

INSTITUTE OF ADVANCED STUDIES

NANYANG TECHNOLOGICAL UNIVERSITY

Catalyse high-impact research | Transcend disciplinary boundaries | Expand knowledge & education frontiers

FEATURED ARTICLES

Revolutionising Protein Science

2024 Nobel Prize in Chemistry



The prestigious prize was awarded to Prof David Baker for computational protein design and jointly to Sir Demis Hassabis and Dr John Jumper for protein structure prediction. Their contributions pave the way for an AI revolution in protein science, enabling faster, cost-effective drug discovery and treatments, and solutions to major global challenges.

[Read more](#)

A Candid Conversation with Assistant Professor Prashant Kumar



Asst Prof Prashant Kumar (MSE), recipient of the 2024 MIT Technology Review Innovator Under 35 (Asia Pacific) award, shared insights on his research in drug discovery, nanotechnology, and computing. He also reflected on his academic journey, the challenges he overcame, and offered advice for aspiring researchers.

[Read more](#)

EVENT HIGHLIGHTS

NTU Physics Challenge



The annual NTU Physics Challenge brought together pre-university students for a day of engaging problem-solving, lectures, and hands-on demonstrations. Top performers received awards and nominations for the Global Young Scientists Summit, continuing the event's mission to inspire and nurture future leaders in science.

[Read more](#)

Topological Insights into Brain Connectivity



Prof Kathryn Hess Bellwald (EPFL, Switzerland) showed how algebraic topology can reveal structural patterns in neural networks. She highlighted the use of tools to simplify complex data and quantify network structures, offering new ways to interpret the brain's organisation from a biological perspective.

[Read more](#)

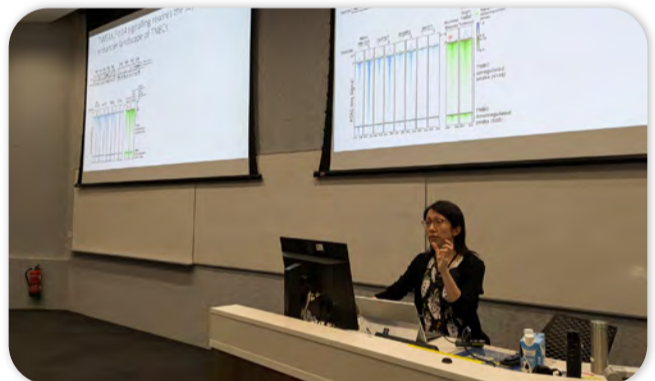
Revolutionising Blood Diagnostics with Microfluidics



Assoc Prof Hou Han Wei (MAE and LKCMedicine) presented innovative microfluidic techniques like ExoARC and electro-mechano-phenotyping for fast, label-free diagnostics. His talk sparked lively discussions on real-world uses and the future of accessible, high-speed medical testing.

[Read more](#)

Uncovering Metastasis Drivers in Breast Cancer



Asst Prof Li Yinghui (SBS) shared her research on how TWEAK/Fn14 signaling reshapes metabolism to drive triple-negative breast cancer (TNBC) metastasis. Using CRISPR and genomic tools, her work opens doors to new therapies and inspires further exploration in cancer research.

[Read more](#)

UPCOMING EVENTS

IAS Frontiers Conference on Artificial Intelligence

Co-organised by IAS and CCDS

23 April 2025 (Wednesday), North Spine LT1

[Register now](#)

PANEL DISCUSSION Navigating the Funding Landscape of Programmatic Grants

25 April 2025 (Friday), The Arc Innovation Port

[Register now](#)

Einstein Telescope : A Look At The Dawn Of The Universe

Prof Fernando Ferroni
Former President of the National Institute for Nuclear Physics

15 May 2025 (Thursday),
Tan Chin Tuan Lecture Theatre

[Register now](#)

IAS 20th Anniversary Symposium

Celebrating Two Decades of Transformative Science

29 July 2025 (Tuesday),
Lee Foundation LT (WKWSCl)

[Register now](#)

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For enquiries, email us at iasevents@ntu.edu.sg

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