



ICTP | International Centre for Theoretical Physics
SAIFR | South American Institute for Fundamental Research

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July 29 – August 9, 2024

**COSMOLOGICAL HISTORY:
FROM GRAVITATIONAL
WAVES TO EXOPLANETS**

Recent advancements in gravitational physics and astrophysics have gathered significant attention, underscored by the Nobel Prizes awarded in 2017 (Weiss, Barish, Thorne), 2019 (Peebles, Mayor, Queloz), and 2020 (Penrose, Genzel, Ghez). Concurrently, we have embarked on an era characterized by astrophysical and cosmological surveys of unparalleled precision, resolution, and cadence. These surveys enable intertwined investigations in galactic, extragalactic astrophysics, and cosmology fields that, although deeply interconnected, have historically been explored through separate avenues with only occasional intersections.

Gravitational wave detections are starting to give invaluable information about stellar mass function and birth rates, which in turn provides insights into galaxy and protogalaxy formation and the boundary conditions for matter that forms exoplanets. Such knowledge also provides a crucial piece of the puzzle in understanding galactic structure formation which has important cosmological consequences.

This school is dedicated to bridging astrophysics and cosmology across different scales by offering fresh perspectives for interpreting recent observations of gravitational waves, black holes, and exoplanets.

There is no registration fee and limited funds are available for travel and local expenses.

Application deadline: May 4, 2024

**Online application and more information:
www.ictp-saifr.org/chgwe2024**



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