

MONDAY

# COLLOQUIUM

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## Intermediate mass black hole binary discovery in Gravitational Wave Astronomy

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29 Jun 2026 (Monday) | 16:00 Hrs (Tea / Coffee 15:45 Hrs) | Venue: TIFRH Auditorium

The intermediate-mass black holes (IMBHs) form a bridge between stellar mass BHs and supermassive BHs. While EM observations have identified several IMBH candidates, a confident detection remained elusive. The gravitational-wave merger event GW190521 was the first confirmed binary merger system with a remnant as an IMBH. The talk will summarize the landscape of GW astronomy till date with a focus on IMBH discovery with the astrophysical implications. Further, it will elaborate on the technical challenges involved in detecting such massive binary BH events using the LIGO-Virgo-KAGRA detector network.