EPFL at Global Young Scientists Summit (GYSS)

SINGAPORE: The GYSS is South East Asia’s Landau meeting where young scientists get the opportunity to meet with Nobel Prize winners, Fields Medalists, and other leaders in science.

Michael Francis
for the EPFL delegation
at GYSS

At the height of last summer, when a spell of heat swept through empty offices and corridors, there was an email from that spoke of inspiration, excellence, and a better world. This email turned out to be the invitation to the Global Young Scientist Summit (GYSS) in Singapore. The GYSS is conceived as a remake of the German Lindau Nobel Laureate Meeting, designed for intense and direct discussions between Nobel Prize winners and ordinary graduate students. However, the summit in Singapore goes beyond this in two aspects. First, the discussion with the star scientists was wider in the technical domain, since there was not only twelve Nobel Prize winners but also winners of the Fields Medal, Millennium Technology Prize, and Turing Award. Second, the GYSS was conceived to attract researchers to Singapore, and thus directly publicized the metropolis to the scientists. The home institutions of participants were either friends of the house or peers of the realm, i.e., Singapore’s partners like TU München, Jiaotong University, and the Technion or global leaders like MIT, Karolinska Institutet, and Cambridge University.

Participants and distinguished scientists interacted in one of three forums — lectures, panel discussions, and master classes. The lectures and discussions consisted of a satisfying melange of basic science, philosophical conundrums, and the more pragmatic. To give examples, Eric Cornell talked on Extreme meteorology and being able to measure the out of roundness of the electron at 10⁻²⁶m and Anthony Leggett pursued the mysterious age old question Time and why it cannot run backwards, initiating discussions on the nature of reality and a debate on the presence of free will. Discussions were engaging and involved questions relating to scientific ethics, discipline and self-motivation; each time eliciting informal and open-minded discussions among the attendees that often carried from the auditorium to the dining tables.

The GYSS was only one piece of Singapore’s broader goal of driving research, innovation, and enterprise to create a leading high-tech economy. The scientific landscape is made up of a collection of innovative, fast-paced, and international research hubs that mainly target the fields of biomedical, physical science, and engineering. In 2010, the government committed S$16.1 billion over five years to support research, innovation, and enterprise with the intent of solving complex national challenges through advances in science. During the GYSS, we had the opportunity to visit Singapore research sites such as the Biopolis and Fusionopolis. Despite its diversified profile, Singapore has become a leading expert in many fields. One example is the Genome Institute of Singapore at the Biopolis, which has established itself as one of the most important basic genomics research organizations in the world.

To demonstrate how science and technology has impacted Singapore’s economy and people we were shown industrial and cultural centers. We were shown the Marina Barrage which demonstrates nicely how this isolated island deals with freshwater supply, and later, while admiring a stunning 360° floor view of the world’s busiest port we learned that in Singapore it takes only 25 seconds to clear cargo from container vessels - a time they continue to improve.

The tour of Singapore was not limited to their industrial and cultural centers but also included social evening activities. Among them, a stunning city tour, a breathtaking ride in the Singapore Flyer, and a Night Safari in the famous Singapore Zoo. Even after an entire day of stimulating talks and interesting workshops the social activities were still quite enjoyable. The generosity of our hosts was not limited to sponsoring the GYSS, site visits, and social events throughout their country, but we were also invited to a gala dinner at Istana, the official residence and office of the President of Singapore. The President, lecturers, ministers of Singapore, and GYSS participants were present.

For the ten EPFL attendees the GYSS represented a great opportunity to learn and network. We not only had the possibility to interact with “big names”, listening to their life experiences, asking for their advice but also to start scientific exchange with young scientists from a range of fields and to learn about the evolution of science policy in different countries. The GYSS was also a way for Singapore to show its willingness to be at the scientific forefront by attracting top-level scientists and investing in top level research. What we have seen is that a young nation like Singapore is ready to invest a large amount of money and to become a major hub for fundamental as well as market-driven research. But, if there is one memory that is going to linger in our heads, it is certainly a spectacular view of Singapore from the highest Ferris wheel in the world that broadened our view of the city, ourselves, and our horizons.