A Lindau Experience – Mohd Arif Bin Mohd Sarjidan, UM

MY LINDAU EXPERIENCE
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The Meeting’s venue, Inselhalle, Lindau.
Objectives

To facilitate the transfer of knowledge between Nobel Laureates and young scientists but also among the international scientific community and the general public. The opportunity for participants to form international networks of scientists is also regarded as a prime objective by the organisers. The meetings’ leitmotif is ‘Educate, Inspire, Connect.’

Program Overview

There are several programme sessions that I’ve joined during the meeting, including:

- Lectures
  Lectures delivered by Nobel Laureates. They may choose a topic of their liking. As time is limited to thirty minutes, there is no discussion directly after the lecture.

- Agora Talks
  Flexible and interactive, one Laureate or several Laureates will present on one theme, with a qualified moderator steering the Q&A session with the audience, discussion or interview. Up to two parallel Agora Talks can happen at once.

- Panel Discussions
  In a panel discussion, several panellists jointly discuss on one topic. This year, three discussions are offered: “The Dark Side of the Universe”, “Student, Postdoc, and Then? – Aiming for a Career in Science”, and “How Can Science Change the World for the Better?”.

- Open Exchanges
  In the afternoon, all lectures and Agora Talks held in the morning can be discussed in separate sessions. These research-oriented discussions are strictly limited to Laureates and young scientists.

- Poster Flashes and Poster Session
  Poster Flashes, 30 young scientists presented their posters in a two-minute presentation at Stadttheater. During the corresponding Poster Session, ten posters were presented, discussed and described in the foyer of the Inselhalle. The aforementioned 30 posters were displayed in the foyer all week. In addition, during the entire meeting, the first 30, as well as the 70 second-best posters, were displayed on two screens in the foyer and the basement.
Science Breakfast

The Science Breakfast is an event organised by the Lindau Nobel Laureate Meeting. A few Nobel Laureates delivered short statements at the beginning, which were then jointly discussed by the audience at various tables.

Impactful Laureates

There are several Laureates whom I have met personally and with whom I took a picture, including Sir Konstantin S. Novoselov, J. Georg Bednorz, Gerard Mourou, and Martin Edward Hellman.

Among them, I was very impressed by Sir Novoselov because of his personality and his scientific findings. He is known as “the Father of Graphene” as he found a graphene sheet from a simple scotch-tape method on bulk graphite. Initially, he did a simple preparation method to polish the graphite as preparation for scanning electron microscope (SEM) analysis. He was just wondering what was left on the tape after polishing the graphite. He found this leftover layer has great electrical conductivity, now known as the graphene. His finding was done during his “Friday Experiment” - a simple experiment that regularly done on Friday, just to do sample preparation. He is a very humble person and easy to communicate with a young scientist like us. He is also a genuine scientist that only focuses on scientific knowledge, rather than getting hung up on commercialising for profit. He always emphasised that enthusiasm is the key to success.

Figure 3: My picture with Sir Novoselov, Gerard Mourou, Georg Bednorz, and Martin Edward Hellman.

Significant Sessions

There are many sessions that were interesting to me. Some notable ones include:

- Lecture: Materials of the Future by Sir Konstantin S. Novoselov
  - Graphene is the material of the future due to its tremendous properties in varies applications.

- It is interesting to know that the moving particle due to energy can be trapped and analysed by applying electrical energy.

Agora Talk: Taking a Scientific Approach to Physics Teaching and Learning by Carl E. Wieman

- From his study, it is found that it is very important for an academician to teach "the way to think to make a decision" rather than focus on the scientific content only.

Panel Discussion: The Dark Side of the Universe by David J. Gross, Kirsten Hall, Adam G. Riess, Brian P. Schmidt and George F. Smoot.

- There is another category of energy in this universe known as "dark energy" which cover almost 60% of overall energy in the universe.


- We need to plan our future and try to be a balance between life (family) and career.
Meeting New Friends

During the meeting, I also have a chance to meet and exchange scientific ideas with other young scientists from around the world. In the beginning, it is hard to find someone working in the same field as I am. So, I took the initiative to find out more information about them and then planning to meet with them via email. I also made friends from different research backgrounds. The following are several young scientists that I met:

Figure 7: Pablo Blanco from Universidad Complutense de Madrid, Spain

Figure 8: Miguel Henrique Borrato, Federal University of Santa Catarina (UFSC), Brazil.
Important Lessons Learnt

The following are the important lessons that I learnt from the meeting:

- Enthusiasm, imagination and hard work are very important to success in the scientific field.
- Collaboration is the key to find a new idea, verify your idea, get financial support and access to high-tech research equipment.
- Do small think smartly to produce high impact.
- Use scientific approach to solve problems and make decisions in daily life.
I want to thank Akademi Sains Malaysia and the University of Malaya for sponsoring me to this great meeting. I also like to thank my supervisor, Prof. Dr. Wan Haliza Abd Majid and our previous Head of Department, Prof. Dr. Hasan Abu Kassim, for their encouragement and support during my application.