



GUJARAT TECHNOLOGICAL UNIVERSITY

ITAP & CiC3

A Discourse On

“LIGO India project and gravitational waves”
By Karan Jani (Indian Astrophysicist)

23rd August, 2016

Time: 2 PM to 6 PM

Venue

B-o Coference Hall, Gujarat Technological University, Nr.
Vishwakarma Government Engineering College, Nr.Visat Three Roads, Visat
Gandhinagar Highway, Chandkheda, Ahmedabad

Registration

Interested participants may register online at
<https://goo.gl/forms/NW193tNiexvruZNz1>



About GTU ITAP & CiC3

Gujarat Technological University (International Innovative University), commonly referred as GTU, is a state wide institution affiliating many engineering, pharmacy, and management colleges and varsities across the western Indian districts of Gujarat. GTU is associated with the Institute and Student development activity right through its inception. As same direction GTU has established ITAP & CiC3 Cell” to support Institutes for enhance employability Skill in students which help the students to get job and also it would help them to fit in turbulence environment. This Department also works for development of entrepreneur skill, which helps students to established new business generate employability for society. CiC3 organizes various workshops, hackathon's, challenges and Faculty Development Programs for students.

About LIGO India Project

LIGO-India is a planned advanced gravitational-wave observatory to be located in India as part of the worldwide network. The project recently received the in-principle approval from the Indian government.

LIGO -India is planned as a collaborative project between a consortium of Indian research institutions and the LIGO Laboratory in the USA, along with its international partners Australia, Germany and the UK.

The Laser Interferometer Gravitational-wave Observatory (LIGO) project operates three gravitational-wave (GW) detectors. Two are at Hanford in the state of Washington, north-western USA, and one is at Livingston in Louisiana, south-eastern USA. Currently these observatories are being upgraded to their advanced configurations (called Advanced LIGO).

The proposed LIGO-India project aims to move one Advanced LIGO detector from Hanford to India. LIGO-India project is envisaged as an international collaboration between the LIGO Laboratory and three lead institutions in the IndIGO consortium: Institute of Plasma Research (IPR) Gandhi agar, Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune and Raja Ramanna Centre for Advanced Technology (RRCAT), Indore. LIGO lab would provide the complete design and all the key detector components. Indian scientists would provide the infrastructure to install the detector at a suitable site in India and would be responsible for commissioning it. The proposed observatory would be operated jointly by IndIGO and the LIGO-Lab and would form a single network along with the LIGO detectors in USA and Virgo in Italy.

About Speaker:

Karan Jani is a doctoral researcher in the Center for Relativistic Astrophysics at Georgia Tech. After finishing his high-school studies in India, Karan joined the Maharja Sayajirao University followed by the Pennsylvania State University, where he obtained double Bachelor's degree in Physics and Astronomy-Astrophysics, along with a Minor in Mathematics. He has previously held research positions at the Albert Einstein Institute (Germany), Perimeter Institute for Theoretical Physics (Canada) and Institute for Gravitation and Cosmos (Penn State).

Karan's research focuses on searching for gravitational-waves from the collision of black holes in the universe. Along with his doctoral advisor, Prof. Deirdre Shoemaker, he numerically simulates Einstein's Equations on supercomputers to investigate the dynamics of black hole collision. "Karan is a member of the international LIGO Scientific Collaboration." In LIGO he is part of the search team and looks for black holes with mass greater than 10 to 1000 times heavier than of our Sun.

Important Dates:

End of Registration: 21th August 2016

Registration Confirmation : 22th August 2016

Limited seats are available, Kindly registrar as early as possible

Schedule:

Sr No	Contents	Date	Time
1	Inaugural	23/08/2016	02:00pm to 02:45pm
2	Expert Talk	23/08/2016	02:45pm to 04.45pm
3	Question – Answer Round	23/08/2016	04:45pm to 05:45pm
4	Closing remarks and valedictory	23/08/2016	05:45pm to 06:15pm

Chief Patron

Dr. Rajul K.Gajjar, I/C Vice-Chancellor, GTU

Patron

Dr. J. C. Lilani , I/C Registrar, GTU

Convener

Dr. Apurv Raval (Deputy Director, GTU)

Co-Ordinators

Mr. Hemal Nayak(Asst. Prof. , CiC3)

Mr. Raj Hakani (Asst. Prof. , CiC3)

Mr. Mitesh Solanki (Asst. Prof. , CiC3)

Ms. Tosha Shukla (Asst. Prof. , CiC3)

Ms. Rutika Ghariya (Asst. Prof. , CiC3)

Mr. Tushar Panchal (Asst. Prof. , ITAP)