Joint Academies Science Education Panel
is organizing

A MINI-SYMPOSIUM

03 July 2025

Venue: Ground Floor Main Auditorium
New Biological Sciences Building
Indian Institute of Science, Bengaluru

Session Chair
Professor Ganesh Nagaraju
Member, Science Education Panel

PROGRAMME SCHEDULE

14:00–14:45 : "Serendipity in chemistry: Prussian blue and ferrocene"

Professor K.C. Kumara Swamy
School of Chemistry, University of Hyderabad, Hyderabad

Serendipitous discovery is not uncommon in chemistry. This talk will present the story of two compounds, Prussian blue and ferrocene, which paved the way to rather unprecedented activity in the artist's world and organometallic chemistry, respectively. Related chemistry will also be highlighted.

14:45–15:30: "Life inside the vacuole"

Professor Dipshikha Chakravortty
Department of Microbiology and Cell Biology, Indian Institute of Science, Bengaluru

Bacteria are wonderful life forms which shape the universe, and we cannot imagine life without bacteria. Though tiny and invisible, they govern our lifestyle and other life forms on Earth. Bacteria choose their lifestyle. Some love to live in an external environment while others choose to live within the cells. Even within the cells, they choose either a cytosolic or a vacuolar lifestyle. Salmonella is one such bacterium which chooses the vacuolar lifestyle. Decades of research in our lab discovered for the first time that Salmonella not only lives in the vacuole but also divides along with its vacuole. This fascinating phenomena is crucial for the lifestyle of bacteria. We will discuss the exciting avenues and the mechanisms in this talk.

15:30–15:45 Tea Break

15:45–16:30: "Dimensional analysis in sciences"

Professor H.S. Mani
Department of Mathematics, Chennai Mathematical Institute, Chennai

The use of dimensional analysis will be discussed in some of the scientific disciplines with examples.

16:30–17:15: "The very first stars - how we can study them"

Dr Mayuri S. Rao
Department of Astronomy and Astrophysics, Raman Research Institute, Bengaluru

When you look out into the night sky filled with stars, have you ever wondered how they formed? If you think further and further back in time, can you think of how the very first stars formed? Astronomers do not know the full answer to this question, but we are working on finding out! In this talk, I will talk about how we can use a signal from the hydrogen atom to study the first stars and discuss some experiments that are being led by the Raman Research Institute to find this signal!

Youtube Live Streaming Link **https://youtube.com/live/OIDNLC4chR0?feature=share**