Top IEEE PhD dissertation award for groundbreaking AI research

FEIT PhD graduate Dr Zhiyu Wang has been awarded the IEEE Technical Committee on Scalable Computing's "2026 Outstanding PhD Dissertation Award."

Dr Wang's PhD thesis was entitled "Artificial Intelligence-Driven Resource Management in the IoT-Edge-Cloud Computing Continuum." It demonstrated how artificial intelligence (AI) can better co-ordinate computing across the continuum – from tiny Internet of things (IoT) devices, through nearby servers to big cloud services.



Dr Zhiyu Wang.

Dr Wang completed his PhD in FEIT's School of Computing and Information Systems (CIS), with three supervisors: Professor Rajkumar Buyya (CIS), Associate Professor Mingming Gong (Maths and Statistics) and Dr Mohammad Goudarzi (Monash University).

Dr Wang said he was delighted with the acknowledgement.

“I am deeply honoured to receive this recognition. My PhD research explored how artificial intelligence can transform the way computing resources are managed across interconnected devices, edge infrastructure and cloud platforms. It is wonderful to see this work recognised by the international research community,” he said.

“Building on my PhD research, I am continuing to explore intelligent resource management and scalable computing systems, with a growing focus on the infrastructure supporting large AI models. I am particularly interested in developing new approaches to address the challenges of increasingly complex and rapidly evolving computing environments.”

Professor Buyya said a major strength of Dr Wang’s research is its integration of algorithmic innovation, software development and validation.

“His research outcomes, high-quality publications, software implementation and empirical evaluation demonstrate significant contributions with industrial impact,” Professor Buyya said.

“The thesis turns to AI, using deep reinforcement learning as the main decision tool, to create systems that are: efficient and scalable, able to work with many kinds of AI models, capable of robust cooperation without a single central controller, and able to coordinate many agents whose behaviour and workloads change over time.”

With over 400,000 members, the Institute of Electrical and Electronics Engineers (IEEE) is the world’s largest technical professional organisation.

AI and data

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