



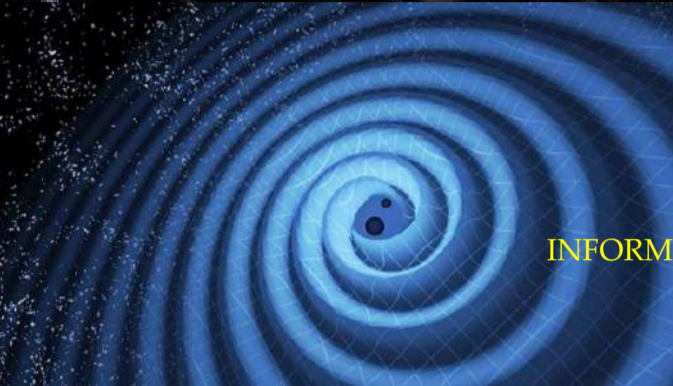
**CENTRE FOR THEORETICAL PHYSICS  
JAMIA MILLIA ISLAMIA, NEW DELHI**

**A COURSE ON  
A COURSE ON GRAVITATIONAL WAVE  
ASTRONOMY**

**November 23-29, 2023**

@ Centre for Theoretical Physics  
Jamia Millia Islamia, New Delhi-110025

INFORMATION:- <http://www.gian.iitkgp.ac.in/GREGN>



**COURSE BY WORLD RENOWNED SCIENTIST  
PROFESSOR ANZHONG WANG, USA**

**FEES**

Participants from abroad: US \$800

Industry/ Research Organizations: INR 10000

Academic Institutions: Faculty members: INR 3500/-

Ph. D. Scholars: INR 1500/- MSc Students: INR 1000/-

One time Registration @

<http://www.gian.iitkgp.ac.in/GREGN>  
(Registration Fee INR 500)

**COURSE FEES PAYMENT**

The DD should be prepared in favour of "Registrar, Jamia Millia Islamia", Payable at New Delhi and submit to Centre for Theoretical Physics, JMI.

**COURSE OBJECTIVES**

The course will present participants with the foundational principles underpinning the General Theory of Relativity (GR) and its predictions concerning the existence of Gravitational Waves (GW). The participants will understand the derivation and theoretical characteristics of exact solutions for black holes within GR. This exploration encompasses grasping concepts such as Edington-Finkelstein Coordinates and Event Horizons, comprehending the Kruskal Extension of the Schwarzschild Solution, and analyzing the inherent Singularities in the Schwarzschild Solution. The course will emphasize the significance of Penrose Diagrams and the maximal analytical extensions within spherically symmetric space-times. Participants will understand Linearized Plane GWs, gaining insights into the intricate facets of Plane GW polarization.

Dr. Wang is extensively engaged in innovative research encompassing gravitational wave physics, cosmology, black hole physics, quantum cosmology in the early universe, and the origins and nature of dark matter and energy. Having joined the Baylor faculty in August 2003, diverse teaching experiences have marked Dr. Wang's academic journey. Before his tenure at Baylor, he held teaching positions at the State University of Rio de Janeiro (1996-2003), the National Observatory in Rio de Janeiro (1994-1996), and the State University of Sao Paulo at Campinas (1992-1994). He also enriched his research insights as a postdoctoral research fellow at the Universities of Crete and Ioannina.

He completed his M.Sc. in theoretical physics at Northeast Normal University before achieving his PhD from the University of Ioannina. His academic pursuits have taken him across the globe, fostering collaborations with esteemed colleagues in Brazil, China, Japan, the United Kingdom, and the United States.

**COURSE CORDINATOR**

Prof. Sushant G. Ghosh  
Centre for Theoretical Physics



**GIAN-CORDINATOR FOR JMI**

Prof. Atiqur Rehman  
Department of Geography

**MINISTRY OF  
HUMAN RESOURCE DEVELOPMENT, GOVT. OF INDIA**

9.3 bn years

Dark energy

accelerates

expansion

Dark

Pulsars