



# International Workshop on GALAXY FORMATION AND EVOLUTION ACROSS THE COSMIC TIME (GFEACT-2022)

13<sup>th</sup>-14<sup>th</sup> December, 2022

Department of Physics, Visva-Bharati, Santiniketan



## About the workshop:

Understanding the formation and evolution of the galaxies in the Universe remains one of the most challenging problems in cosmology. How the first galaxies formed is still a major unsolved problem. Theoretical models predict the formation of the first sources during the 'Cosmic Dawn', within the first few hundred million years after the big bang. The galaxies are believed to have formed by the cooling and condensation of the accreted neutral Hydrogen gas at the centre of the dark matter halos. The complete story of galaxy formation and evolution involves a host of physical processes, their interactions, and evolution as a function of cosmic time. Both the observational and theoretical studies in this field have undergone rapid developments in the last few decades. The surveys like the Gaia and SDSS have revealed the structure of the Milky Way and the distribution and properties of huge samples of galaxies in the local Universe with unprecedented details. The HST, Herschel and JWST have pushed our observational horizon even further. Moreover, the upcoming HI survey like SKA is expected to reveal the epoch of the cosmic dawn, the final frontier of observational cosmology.

The workshop aims to bring together the experts and the researchers to discuss the latest developments and the challenges in this field. It will motivate young minds to pursue research in the related areas. This workshop is organized under the banner of "Scientific Social Responsibility" as a part of the Science and Engineering Research Board (SERB, DST) project.

## Topics:

Models of galaxy formation, Astrophysics of galaxies, Black hole-galaxy connection, Numerical simulations of galaxy formation and evolution, Probing the 'Cosmic Dawn' with 21 cm observations.

## Speakers:



Prof. Asantha Cooray  
University of California,  
Irvine, USA



Prof. Volker Springel  
Max Planck Institute for  
Astrophysics, Garching,  
Germany



Prof. Somnath Bharadwaj  
IIT Kharagpur, India



Prof. Subhabrata Majumdar  
TIFR Mumbai, India



Prof. Raul E. Angulo  
DIPC, Spain



Prof. Supratik Pal  
ISI Kolkata, India



Dr. Ritaban Chatterjee  
Presidency University,  
Kolkata, India



Dr. Kanan K. Dutta  
Jadavpur University,  
India



Prof. Biman Nath  
RRI, Bangalore,  
India



Prof. Nissim Kanekar  
NCRA-TIFR, Pune,  
India

## Chief patron:

Prof. Bidyut Chakrabarty, Vice Chancellor, Visva-Bharati

## Convener:

Dr. Biswajit Pandey  
Department of Physics  
Visva-Bharati, Santiniketan 731235  
West Bengal, India  
**Email:** biswap@visva-bharati.ac.in

## Patrons:

Prof. Swapan Raha, Principal, Siksha-Bhavana, Visva-Bharati  
Prof. Asmita Sengupta, HOD, Department of Physics, Visva-Bharati

## Local organizing committee:

All faculty members of the Department of Physics,  
Visva-Bharati

The workshop will be held in hybrid mode.  
There will be no registration fees for the participants.  
The participants who want to attend the workshop offline  
have to arrange their own accomodation.  
Email for workshop related queries: [gfeact22@gmail.com](mailto:gfeact22@gmail.com)

Interested final year M.Sc/ B.Tech./ B.E. students, research scholars, post-doctoral researchers and faculty members can register online through the following link:

<https://docs.google.com/forms/d/e/1FAIpQLSfwMaFdTWzWz6m8Gbc60HT2GPa0Rmo4fRSZUmzr9S3nW28Udw/viewform?usp=sharing>

Last date of registration: **25<sup>th</sup> November 2022**