

Information regarding departmental seminar to motivate the students of Physics Hons

Title: Looking Deep Into The Binary Neutron Star Merger With Kilonova

Abstract:

The discovery of the optical counterpart, along with the gravitational waves from GW170817, of the first binary neutron star merger, opened up a new era for multi-messenger astrophysics. The optical counterpart, designated as a kilonova (KN), has immense potential to reveal the nature of compact binary merging systems. Ejecta properties from the merging system provide important information about the total binary mass, the mass ratio, system geometry and the equation of state of the merging system. A kilonova is a thermal transient which is powered by the r-process and observed as electromagnetic emission from the merger ejecta. In this talk, I will introduce the idea of KN and its properties along with its detection possibilities and the enriched information obtained after the observation of the KN. At the same time, the talk will also focus on the importance of machine learning in present day Astronomy and Astrophysics research.

Presenter:

Surojit Saha

PhD Student

**Institute of Astronomy,
National Tsing Hua University,
Taiwan, R.O.C**

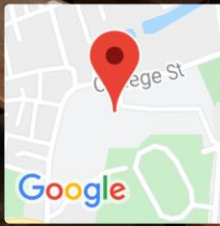
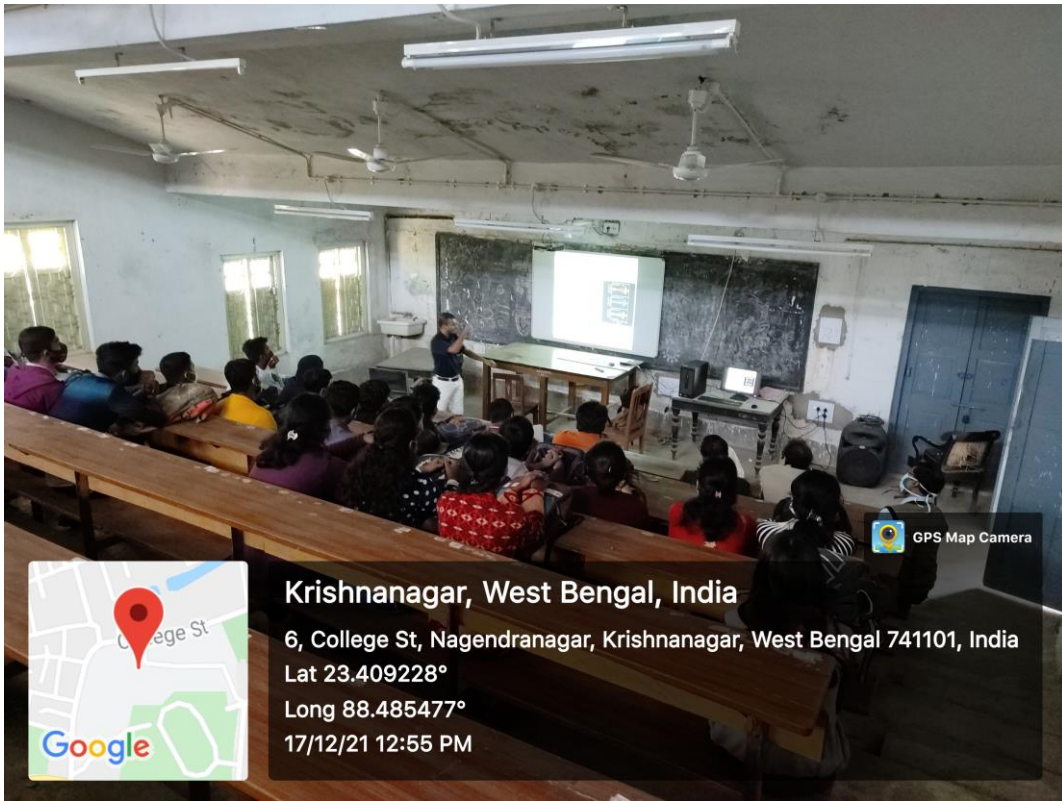
KAGRA Scientific Council Board (Member)

KAGRA Future Strategy Committee (Member)

Date of seminar: 17/12/2021

No of students attended- 26.

No of teachers attended- 05.



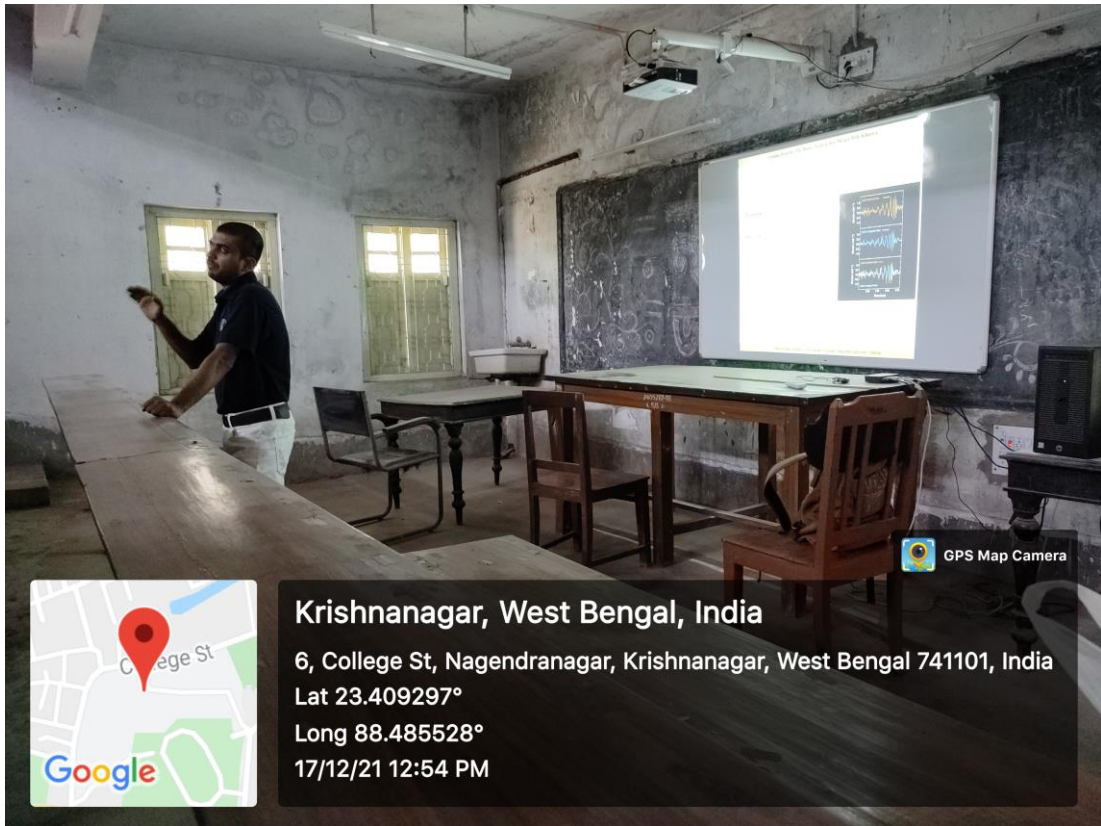
Krishnanagar, West Bengal, India

6, College St, Nagendranagar, Krishnanagar, West Bengal 741101, India

Lat 23.409228°

Long 88.485477°

17/12/21 12:55 PM



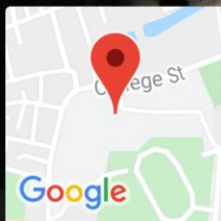
Krishnanagar, West Bengal, India

6, College St, Nagendranagar, Krishnanagar, West Bengal 741101, India

Lat 23.409297°

Long 88.485528°

17/12/21 12:54 PM



Krishnanagar, West Bengal, India

6, College St, Nagendranagar, Krishnanagar, West Bengal 741101, India

Lat 23.409246°

Long 88.485473°

17/12/21 12:55 PM