

IACS Kolkata INSPIRE faculty's work on Black Holes and Gravitational Waves to help understanding fundamentals of our nature

Dr. Sumanta Chakraborty from School of Physical Sciences and School of Mathematical and Computational Sciences at the Indian Association for the Cultivation of Science (IACS) Kolkata, a recipient of the INSPIRE faculty award instituted by the Department of Science & Technology, Govt of India has provided new ways to look into the thermodynamic properties of black holes. The techniques developed through his theoretical work in these areas are now routinely being used in various analyses involving black holes and its various other incarnations.

Dr. Chakraborty's research work is primarily focused on the areas of Gravitational physics and, in particular black holes.



The recent progress in gravitational wave astronomy and black hole shadow measurement can be exploited to understand gravitational theories better. His works in these directions not only provide bounds on the parameter space but is also acting as a guiding principle for subsequent analysis.

The research work performed by him during the tenure of the INSPIRE Faculty fellowship has received significant interest from both national and international communities. The techniques developed by his research are currently being used in other research activities as well. Some of his research works in the area of the gravitational wave will be of significant importance, given the upcoming LIGO-India observatory and world-wide interest in understanding fundamental physics using gravitational waves.

Gravitational physics and, in particular, black holes have been the hotspot of public imagination for decades. Since he works and specializes in this particular topic, he often gives public lectures among students to make them aware of how science can explain these interesting features and how black holes can be 'seen' using gravitational waves. This makes the students and common people more aware about usefulness of science in explaining the nature around us.

"Using the contingency grant, I regularly organize seminars in related topics to inspire research on gravitational physics at the host institution," Dr. Chakraborty said.

He hopes that his research work may act as one of the chief scientific agenda of LIGO-India since he is among the very few people pursuing these research topics in India. This will certainly help to further boost science activities in India and will help the Indian society to participate more with the scientific community." Dr. Chakraborty added.

Publication links: <http://inspirehep.net/author/profile/Sumanta.Chakraborty.1>

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