Editorial

Dear Reader,

While time does not actually speed up as you get older, for me, as well as many others I talk to, the perception that time is moving faster with every passing year is an unscientific yet undeniable reality of life. As my old music teacher wrote in the lyrics of one of his songs, "time is slowly rushing by". Paradoxically, increasingly, a year in computer science seems to be a long time!

In the last year, the landscape of computer science has undergone a drastic evolution. Perhaps most visibly, artificial intelligence has become even more deeply ingrained in both research and real-world systems. What was once novel is now far more mature: agentic AI (systems that act more autonomously), stronger governance tools, and more pervasive AI infrastructures are trending strongly.

I have witnessed firsthand the benefits and challenges this revolution raises. For the first time, I have utilised a generative AI package to turn my conference speaker's notes into a high-quality presentation, complete with images. I have helped prototype an expert system that enables healthcare professionals to craft prompts for an LLM, facilitating the generation of salient responses. More negatively, I have witnessed students generating coursework submissions by merely cutting and pasting their assignment brief into ChatGPT.

Over the last year, developments have not been limited to AI advancements. At the same time, quantum computing has made some of the most concrete leaps we've seen in years. One of the most significant milestones came from Google, which unveiled its "Willow" quantum chip in December 2024: a design that dramatically improves error correction, meaning quantum operations stay more accurate even as the system scales.

Cloud and infrastructure tech haven't been left behind. Over the past year, cloud computing innovation has accelerated towards more secure, efficient and AI-native services. At the same time, the rise of AIOps (AI for IT operations) is helping drive more innovative automation in cloud operations, reducing downtime and making resource management far more dynamic.

These shifts have also reshaped the fields of security and cryptography. Post-quantum cryptography is now a very real part of strategic thinking. As quantum computers become more capable, there is a growing urgency to develop encryption that resists quantum attacks.

Communication infrastructure has also improved in ways that are almost mind-blowing. For example, I have just returned from a holiday in Asia. While on route, I used the aircraft's complimentary Wi-Fi provided by Starlink. It certainly lived up to its advertised capability, "access the internet as quickly as you would at home with speeds of up to 500 megabits per second". Impressive to say the least!

One of my hopes for 2026 is that it goes slower than 2025!!

Professor Andrew Ware,
On behalf of the Editorial Board,
Annals of Emerging Technologies in Computing (AETiC).