Subject: Distinguished Technical Seminar: "Design Efficient AI SoC with Architecture and Circuit Innovations" (November 24, 2025)
Date: Tuesday, November 18, 2025 at 14:01:28 Hong Kong Standard Time
From: Connie Lee on behalf of Prof. Ehsan Nekouei (Coordinator of EE Technical Seminars) <enekouei@cityu.edu.hk>
To: Connie Lee <wylee443@gapps.cityu.edu.hk>

Dear All,

Our next speaker for the Distinguished Technical Seminar Series will be Dr. Tianyu Jia from Peking University, China.

Title: Design Efficient AI SoC with Architecture and Circuit Innovations

Abstract: The rapid advancement of AI demands highly efficient system-on-chip (SoC) solutions to meet the computational and energy constraints of modern applications. This talk will introduce a few architecture and circuit-level innovations that enable the design of high-performance, energy-efficient AI SoCs, especially for large language models (LLMs). At architecture-level, cutting-edge accelerators will be introduced for generative Diffusion and multimodal LLMs leveraging efficient compute-in-memory (CIM) or processing-in-memory (PIM) techniques. At circuit-level, we explore novel circuit design approaches, including fine-grained SoC power management solutions for edge SoC and AI processor. By combining architectural enhancements with circuit-level optimizations, designers can achieve significant improvements in performance-per-watt, making AI acceleration feasible for edge devices, data centers, and beyond.

Biography: Tianyu Jia is currently an Assistant Professor and Boya Young Fellow at the School of Integrated Circuits, Peking University, China. He was a Postdoctoral Fellow at Harvard University and an Assistant Research Professor at ECE department, Carnegie Mellon University at USA. His research interests include domain-specific architecture, compute-in-memory accelerator, and heterogeneous SoC design. Dr. Jia has published more than 80 papers at top-tiered IC conferences and journals including ISSCC, VLSI, DAC and JSSC. He received the Ph.D. degree in computer engineering from Northwestern University, USA.

Date: 24 November 2025
Time: 10:00 – 11:00 am
Venue: LT6, Yeung Kin Man Academic Building

Best regards,
Ehsan

Disclaimer: This email (including any attachments) is for the use of the intended recipient only and may contain confidential information and/or copyright material. If you are not the intended recipient, please notify the sender immediately and delete this email and all copies from your system. Any unauthorized use, disclosure, reproduction, copying, distribution, or other form of unauthorized dissemination of the contents is expressly prohibited.