

# Conference Program

# ICMCT

# 2023

2023 8th International Conference on  
MULTIMEDIA COMMUNICATION TECHNOLOGIES

Xiamen, China

August 4-6, 2023

Sponsored by



Hosted by



计算机科学与技术学院  
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CONTENTS

- 01** Welcome Message
- 02** Conference Committees
- 03** Participants' Guideline
- 04** Conference Schedule
- 05** Introduction for Speakers
- 06** Technical Session
- 07** Huaqiao University

# Welcome Message

We are pleased to welcome you to The 8th International Conference on Multimedia Communication Technologies (ICMCT 2023) which is to be held in Xiamen, China, during August 4-6, 2023. It aims to bring together researchers, developers, and users in both industry and academia in the world for sharing state-of-art results, for exploring new areas of research and development, and to discuss emerging issues on multimedia communication technologies .

ICMCT 2023 is sponsored by Huaqiao University, China, co-hosted by Minnan Normal University, China and Wuhan Institute of Technology, China.

As usual, we would like to take this opportunity to thank all the authors who have submitted their works to the conference. Without them, such an event would not have been possible. Also, we would like to extend our gratitude to all the conference organization committees who have been involved in organizing ICMCT this year, which include our Honorary Chair, Conference Chairs, Conference Co-chairs, Program Chairs, Program Vice-chairs, Local Committee Chairs, Publicity Chairs, Publication Chair, Financial Chair and Technical Committee . We would like to thank their great support and help in conference planning, operations, paper reviews, as well as publication.

Last but not the least, we hope that you will find the conference program interesting and stimulating.

# Organizing Committees



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Haizhou Li, The Chinese University of Hong Kong (Shenzhen) & National University of Singapore

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# Organizing Committees

## Technical Committee

Xiaoling Tao, Guilin University Of Electronic Technology, China

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# Participants' Guideline

## Online Presentation Instruction

- ◆ Please unmute audio and start video while your presentation.
- ◆ It's suggested to use headset with microphone or earphone with microphone
- ◆ Please prepare the slide file of your presentation on your laptop in advance.
- ◆ Duration of each Presentation: about 12 Minutes of Presentation and 3 Minutes of Q&A.
- ◆ E-certificate will be sent to presenters after conference by email.
- ◆ The conference secretary will capture a group photo at the end of each session, and you can download the picture after the conference on website after conference. Please rename yourself before entering the conference room as below (in English):
  - Author: Paper ID-Name
  - Listener: Listener-Name
  - Keynote Speaker: Keynote-Name
  - Conference Committee: Position-Name
- ◆ Conference rooms will be open 30 mins before scheduled time. Please enter the room 10-15 minutes in advance and be prepared.

## ZOOM Meeting

Conference Link: <https://us02web.zoom.us/j/82305082205>

ZOOM ID: 8230 5082 205

Password : 080406

ZOOM Meeting

Download: <https://zoom.com.cn/download>



# Conference Schedule

## August 4, Friday (GMT+8)

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

Time	Activity
10:00 am—15:00 pm	<b>ZOOM Test for Speakers &amp; Committee Member</b>
14:00 pm—15:00 pm	<b>ZOOM Test for Authors</b>





# Conference Schedule

ICMCT 2023

**August 5, Saturday (GMT+8)**

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

Time	Activity	Speaker
9:00 am—9:05 am	<b>Welcome Message</b>	<b>Prof. Jin Gou</b> Huaqiao University, China
9:05 am—9:10 am	<b>Opening Remarks</b>	<b>Prof. Hui Tian</b> Huaqiao University, China
9:10 am—9:55 am	<b>Keynote Speech</b> Title: Federated Learning and Analysis with Multi-access Edge Computing for Connected and Automated Vehicles	<b>Prof. Zhu Han (AAAS Fellow, IEEE Fellow)</b> University of Houston, USA
9:55 am—10:25 am	<b>Break Time</b>	
10:25 am—11:10 am	<b>Keynote Speech</b> Title: Intelligent Video Coding by Data-driven Techniques and Learning Models	<b>Prof. KWONG Tak Wu Sam (IEEE Fellow)</b> City University of Hong Kong, China



# Conference Schedule

ICMCT 2023

## August 5, Saturday (GMT+8)

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

Time	Activity	Speaker
11:10 am—11:55 am	<b>Keynote Speech</b> Title: Detection of Auditory Attention in Human Brain	<b>Prof. Haizhou Li (IEEE Fellow, ISCA Fellow)</b> The Chinese University of Hong Kong, Shenzhen, China Adjunct Professor at the National University of Singapore
11:55 am—15:00 pm	<b>Break Time</b>	
15:00 pm—15:25 pm	<b>Invited Speech</b> Title: Misinformation Mining on Online Media	<b>Assoc. Prof. Zhenguo Yang</b> Guangdong University of Technology, China
15:30 pm—17:00 pm	<b>Technical Session</b> Computer and Communication Engineering & Multimedia Communication Technologies	CT3303, CT3302, CT3405, CT3404, CT1004, CT0071



# Conference Schedule

ICMCT 2023

**August 6, Sunday (GMT+8)**

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

9:30 am—12:00 pm

**Replay of Keynote Speeches**

# Introduction for Keynote Speakers



**Prof. Zhu Han, AAAS Fellow, IEEE Fellow**  
University of Houston, USA

9:10 – 9:55 | August 5 | GMT+8

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

**Speech Title: Federated Learning and Analysis with Multi-access Edge Computing for Connected and Automated Vehicles**

**Bio:** Zhu Han received the B.S. degree in electronic engineering from Tsinghua University, in 1997, and the M.S. and Ph.D. degrees in electrical engineering from the University of Maryland, College Park, in 1999 and 2003, respectively. From 2000 to 2002, he was an R&D Engineer of JDSU, Germantown, Maryland. From 2003 to 2006, he was a Research Associate at the University of Maryland. From 2006 to 2008, he was an assistant professor in Boise State University, Idaho. Currently, he is a John and Rebecca Moores Professor in Electrical and Computer Engineering Department as well as Computer Science Department at University of Houston, Texas. His research interests include security, wireless resource allocation and management, wireless communication and networking, game theory, and wireless multimedia. Dr. Han is an NSF CAREER award recipient of 2010. Dr. Han has several IEEE conference best paper awards, and winner of 2011 IEEE Fred W. Ellersick Prize, 2015 EURASIP Best Paper Award for the Journal on Advances in Signal Processing and 2016 IEEE Leonard G. Abraham Prize in the field of Communication Systems (Best Paper Award for IEEE Journal on Selected Areas on Communications). Dr. Han is the winner 2021 IEEE Kiyo Tomiyasu Award. He has been an IEEE fellow since 2014, AAAS fellow since 2020, IEEE Distinguished Lecturer from 2015 to 2018 and ACM Distinguished Speaker from 2022-2025. Dr. Han is a 1% highly cited researcher according to Web of Science since 2017.

# Introduction for Keynote Speakers



**Prof. Zhu Han, AAAS Fellow, IEEE Fellow**  
University of Houston, USA

9:10 – 9:55 | August 5 | GMT+8

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

**Speech Title:** Federated Learning and Analysis with Multi-access Edge Computing for Connected and Automated Vehicles

**Abstract:** In recent years, mobile devices are equipped with increasingly advanced computing capabilities, which opens up countless possibilities for meaningful applications. Traditional cloud-based Machine Learning (ML) approaches require the data to be centralized in a cloud server or data center. However, this results in critical issues related to unacceptable latency and communication inefficiency. To this end, multi-access edge computing (MEC) has been proposed to bring intelligence closer to the edge, where data is originally generated. However, conventional edge ML technologies still require personal data to be shared with edge servers. Recently, in light of increasing privacy concerns, the concept of Federated Learning (FL) has been introduced. In FL, end devices use their local data to train a local ML model required by the server. The end devices then send the local model updates instead of raw data to the server for aggregation. FL can serve as enabling technology in MEC since it enables the collaborative training of an ML model and also enables ML for mobile edge network optimization. However, in a large-scale and complex mobile edge network, FL still faces implementation challenges with regard to communication costs and resource allocation. In this talk, we begin with an introduction to the background and fundamentals of FL. Then, we discuss several potential challenges for FL implementation in connected and automated vehicles. In addition, we study the extension to Federated Analysis (FA) with data analysis in both user and MEC sides.



**Prof. KWONG Tak Wu Sam, *IEEE Fellow***  
City University of Hong Kong, China

10:25 – 11:10 | August 5 | GMT+8

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

## Speech Title: Intelligent Video Coding by Data-driven Techniques and Learning Models

**Bio:** Sam Kwong received his B.Sc. degree from the State University of New York at Buffalo, M.A.Sc. in electrical engineering from the University of Waterloo in Canada, and Ph.D. from Fernuniversität Hagen, Germany. Before joining the City University of Hong Kong (CityU), he was a Diagnostic Engineer with Control Data Canada. He was responsible for designing diagnostic software to detect the manufacturing faults of the VLSI chips in the Cyber 430 machine. He later joined Bell-Northern Research as a Member of Scientific Staff working on the Integrated Services Digital Network (ISDN) project.

Kwong is currently a Chair Professor at the CityU Department of Computer Science, where he previously served as Department Head and Professor from 2012 to 2018. Prof Kwong joined CityU as a lecturer in the Department of Electronic Engineering in 1989. Prof. Kwong is the associate editor of leading IEEE transaction journals, including IEEE Transactions on Evolutionary Computation, IEEE Transactions on Industrial Informatics, and IEEE Transactions on Cybernetics.

Kwong is actively engaged in knowledge exchange between academia and industry. In 1996, he was responsible for designing the first handheld GSM mobile phone consultancy project at the City University of Hong Kong, one of the largest. He has filed more than 20 US patents, of which 13 have been granted.

# Introduction for Keynote Speakers



**Prof. KWONG Tak Wu Sam, *IEEE Fellow***  
City University of Hong Kong, China

10:25 – 11:10 | August 5 | GMT+8

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

**Speech Title: Intelligent Video Coding by Data-driven Techniques and Learning Models**

**Bio:** Kwong has a prolific research record. He has co-authored three research books, eight book chapters, and over 300 technical papers. According to Google Scholar, his works have been cited more than 25,000 times with an h-index of 70. He has been the distinguished lecturer of IEEE SMCS since 2018 and delivers two DL lectures yearly to promote IEEE SMC Society and cutting-edge cybernetics technology. He also frequently delivers keynote speeches in IEEE supported conferences. In 2014, he was elevated to IEEE Fellow for his contributions to optimization techniques in cybernetics and video coding. He is also a fellow of Asia-Pacific Artificial Intelligence Association (AAIA) in 2022.

Kwong's involvement in the multiple facets of IEEE has been extensive and committed throughout the years. For IEEE Systems, Man and Cybernetics Society (SMCS), he serves as Hong Kong SMCS Chapter Chairman, Board Member, Conference Coordinator, Membership Coordinator and Member of the Long Range Planning and Finance Committee, Vice President of Conferences and Meetings, Vice President of Cybernetics. He led the IEEE SMC Hong Kong Chapter to win the Best Chapter Award in 2011 and was awarded the Outstanding Contribution Award for his contributions to SMC 2015. He was the President-Elect of the IEEE SMC Society in 2021. Currently, he serves as the President of the IEEE SMC Society.

# Introduction for Keynote Speakers



**Prof. KWONG Tak Wu Sam, *IEEE Fellow***  
City University of Hong Kong, China

10:25 – 11:10 | August 5 | GMT+8

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

**Speech Title: Intelligent Video Coding by Data-driven Techniques and Learning Models**

**Abstract:** In June 6th 2016, Cisco released the White paper[1], VNI Forecast and Methodology 2015-2020, reported that 82 percent of Internet traffic will come from video applications such as video surveillance, content delivery network, so on by 2020. It also reported that Internet video surveillance traffic nearly doubled, Virtual reality traffic quadrupled, TV grew 50 percent and similar increases for other applications in 2015. The annual global traffic will first time exceed the zettabyte(ZB;1000 exabytes[EB]) threshold in 2016, and will reach 2.3 ZB by 2020. It implies that 1.886ZB belongs to video data. Thus, in order to relieve the burden on video storage, streaming and other video services, researchers from the video community have developed a series of video coding standards. Among them, the most up-to-date is the High Efficiency Video Coding(HEVC) or H.266 standard, which has successfully halved the coding bits of its predecessor, H.264/AVC, without significant increase in perceived distortion. With the rapid growth of network transmission capacity, enjoying high definition video applications anytime and anywhere with mobile display terminals will be a desirable feature in the near future. Due to the lack of hardware computing power and limited bandwidth, lower complexity and higher compression efficiency video coding scheme are still desired. For higher video compression performance, the key optimization problems, mainly decision making and resource allocation problem, shall be solved. In this talk, I will present the most recent research and new developments on deep neural network based video coding and its applications such as saliency detection, perceptual visual processing and others. This is very different from the traditional approaches in video coding. We hope applying these intelligent techniques to vide coding could allow us to go further and have more choices in trading off between cost and resources.



# Introduction for Keynote Speakers



**Prof. Haizhou Li, *IEEE Fellow, ISCA Fellow***

The Chinese University of Hong Kong, Shenzhen, China

Adjunct Professor at the National University of Singapore (NUS)

11:10 – 11:55 | August 5 | GMT+8

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

**Speech Title: Detection of Auditory Attention in Human Brain**

**Bio:** Haizhou Li is currently a Professor at The Chinese University of Hong Kong, Shenzhen, China, and an adjunct Professor at the National University of Singapore (NUS). Prior to that, he was the Principal Scientist and Department Head of Human Language Technology in the Institute for Infocomm Research, Singapore (2003-2016). Prof. Li's research interests include speech information processing, natural language processing, and human-machine interface. Prof. Li has served as the Editor-in-Chief of IEEE/ACM Transactions on Audio, Speech and Language Processing (2015-2018), a Member of the Editorial Board of Computer Speech and Language (2012-2018), and a Member of IEEE Speech and Language Processing Technical Committee (2013-2015). He was the President of the International Speech Communication Association (ISCA, 2015-2017), the President of Asia Pacific Signal and Information Processing Association (2015-2016), and the President of Asian Federation of Natural Language Processing (2017-2018). He was the General Chair of ACL 2012, INTERSPEECH 2014, IEEE ASRU 2019, and ICASSP 2022. Prof. Li is a Fellow of the IEEE, a Fellow of ISCA, and a Fellow of Academy of Engineering Singapore. He was a recipient of the President's Technology Award 2013 in Singapore. He was named one of the two Nokia Visiting Professors in 2009 by the Nokia Foundation, and U Bremen Excellence Chair Professor in 2019 by Bremen University, Germany.

# Introduction for Keynote Speakers



**Prof. Haizhou Li, *IEEE Fellow, ISCA Fellow***

The Chinese University of Hong Kong, Shenzhen, China

Adjunct Professor at the National University of Singapore (NUS)

11:10 – 11:55 | August 5 | GMT+8

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

**Speech Title:** Detection of Auditory Attention in Human Brain

**Abstract:** Humans have the ability to selectively listen to one of the speakers in a multi-talk acoustic environment. This is also called the cocktail party effect or the selective auditory attention. In this talk, we will discuss the recent studies on how such selective auditory attention is reflected in brain signals, and the computational solutions to decode brain activities from brain signals. The advances in brain signals decoding will enable innovative brain-computer interfaces such as smart hearing aids and mind-speaking prosthetics.

# Introduction for Invited Speaker



**Prof. Zhenguo Yang**

Guangdong University of Technology, China

15:00 – 15:25 | August 5 | GMT+8

ZOOM Link: <https://us02web.zoom.us/j/82305082205> (Password: 080406)

**Speech Title:** Misinformation Mining on Online Media

**Bio:** Zhenguo Yang is an Associate Professor at Guangdong University of Technology. He received his Ph.D. degree in Computer Science from City University of Hong Kong. His research interests include multimedia, news event detection, etc. He has published papers in IEEE TPAMI, IEEE TKDE, IEEE TMM, ACM TOMM, ACM MM, IEEE ICME, ACM ICMR, ACM ICMI, etc. He has served as a Special Session Chair for IEEE ICME 2023-2021, a Publication Chair of IEEE DSC 2020, a PC Member or Reviewer for more than 20 international conferences, including ACM MM 2023-2020, KDD 2022/2019, IJCAI 2022-2021, ACM WSDM 2022, and a Reviewer for more than 20 journals, including ACM TOMM, IEEE TAI, IEEE TDSC, IEEE TEC, VLDBJ, MTA, etc.

**Abstract:** Online media platforms (e.g., news media and social media) allow users to share data freely, generating plenty of data that are publicly available. The public data records the aspects of people's daily lives, and being related to real-world happenings, such as armed conflicts and attacks, disasters and accidents, law and crime, politics and elections, sports and entertainment, etc., constructing a cyber space. In the cyber space, there are some misinformation (e.g., rumors, fake messages, hackers' behaviors, propaganda, and extremism, etc.) that may mislead the public. This talk focuses on the usual patterns of misinformation, the challenges, and how to identify the misinformation, etc. For illustrations, a deep learning model will be presented as well as experimental results. The talk will introduce some current work on data collection and future directions.



August 5 | Saturday | 15:30 – 17:00 (GMT+8)

ZOOM Link: <https://us02web.zoom.us/j/82305082205>

Password: 080406

Topic: Computer and Communication Engineering & Multimedia Communication Technologies

Session Chair: Dr. Yue Li, Huaqiao University, China

**The Effects of Virtual Escape Cooperative Learning into Fifth Grade Mathematics on Learning Motivation and Mindset: Taking the Factors and Multiples Unit as An Example**

**Yuzhe Xiao, National Yunlin University of Science and Technology**

Abstract: Prior research in the field of mindset has predominantly focused on growth mindset interventions, often overlooking the impact of teaching styles on mindset. As an experiential approach, cooperative learning allows students to surpass the prescribed curriculum by exchanging ideas and leveraging one another's strengths. By integrating cooperative learning into the framework of an escape room game, students' motivation and effectiveness can be enhanced. This study aims to foster a growth mindset among students by implementing a cooperative learning model utilizing virtual escape rooms. A Factors and Multiples course was chosen to validate the proposed approach. The experimental group (n=76) received instruction via virtual escape room cooperative learning, while the control group (n=59) followed traditional instructional methods. Both groups achieved similar learning outcomes; however, qualitative interview data indicated the experimental group had a preference for the instructional material used with them. Furthermore, students in the experimental group were inclined towards a growth-oriented mindset, as evidenced by their increased willingness to tackle challenges and their reliance on peers for problem-solving. Regression analysis revealed that pre-course orientation significantly influenced post-course performance, suggesting the potential for sustained improvements resulting from the intervention.

CT3303

15:30-15:45

<p>CT3302 15:45-16:00</p>	<p><b>Exploring the Impact of Collaborative Behavior on Digital Collaborative Game-based Learning</b> <b>Jian-Ying Feng, National Yunlin University of Science and Technology</b></p> <p>Abstract: Collaborative behaviors are crucial for effective game-based collaborative learning. Understanding learners' collaborative behaviors can further enhance their achievement. This study investigates the impact of critical collaborative interactions on learning outcomes in an online color education game. It explores the relationship between collaborative behaviors and learning achievement. Seventy-six university and graduate students participated in pairs for collaborative game learning. Collaborative play significantly improved learning effectiveness in colored light concepts. The study confirmed a positive correlation between communication behaviors with coordination behaviors, and learning achievement. Cluster analysis identified three team clusters: Cluster I had high communication, coordination, efficiency, and achievement; Cluster II had high communication and coordination but lacked efficiency and achievement; and Cluster III exhibited low communication, coordination, and achievement but high efficiency. Educators can use these clusters to tailor teaching strategies accordingly.</p>
<p>CT3305 16:00-16:15</p>	<p><b>Dual-Polarity ViT for Fine-Grained Visual Categorization</b> <b>Tingjiang Guo, Fujian Agriculture and Forestry University, China</b></p> <p>Abstract: Identifying delicate yet discriminative features is the main task of fine-grained visual categorization (FGVC). The Transformer's long-range receptive field makes it appropriate for FGVC. Existing Transformer-based efforts heavily rely on attention weights to mine fine-grained local features. However, the approach will highlight irrelevant, even adversarial, regions. In this paper, we propose a new formulation that optimizes the token-importance indicator to distinguish the contribution and suppression of tokens and effectively select discriminative patches. Given a network, the Part Selection Module(PSM) introduces gradients to attention weights for token polarity and utilizes the fusion rule to aggregate multi-layers information. The Dual-Polarity ViT(DP ViT) can reduce misleading attention and focus on subtle yet discriminative parts. Our method outperforms existing methods and improves baselines.</p>

<p>CT3304 16:15-16:30</p>	<p><b>An Optimization Algorithm for Joint Routing and Scheduling in Time-Sensitive Networks</b> <b>Weilin Zhen, University of Electronic Science and Technology of China, China</b></p> <p>Abstract: Time-Sensitive Networking (TSN) is an Ethernet communication standard developed by the IEEE TSN working group. It is an emerging industrial communication technology that can meet the requirements of low latency and high reliability for timesensitive applications. However, the TSN protocol does not specify the specific implementation methods for traffic scheduling, making traffic scheduling algorithm research an ongoing open problem in the TSN field. In this paper, we propose a joint algorithm for routing selection and scheduling. The routing selection considers the requirements of link load and transmission delay, while the scheduling algorithm determines the transmission time of traffic using a hybrid strategy of basic and hyper cycles. Additionally, an improved tabu search algorithm is employed to optimize the results. Furthermore, we implement a TSN simulation environment using the NeSTiNg framework based on OMNeT. The simulation results demonstrate that the proposed algorithm, compared to the reference algorithm, can consistently complete traffic scheduling within a shorter time as network traffic increases. This ensures the real-time transmission performance of streaming traffic. Moreover, the results show that using the sorted set of traffic as the initial solution for the tabu search yields superior results.</p>
<p>CT1004 16:30-16:45</p>	<p><b>Bubble-Sheet Assessment Checker with Test Grader using Computer Vision through Raspberry Pi</b> <b>Marianne G. Wata, Mapúa University and University of Mindanao, Philippines</b></p> <p>Abstract: Manual checking of test papers is still one of the most tedious tasks of being an educator. The immediate feedback of these exam results from the teachers enhances the student's learning experience since it also enables the teachers to identify the knowledge gap in the class efficiently. Thus, this study is mainly designed to develop an intelligent bubble-sheet test checker with a scoring system employing computer vision for automated checking using Python. This system requires the examiner to input the student's name and ID number into the system using the touchscreen monitor, then place the bubble sheet properly inside the chamber. The camera button must be pressed to capture the bubble sheet's image and undergo image processing; after a few seconds, the student's score is displayed. Canny edge detection, image segmentation, and inverse warp perspective are some of the image processing techniques involved in this study. To examine the system's accuracy, confusion matrix analysis and paired t-test are used. The confusion matrix analysis assesses the device's correctness in checking each letter on the shaded bubble sheet, which revealed a high accuracy rate of 96.80%. On the other hand, the paired t-test evaluates the accuracy of automated checking versus manual checking, which resulted in a p-value of 0.01.</p>

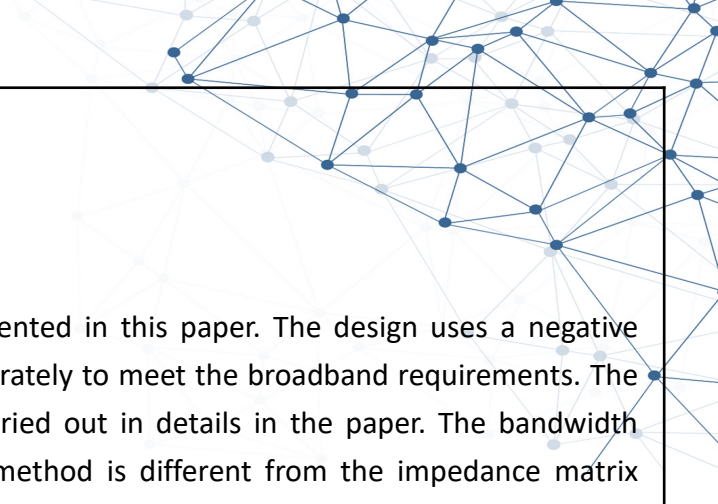


CT0071

16:45-17:00

**A Wide-band GaN Power Amplifier with Negative Feedback**  
**YueWei Guo, Bowei Integrated Circuits Company Ltd, China**

Abstract: A two-stage common source wideband power amplifier with negative feedback network is presented in this paper. The design uses a negative feedback structure to improve the bandwidth and stability, and the matching network is also designed elaborately to meet the broadband requirements. The theoretical analysis of broadband design based on the parasitic effect of transistors is introduced and carried out in details in the paper. The bandwidth expanding technique with negative feedback structure are also analyzed. The dedicated theory analysis method is different from the impedance matrix theoretical wideband analysis in other designs. The proposed power amplifier designed based on a 0.25 $\mu\text{m}$  GaN process, has a saturated output power greater than 26dBm in the 8GHz-18GHz wide operating band, a maximum dynamic current of less than 149mA, and has a compact size of 1.7mm $\times$ 1.1mm.



# HUAQIAO UNIVERSITY



Huaqiao University (HQU) is a comprehensive university, directly under the Overseas Chinese Affairs Office of the State Council of China and jointly run by the Overseas Chinese Affairs Office of the State Council, the Ministry of Education (MOE) of the People's Republic of China and the Fujian Provincial People's Government. It is the National Base for Chinese Language Teaching, the National Base for Cultural Quality Education of College Students, the National Demonstration University for Deepening Innovation and Entrepreneurship Education Reform and the National Demonstration University for Teacher Evaluation Reform.

HQU was established in Quanzhou, Fujian Province, with the approval of former Chinese Premier Zhou Enlai in 1960. The first president was Liao Chengzhi, one of the state leaders. The university was once closed in 1970 and rehabilitated in 1978. In 1983, HQU was listed as one of China's Prioritized Fostered Universities by Chinese Central Government. Since 1996, it has been jointly constructed by the Overseas Chinese Affairs Office of the State Council and the Fujian Provincial People's Government. In 1997, the former Jimei Overseas Chinese Tutoring School was incorporated into the university and renamed as the Chinese Language and Culture College. In 2006, Xiamen Campus of the university was officially launched. In 2003, HQU achieved "Excellence" in MOE's first Undergraduate Teaching Performance Assessment. In 2018, the university was selected into the construction plan of first-class universities and first-class disciplines (also named as Double First-Class Initiative) of Fujian Province.