NITheP
National Institute for Theoretical Physics

NITheP Colloquium
Monday, 31 May 2021, 11h00

Prof Ilya Mandel | Monash University

"The promise of gravitational-wave astrophysics"

ABSTRACT

The first detections of gravitational waves from compact-object mergers have opened up new opportunities and challenges in astrophysics. I will survey the plausible formation scenarios for merging compact-object binaries. I will then describe ongoing efforts to extract the astrophysical evolution of massive stellar binaries from observations of gravitational waves emitted during mergers of the stellar remnants.

BIOGRAPHY

Ilya Mandel received a PhD in physics from the California Institute of Technology in 2008, with a specialization in gravitational-wave astronomy, under the supervision of Kip S. Thorne. He carried out postdoctoral research at Northwestern University and at the Massachusetts Institute of Technology as a National Science Foundation astronomy and astrophysics postdoctoral fellow.

Ilya arrived at the University of Birmingham, UK as a Lecturer in 2011 and was promoted to Professor of Theoretical Astrophysics in 2016. During this time, he established himself as a leader in the emerging field of gravitational-wave astrophysics, focusing on sources of gravitational waves, data-analysis challenges posed by current and planned gravitational-wave detectors, astrophysics of compact-object binaries and ways in which upcoming observations of gravitational waves can aid our understanding of this astrophysics.

In 2019, Ilya joined Monash University as a Professor in the School of Physics and Astronomy.

Research interests: Theoretical astrophysics, Stellar binary evolution, Gravitational-wave astronomy, Dynamics, High-energy transients, Astrostatistics.

CLICK TO REGISTER

After registering, you will receive a confirmation email containing information about joining the webinar.

WANT TO FIND OUT MORE?

Contact our Communications Officer: T: +27 (0)87 702 9364 | E: rene.kotze@nithep.ac.za