

Global Young Scientists Summit (GYSS) 2024 convenes international young scientists in Singapore fostering research and collaboration

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From 8 - 12 January, Young scientists are engaging closely with distinguished scientists across multidisciplinary trajectories, including forensic science, quantum technologies, computer science, and sustainable energy solutions.



GYSS 2024 is celebrating the values of science promoting collaboration and teamwork in Singapore from 8 to 12 January 2024 where the world's best researchers descending upon to celebrate the values of science. The summit was launched by Deputy Prime Minister, Coordinating Minister for Economic Policies and Chairman of the NRF, Heng Swee Keat.

This year, over 350 young scientists from about 35 countries and and 150 institutions are participating in the five-day Summit, the highest number of participants in a decade, with interest growing on average by 10% every year. For 2024, Singaporean participation increased by nearly 70% from 58% in 2020 to around 100% in 2024.

The GYSS is the only international Summit in Asia that allows young scientists to engage closely with a wide range of esteemed scientists across multiple disciplines ranging from healthcare and therapeutics to quantum technologies, forensic science and sustainable energy solutions to computer science and engineering.

Deputy Prime Minister, Heng Swee Keat in his speech gave three suggestions to the attendees of GYSS summit:

First, we must be patient in nurturing and grooming scientific talent, because good science takes time and perseverance. Nurturing scientific talent must begin early – by first stimulating curiosity about the world, encouraging one to question, and providing opportunities to play with ideas and tools from a young age.

For those who are contemplating a career in science and research, there must be pathways and scaffoldings to support them in their journeys, which will take multiple years. In Singapore, our primary and secondary schools offer a STEM Applied Learning Programme to help young students develop an appreciation for science, technology, engineering and mathematics.

We also have scholarships at the pre-university level for aspiring scientists, as well as scholarships from the undergraduate through to PhD levels. The latter are coupled with opportunities to work in our research institutes and universities, to support our students' growth and development. Nurturing scientific talent also requires long-sighted and patient funding, as the experiences of our speakers show" explained the Deputy Prime Minister.

Singapore takes a holistic approach to funding, including a sustained commitment to basic research. We have set aside S\$25 billion for research, innovation and enterprise between 2021 and 2025. This includes more than S\$6 billion for basic research in areas like health and human potential, urban solutions and sustainability, digitalisation and the services economy, and manufacturing

Secondly, beyond nurturing talent, we must build the support structure and ecosystem for scientists and researchers to do their best work. It is a marathon of sustained hard work in the lab, collaborating with like-minded researchers, and working with industry to translate scientific insights into tangible, real-world innovations. We need to bring the best people together to cross-share, cross-pollinate, and spark new ideas and collaborations, including across different disciplines. Community building is critical. Singapore places great emphasis on this. Today's Summit is one such platform for energetic young talent to mingle with eminent leaders and meet with peers, so as to sharpen their ideas and grow new ones.

We also have other schemes like the National Research Foundation Fellowship and Investigatorship, where we invite top scientists to tap on our ecosystem, further their research, inspire our students and strengthen our peaks of excellence. Our Campus for Research Excellence and Technological Enterprise, or CREATE, which is just next door, brings together the best minds from around the world to address specific global challenges.

As I mentioned earlier, Singapore thinks of the full value-chain of Research, Innovation and Enterprise. We therefore support a full spectrum of activities, from basic research, to partnering with industry to translate these insights into innovation, and scaling these solutions through the formation of start-ups and enterprises. We seek to position Singapore as a Global-Asia node of technology, innovation and enterprise – serving the region and the world, with strong linkages to other innovation nodes.

Third and most important aspect is, while governments can invest in nurturing scientific talent and building the right environment for them to do their best work, what ultimately matters is our young scientists having a collaborative and open-minded outlook, and a spirit of perseverance. I also encourage the young scientists here to consider venturing beyond academia and spending time in industry. This can be fruitful especially in understanding real-world problems and challenges, so that your research can be even more impactful. We offer such opportunities in Singapore through Corporate Labs as well as our Industry PhD programmes. In summary, nurturing successful and impactful scientists is about bringing different elements together – providing supportive infrastructure and shaping a robust ecosystem, coupled with young scientists taking a collaborative outlook to explore new opportunities, and persevering in pursuit of good science that can make a difference.

Furthermore, the Deputy PM iterated that, "We must continue to invest in addressing climate change, finding efficient sources of renewable energy, and harnessing digitalisation, artificial intelligence, precision medicine and new healthcare solutions. Breakthroughs in these areas will allow us to live healthier and more meaningful lives, taking better care of both ourselves and our planet.

More Opportunities for Young Scientists:

Organised by the National Research Foundation (NRF), the 2024 GYSS provides more opportunities for young scientists to engage with established researchers, venture capitalists, corporates, and technopreneurs. These include 16 esteemed scientists who are recipients of the Nobel Prize, Fields Medal, Millennium Prize, Turing Award and the President's Science and Technology Award.

Of the 16 invited scientists, six will be speaking at the GYSS 2024 for the first time – Professor Adi Shamir, Dame Sue Black, Professor Martin Green, Sir Shankar Balasubramaniam, Professor Hugo Duminil-Copin and Professor Wang Rong. Esteemed representatives from the Technology Academy Finland (TAF), the Lindau Nobel Laureate Meetings Foundation, and the Heidelberg Laureate Forum will be attending the Summit. Her Royal Highness Princess Maha Chakri Sirindhorn of the Kingdom of Thailand will also be attending the opening ceremony and engaging with young Thai researchers.

The Young Scientists Poster session, where young scientists present their research, has nearly doubled from 60 in 2023 to 115 this year. A total of 16 scientists will be able to participate in the GYSS Young Scientists Quickfire Pitch session this year, up from 10 in 2023. In addition, there will be more small group sessions where young scientists can interact with invited scientists informally, from 20 in 2023 to 28 in 2024.

To promote the values of science and STEM education, the esteemed scientists is also conducting presentation sessions and engagements from the Nanyang Technology University (NTU), National University of Singapore (NUS), Agency for Science, Technology and Research (A*STAR), Singapore Science Centre, SGInnovate, as well as the 'International Science Youth Forum' (ISYF) organised by the Hwa Chong Institution.

Chief Executive Officer of the NRF, Beh Kian Teik said, "Science today involves collaboration across disciplines to solve global challenges that affect us in various ways. The GYSS introduces young talents to new and innovative research ideas from different fields. Their engagements with esteemed scientists offer a unique insight into the efforts behind groundbreaking discoveries and inspire them to push boundaries in research and innovation in a world that is continually evolving."