

Women in Science at IUCAA

Since 2015, every year, 11 February is celebrated worldwide as the 'International Day of Women and Girls in Science'. This year's theme was 'Investment in Women and Girls in Science for Inclusive Green Growth'. This year, to celebrate this day, IUCAA, Pune organized a special programme for girl students and women teachers from schools across the city. Pushpa Khare (Utkal University, Bhubaneswar, Odisha) delivered a talk on foundations of Astronomy and major concepts involved. She talked about fundamental tenets of the universe, different celestial phenomena and bodies like the galaxy, solar system, stars and black holes. She also discussed in detail about how study of the universe is possible due to various types of radiations, including X-rays, gamma rays, UV rays, infrared rays and radio waves. She discussed about the temperature, mass, distance, and chemical composition of stars, concepts of galaxies, expansion of the uni-

verse, dark energy and speed of celestial bodies. She gave a broad overview of different significant projects of IUCAA like TMT, LIGO and Square Kilometre Array (SKA) projects. While simplifying concepts in the local language (Marathi) to the girl students, Khare encouraged them to take up a career in astronomy as more and more opportunities are opening up.

IUCAA also released a short film honouring the contribution of women astronomers from India and the globe (<https://www.youtube.com/watch?v=ASK-CmRQSlSk>), while showcasing young women astronomers currently working in the centre. The film featured tributes from women scientists working in IUCAA to global women scientists who are either forgotten or not recognized for their significant contribution to development of Astronomy.

Sonal Thorve (IUCAA) gave a talk on 'Astronomy without telescopes'. Samir

Dhurde (IUCAA) gave an introduction to the event in the presence of Somak Raychaudhury (Director, IUCAA).

This entire programme was webcasted (YouTube) and many school girl students from all over Maharashtra watched this live streaming.

Every stream of science has a rich history where women scientists have contributed immensely to solve fundamental mysteries of scientific progress. Science and gender equality are both vital for the achievement of the internationally agreed development goals, including the 2030 Agenda for Sustainable Development. In view of this, there is a need to celebrate 11 February each year with greater vigour and organized efforts to inspire more girls and women in science and research.

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MEETING REPORT

Ancient Indian glass*

The Archaeological Sciences Centre at the Indian Institute of Technology Gandhinagar (IITGN) has pursued a programme of organizing 'History, Science and Technology' workshops that focus upon a selected archaeological artifact class or material. The aim of these events has been to expose a selected group of students with an acute sense of specific problems and opportunities that are involved in the study of that material. This has taken shape in the motivation to host a conversation between the leading experts of the field, and equally to provide hands-on training in the ethnoarchaeological, experimental and scientific prospects of that particular field of archaeological research.

*A report on Conference-cum-Workshop on 'History, Science and Technology of Ancient Indian Glass' held at IIT-Gandhinagar, from 21 to 25 January 2019.

After publishing the results of the first workshop of the series on stone beads¹, the second workshop focused on ancient Indian glass. The experts included archaeologists who have had extensive experience of South Asian glass, and archaeological chemists with expertise in the elemental analysis of glass. In addition, it included established ethnohistorians and ethnoarchaeologists of South Asian glass and vitreous materials, alongside craftspersons who brought their lifelong and inherited skill, expertise and knowledge.

The five-day conference-cum-workshop involved four days of academic presentations and two field trips, that together covered veritably all aspects of the study of glass. These ranged from the origin of glass and faience, to the manufacturing techniques developed at different times in South Asia, and the regional distribution of key artifacts both within

and as traded far outside the region. Valuably, the talks also included detailed introductions and extended examples of the analytical chemistry of ancient glasses. Finally, the field trips gave exposure to the contemporary traditional glass-working and a world-famous archaeological heritage site of India.

This was organized into several panels; the first of these on 'Glass in General' included a series of foundational introductions to the study of glass. Prior to this, Thilo Rehren's (The Cyprus Institute) keynote introduced the chemistry of glass as a matter of three different components: the sand/quartz base to which a flux is added alongside the third component – a variety of 'spices' to colour, opacify and lend it special qualities. His talk provided an overview of the complexity involved in the study of trace element contributions from both the flux and colourants. He also stressed the need