, Hong Wen, Wenjin Hou, Juntao Mao, Wenjun Luo, Xinrui Hu

Session #6 Poster Presentation

The Conference Link: https://meeting.tencent.com/dm/tsuSuuXXOjmH
Tencent Meeting ID: 856-403-504
Password: the password has been sent to the Designated Attendees

10:00—17:30 August 16, 2026

Session #3	Paper Title	Author
B371	Research on a Compliant Anonymous Coin Mixer	Jinlan Guo
B372	Research on the Knowledge Graph Adaptive Immune Pruning Method for Targeted Audit of Smart Contracts	Yuan Tao, Jingwen Yang, Sheng Wang
B375	Mapping the ICT Research Landscape: An Analysis of Bibliometric and BERTopic	Qi Xu, Chenghua Jia
B384	DualSpec-YOLO: A Physics-Driven Dual-Spectral Robust Detection Network for Early Fire Recognition in Photovoltaic Plants	Jun Deng, Zhicheng Xie, Haibin Zhou, Zhicheng Pan, Yong Sun, Han Zhang, Xuexue Wang, Xuzhao Shen
B391	Research on Multimodal Learning Behavior Data Fusion based on Ai Technology-Taking Online Course Scores Analysis as an Example	Haiyan Liu
B400	Intellectual Property Protection of Data Used for Training and Generated by AI Agents Based on the Binary Distinction between Input and Output	Purui Yang, Yuhong Wang
A1094	Short-term Bus Passenger Flow Prediction based on a Machine Learning GWO-LSTM model	Wei Wang, Qiaoran Yu

A1104	Adaptive HyDE-RRF Retrieval for GUI Agents	Zhilin Yao, Ruiyang Mao, Qingxin Li
B1093	Dynamic Planning of Transmission Lines Guided by Road Networks and Source-Target Projection	Yunfei Luo, Tingting Wang, Gene Shi, Zongyao Sha
B1115	Hierarchical Attribute Fusion for Next POI Recommendation	Xiaokun Li, Zhichun Jia, Shiqi Zhang, Yukai Wang, Xing Xing, Mindong Xin
B1116	SARA: A Semantic-Guided Adaptive Representation Aggregation for QoS Prediction	Yukai Wang, Zhichun Jia, Shiqi Zhang, Xiaokun Li, Xing Xing, Mindong Xin
G257	Novel QR Code-based Traceability Mechanism for Tobacco Manufacturing	Rong Ni, Xiaoou Xie, Yixian Yin, Haoran Xu, Xiaojing Zhu, Renhe Xiang, Qi Xu
G258	Exploration of WebRTC Server Technology based on SFU Mode	Xinhui Yan
S851	Cable Line Fault Location Method Based on Graph Neural Networks	Lei Wang, Lin Niu, Xingwang He, Yanjie Zhang, Zhenhai Zhang, Bingqian Zhang
C532	Cross-Border Data Fusion Method based on Cross-Domain Reasoning Large Model Technology	Fan Zhang, Qianlong Feng, Jia Zhao, Shuiyuan Chen,Peng Liu, Ming Cui
C569	Research on Global Automotive Multi-Source Data Fusion Technology Based on Feature Model	Yan Liu, Yun Ling, Bingfeng Zhao

C262	Hybrid Sensor for Simultaneous Measurement of Glucose Concentration and Temperature	Bingsen Huang, Zhenshi Chen, Xincheng Huang, Wenxue Xie
C264	Research on Agarwood Product Traceability and Trustworthy Value Chain Management Based on Blockchain Technology	Shumin Liu, Jican Lin, Zhuochun Lu
N233	Research and Implementation of ONU Fault Detection and Repair Based on Deep Learning and Large Models	Zixuan Pei, Ruifang Liu
N405	A Study of the Variable Stiffness Knee Joint of a Rehabilitation Exoskeleton Robot	Changlong Jiang, Xiaorong Guan, Leifeng Lu, Long He, Dingzhe Li, Jingwei Ren
N437	Factors Influencing Continuous Intention to Use Generative AI	Xi Cun, Jifan Ren
N1095	Wavelet Denoising Method for Partial Discharge Signals Based on Improved Threshold Function	Youxiang Yan, Tong Wu, Hong Chen, Jingyi Chen, Zhenjia Li, Zhixiong Lin, Zhihong Sun
M216	Structural Design of an Automatic Pipeline Docking Device	Zhong Ding, Liangchun Qi, Chenguang Zhang
M1107	Polygon Effect of Chain Drive and Compensation Method for Linear Motion of Chain Links	Yanhui Lai, Peng Zhang, Jianye Wang, Yilin Wang
S220	Simulation Study on Electromagnetic Field Characteristics of Iced Overhanging Insulator String of UHV Transmission Line	Shashasha Peng, Yurong Xu, Liyuan Zhao, Zongqiang Qing

S1145	Precise Transient WiFi RF Fingerprinting via CUSUM–GLRT Detection and Multi-Scale DWT Features	Zerui Nie, Zhuo Sun
F265	Research on Copyright Infringement Detection of Generative AI Training Data Based on Hash Similarity and Neural Networks	Yue Long, Junlei Wang, Lin Dai, Yaqin Chen
W290	Research on Multimodal Data Fusion in the Global Automotive Industry Based on Machine Learning and NLP	Yan Liu, Bingfeng Zhao, Jiaqi Liang
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