NUS120 Distinguished Speaker Series – Dr William Dally
Shaping the Future Through Computer Innovation
Welcome remarks by Professor Tan Eng Chye, NUS President
Monday 20 May 2026, 4.30pm

Good afternoon, and a warm welcome to the NUS120 Distinguished Speakers Series. Today, we are discussing a subject that sits at the heart of our shared future. To shape the future of computer innovation is—in no small measure—to shape our economies, our societies—and how we come to understand intelligence itself.

We are deeply honoured to have Dr William Dally with us today. His foundational contributions to parallel computing and high-performance interconnects have helped shape the infrastructure upon which modern AI runs. The principles behind his work, which centre on systems design, scale and efficiency, continue to define the direction of the field.

To understand where computing is heading, we need to confront a constraint that is sometimes overshadowed. What determines what we are able to build? The demand for computing power is growing rapidly. Advances in AI, data analytics and scientific simulation are redefining whole fields and industries, from healthcare to finance, climate modelling to materials science. As models grow more ambitious, the infrastructure behind them has become as consequential as the ideas within them. This tension is reshaping how systems are designed.

This is where Dr Dally's work is particularly significant. Behind every frontier AI model lies a coordination issue: getting thousands of processors to work in concert, communicating at speed and scale. It is often this connective tissue, not raw compute alone, that determines what's possible. Dr Dally's work on high-performance interconnects has been instrumental in making that coordination feasible for the large-scale systems that define the AI we see today.

As capability scales, energy emerges as a concern. Dr Dally's work on efficiency addresses this: how do we sustain performance without creating unsustainable demands on energy? There is also a broader question: how do we ensure that these capabilities are deployed in ways that are equitable and responsible?

These are questions central to the work NUS is doing. The NUS AI Institute brings together researchers across disciplines to advance scalable, energy-efficient AI, with a focus on responsible deployment.

We also actively collaborate with industry to amplify the impact of our innovations. Through our partnerships with IBM on AI and sustainable computing, as well as Microsoft Research Asia and Google on AI-driven research and talent development, we are working to deepen the region's role in shaping technological innovation and application.

The future of computer innovation calls for collaboration across disciplines, sectors and borders. It will demand technical ingenuity—and a clear sense of purpose. As a university, our responsibility is not only to advance knowledge, but to cultivate the judgement that guides its use.

Dr Dally's work embodies what this moment requires: powerful, efficient and scalable systems—and the design choices that make this both possible and more sustainable. We look forward to hearing from him.

Please join me in welcoming Dr William Dally. Thank you.