



## **Over 340 young scientists from 49 countries converge at the 2025 Global Young Scientists Summit**

SINGAPORE: More than 340 young scientists<sup>1</sup> will have a rare chance to engage with leading experts in science and technology from around the world at the **Global Young Scientists Summit (GYSS) 2025**. The Summit has drawn participants from 49 countries, a 40 per cent increase from 2024<sup>2</sup>, marking the highest number in the past five years and reflecting the GYSS's increasing global prominence.

2 Taking place from 6 to 10 January 2025 at the National University of Singapore (NUS), the Summit continues to have the highest participant selection rate from Singapore at 100 participants since 2024<sup>3</sup>, accounting for about 27 per cent, along with 22 per cent from Europe and 17 per cent from Asia. The Summit was launched today at an opening ceremony by Mr Heng Swee Keat, Deputy Prime Minister and Chairman of the National Research Foundation, Singapore (NRF).

### **Deepening Engagements for Young Scientists**

3 Organised by the NRF, GYSS 2025 will offer more opportunities for young scientists to showcase their work and interact with established scientists, engineers, and technopreneurs. These include 18 eminent scientists, including Nobel Laureates, Fields Medallists, Turing Award recipients, and winners of other top international science awards.

4 One of the main highlights of the Summit is the small group sessions, now referred to as Fireside Chats. These sessions allow young scientists to interact with top minds in an intimate setting, typically with around 25 participants. This year, the Summit will feature 26 sessions, an increase from 20 in 2024, including four double-speaker Fireside Chats.

5 Participants will get opportunities to engage in Young Scientists Quickfire Pitch sessions with 16 young scientist presenters and two dedicated Poster Sessions with 100 posters in total, where they can present their research to esteemed scientists and fellow researchers. Part of the Summit experience also includes visits to local universities and research institutions, providing participants with a firsthand look at the research and technologies developed in Singapore.

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<sup>1</sup> The young scientists were nominated by 93 institutions and universities worldwide, including local entities such as NUS, Nanyang Technological University (NTU), Singapore University of Technology and Design (SUTD), and Agency for Science, Technology and Research (A\*STAR).

<sup>2</sup> At GYSS 2024, approximately 350 young scientists from around 35 countries participated.

<sup>3</sup> GYSS 2024 had 96 participant selection rate from Singapore, which was a 70 per cent increase from a steady state of 58 since 2020. The GYSS was conducted virtually in 2021 and 2022 due to COVID-19 and participant profile details for these years are unavailable.

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### Other Highlights at the GYSS 2025

6 To champion the values of science and inspire a passion for STEM education, esteemed scientists will engage in talks and workshops at local institutions that are open to the public. These include NUS, NTU, A\*STAR, Singapore Science Centre, Singapore Management University, SGInnovate, and SUTD. They will also engage local students at the International Science Youth Forum (ISYF) organised by Hwa Chong Institution.

7 Among the 19 scientists this year, the Summit welcomes four who will be speaking for the first time: Prof Joan Rose, Prof Louis Ignarro, Prof Steven Chu, and Prof Yael Kalai. Her Royal Highness Princess Maha Chakri Sirindhorn of the Kingdom of Thailand will also attend the opening ceremony and engage with young Thai researchers.

8 The GYSS is the only international summit in Asia that allows young scientists to engage with esteemed experts across various fields, including healthcare, quantum and physics, forensic science, computer science, and engineering. For example, this year, Prof Joan Rose will delve into the evolution of viruses in our environment and their impact on health. The summit also looks ahead at the future of artificial intelligence, as Prof Joseph Sifakis will share more on the current state of AI and its potential to merge with other technologies, highlighting both opportunities and challenges.

9 NRF Chief Executive Officer, Mr John Lim said, “Young scientists are the future of technology, innovation, and enterprise. Initiatives like the Global Young Scientists Summit provide opportunity for young scientists worldwide to gather for a five-day immersion, to engage with groundbreaking ideas, be inspired by world leaders in their fields, learn from each other, and imagine new possibilities for the future of science and humanity.”

10 DPM Heng’s speech will be issued after delivery at the Opening Ceremony on 7 January 2025. Please refer to **Annexes A to C** for quotes from speakers and participants, the complete list of speakers for GYSS 2024, and the Summit’s full programme.

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### ***About the Global Young Scientists Summit***

The Global Young Scientists Summit (GYSS) is an international gathering of bright young researchers from all over the world in Singapore, who will be mentored by eminent scientists over a five-day Summit. The Summit will discuss the latest advances in science and technology, and how research can develop solutions to address major global challenges. It is a multi-disciplinary event covering the disciplines of chemistry, physics, biology, mathematics, computer science and engineering.

Organised by the National Research Foundation Singapore (NRF), GYSS is supported by the Ministry of Education, National University of Singapore, Nanyang Technological University, Agency for Science, Technology and Research, Singapore Management University, Singapore University of Technology and Design, and Science Centre Singapore. Other close collaborators for this edition of GYSS include SGInnovate, Hwa Chong Institution, Foundation Lindau Nobel Laureate Meetings, Heidelberg Laureate Forum, and Technology Academy Finland.

For more info on the GYSS please visit: <https://gyss.nrf.gov.sg>

### ***About the National Research Foundation***

The National Research Foundation, Singapore (NRF), set up on 1 January 2006, is a department within the Prime Minister's Office. The NRF sets the national direction for research and development (R&D) by developing policies, plans and strategies for research, innovation and enterprise. It also funds strategic initiatives and builds up R&D capabilities by nurturing research talent.

Learn more about the NRF at [www.nrf.gov.sg](http://www.nrf.gov.sg)

**ANNEX A: ADDITIONAL QUOTES FOR REPORTING**

Speakers

1. **Professor Louis Ignarro, Nobel Laureate in Physiology or Medicine (1998)** has an inspiring story— from his upbringing in New York City as the son of first-generation immigrant parents to his groundbreaking research on nitric oxide as a signalling molecule in the cardiovascular system—highlighting the transformative power of mentorship and support in his scientific journey.

Prof Ignarro shared his thoughts on the importance of perseverance in science: “Science is full of challenges, and the journey is often tough, but it is precisely these struggles that make every breakthrough so rewarding. As young scientists, it's important to embrace these challenges, knowing that they are part of the process that will eventually lead to discovery. The Global Young Scientists Summit is a place where young researchers can find inspiration, learn from each other, and push the frontiers of science together.”

2. **Professor Joan Rose, the 2016 Stockholm Water Prize Laureate**, emphasises the critical role of young scientists in addressing global water challenges: "The future of our planet's water quality and public health rests in the hands of the next generation of scientists.

“Their innovative approaches and designs of novel technologies are essential to developing global water quality data, which is so desperately needed, and their dedication will help achieve sustainable solutions for clean water access worldwide. Platforms such as the Global Young Scientists Summit provide an invaluable platform for these emerging leaders to collaborate, learn, and be inspired to drive meaningful change.”

Participants who attended the GYSS 2024

1. [Singaporean Male] **Adolphus Lye, 30, Research Fellow at NUS**, said, “Collaboration is an important aspect of science today, especially given that the problems we deal with are interdisciplinary. One cannot simply solve a problem on their own. Through collaboration, we gain access to a wider pool of knowledge from people across different scientific disciplines. The Summit’s discussions help spark better ideas and novel approaches to solving research problems better and more creatively. That is the beauty of GYSS, in that it fosters interactions between participants from different disciplines, generates opportunities for collaborations, and solves problems of today.”
2. [Singaporean Female] **Uma Jingxin Tay, 25, Graduate Student at A\*STAR**, said, “My biggest takeaway is from listening to the Nobel Laureates, which is not an opportunity I get every day. Listening to them has made me more curious and perceptive in my research, such as viewing anomalies as opportunities for discovery and research rather than obstacles.”
3. [Tanzanian Female] **Doreen Steven Mlote, 27, Graduate Student at SUTD**, said, “Presenting my research at GYSS reignited my confidence in sharing research with other researchers worldwide. Standing in front of thousands of people can be intimidating, but it can also be a turning point and a reminder that anything is possible, which is what GYSS did for me.”

**ANNEX B: LIST OF EMINENT SCIENTISTS AT THE GYSS 2025**

1. **Aaron Ciechanover**
  - **Award:** Nobel Prize in Chemistry (2004)
  - **Field:** Biochemistry, for the discovery of ubiquitin-mediated protein degradation
2. **Adi Shamir**
  - **Award:** Turing Award (2002)
  - **Field:** Cryptography, co-inventor of the RSA algorithm
3. **Brian Schmidt**
  - **Award:** Nobel Prize in Physics (2011)
  - **Field:** Astrophysics, for the discovery of the accelerating expansion of the universe
4. **Dame Sue Black**
  - **Field:** Forensic Anthropology, recognised for research into identification from the hand
5. **Duncan Haldane**
  - **Award:** Nobel Prize in Physics (2016)
  - **Field:** Condensed Matter Physics, for theoretical discoveries of topological phase transitions and topological phases of matter
6. **Hartmut Michel**
  - **Award:** Nobel Prize in Chemistry (1988)
  - **Field:** Biochemistry, for the determination of the three-dimensional structure of a photosynthetic reaction center
7. **Joan Rose**
  - **Award:** Stockholm Water Prize (2016)
  - **Field:** Environmental Microbiology, for work on water quality and public health
8. **Joseph Sifakis**
  - **Award:** Turing Award (2007)
  - **Field:** Computer Science, specialising in the design of trustworthy systems
9. **Leslie Valiant**
  - **Award:** Turing Award (2010)
  - **Field:** Computer Science, for contributions to computational learning theory
10. **Louis J. Ignarro**
  - **Award:** Nobel Prize in Physiology or Medicine (1998)
  - **Field:** Pharmacology, recognised for discoveries concerning nitric oxide as a signaling molecule in the cardiovascular system
11. **Sir Richard Roberts**
  - **Award:** Nobel Prize in Physiology or Medicine (1993)
  - **Field:** Molecular Biology, for the discovery of split gene
12. **Sir Konstantin Novoselov**
  - **Award:** Nobel Prize in Physics (2010)
  - **Field:** Condensed Matter Physics, specifically the isolation and study of graphene
13. **Sir Tim Hunt**
  - **Award:** Nobel Prize in Physiology or Medicine (2001)
  - **Field:** Cell Biology, for discoveries of key regulators of the cell cycle
14. **Stefan Hell**
  - **Award:** Nobel Prize in Chemistry (2014)
  - **Field:** Physical Chemistry, for the development of super-resolved fluorescence microscopy

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### 15. Steven Chu

- **Award:** Nobel Prize in Physics (1997)
- **Field:** Atomic Physics, known for research in laser cooling and trapping of atoms

### 16. Takaaki Kajita

- **Award:** Nobel Prize in Physics (2015)
- **Field:** Particle Physics, for the discovery of neutrino oscillations

### 17. Wendelin Werner

- **Award:** Fields Medal (2006)
- **Field:** Mathematics, for work on stochastic Loewner evolution and the geometry of two-dimensional Brownian motion

### 18. Yael Tauman Kalai

- **Award:** ACM Prize in Computing (2022)
- **Field:** Computer Science, with contributions to cryptography and verifiable delegation of computation

For more info on the esteemed scientists, please visit <https://gyss.nrf.gov.sg/gyss-2025/speakers/>

**ANNEX C: FULL GYSS 2025 PROGRAMME**

<b>Tue, 7 Jan</b>	<b>Wed, 8 Jan</b>	<b>Thu, 9 Jan</b>	<b>Fri, 10 Jan</b>
<b>Media registration at 0830</b>			
<b>Opening Ceremony</b> (0900 - 1030)  Speech by DPM Heng Opening Plenary by Prof Louis Ignarro	<b>Two Plenary Lectures</b> (0900 - 1030)  Prof Wendelin Werner, Prof Joan Rose	<b>Two Plenary Lectures</b> (0900 - 1030)  Prof Adi Shamir, Prof Steven Chu	<b>Two Plenary Lectures</b> (0900 - 1030)  Prof Leslie Valiant & Prof Hartmut Michel
<i>Morning Break (1030 - 1100)</i>			
<b>Panel Huddle</b> (1100 - 1230)  “Interdisciplinary Approaches to Solving Global Challenges”  Prof Wendelin Werner, Dame Sue Black, Prof Takaaki Kajita	<b>Panel Huddle</b> (1100 - 1230)  “Future of Medical Research and Healthcare”  Prof Louis Ignarro, Prof Aaron Ciechanover, Prof Richard Roberts	<b>Panel Huddle</b> (1100 - 1230)  “Human Wellbeing and Sustainability - Physicists’ Perspective”  Prof Brian Schmidt, Prof Duncan Haldane, Prof Konstantin Novoselov, Prof Steven Chu	<b>Panel Huddle</b> (1100 - 1230)  “Ethics of Scientific Research in the Age of AI”  Prof Joan Rose, Prof Yael Kalai, Prof Adi Shamir
<i>Lunch Break (1230 - 1330)</i>			
<b>Two Plenary Lectures</b> (1330 - 1500)  Prof Richard Roberts (TBC), Prof Brian Schmidt	<b>Eight Young Scientist Quickfire Pitches</b> (1330 - 1500)	<b>Eight Young Scientist Quickfire Pitches</b> (1330 - 1500)	<b>One Plenary Lecture</b> (1330 - 1415)  Prof Yael Kalai
<i>Afternoon Break (1500 - 1530)</i>			
<b>Five Fireside Chat Sessions</b> (1530 - 1615)  1. Prof Tim Hunt	<b>Two Plenary Lectures</b> (1530 - 1700)  Prof Stefan Hell	<b>Two Plenary Lectures</b> (1530 - 1700)  Prof Joseph Sifakis	<b>Closing Plenary Lecture</b> (1415 - 1515)  Dame Sue Black

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<ul style="list-style-type: none"> <li>2. Prof Richard Roberts</li> <li>3. Prof Duncan Haldane</li> <li>4. Prof Konstantin Novoselov</li> <li>5. Prof Adi Shamir</li> </ul>	<p style="text-align: center;">Prof Tim Hunt</p>	<p style="text-align: center;">Prof Duncan Haldane</p>	<p><i>Afternoon Break (1515 - 1600)</i></p>
<p style="text-align: center;"><b>Fireside Chat (x7) (1630 - 1715)</b></p> <ul style="list-style-type: none"> <li>1. Dame Sue Black &amp; Prof Joan Rose</li> <li>2. Prof Yael Kalai &amp; Prof Leslie Valiant</li> <li>3. Prof Wendelin Werner &amp; Prof Louis Ignarro</li> <li>4. Prof Steven Chu &amp; Prof Takaaki Kajita</li> <li>5. Prof Hartmut Michel</li> <li>6. Prof Aaron Ciechanover</li> <li>7. Prof Brian Schmidt</li> </ul>			<p><i>Travel to Closing Event (1600 - 1730)</i></p>
<p style="text-align: center;"><b>Dedicated Poster Session for Participants (1715 - 1800)</b></p>	<p style="text-align: center;"><b>Five Fireside Chat Sessions (1700 - 1745)</b></p> <ul style="list-style-type: none"> <li>1. Prof Richard Roberts</li> <li>2. Prof Louis Ignarro</li> <li>3. Prof Takaaki Kajita</li> <li>4. Prof Leslie Valiant</li> <li>5. Prof Hartmut Michel</li> </ul>	<p style="text-align: center;"><b>Seven Fireside Chat Sessions (1700 - 1745)</b></p> <ul style="list-style-type: none"> <li>1. Prof Duncan Haldane</li> <li>2. Prof Brian Schmidt</li> <li>3. Prof Yael Kalai</li> <li>4. Prof Tim Hunt</li> <li>5. Dame Sue Black</li> <li>6. Prof Steven Chu</li> <li>7. Prof Joan Rose</li> </ul>	<p style="text-align: center;"><b>[Speakers &amp; Participants] Closing Event@Sentosa (1730 - 2030)</b></p>
		<p style="text-align: center;"><b>Dedicated Poster Session for Participants (1745 - 1830)</b></p>	