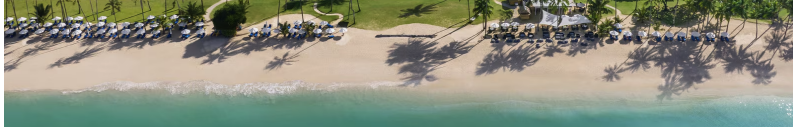


Fast Radio Burst 2024



Monday 04 November 2024 - Friday 08 November 2024

JW Marriott Khao Lak

Scientific Programme

The FRB2024 scientific program will be focused on synthesizing the latest observations and theoretical progress on FRBs. The program is centered on three overarching themes, which are also intended to attract a broad range of participants from fields that may be impacted by FRBs.

Theme 1: FRB source physics. The nature and origin of FRBs is inextricably linked to neutron star formation, composition, and emission. We are soliciting talks from both theorists and observers who study FRBs with the aim of identifying the nature of the sources and the emission physics. We also solicit talks on topics such as neutron star progenitors and their supernovae, the neutron star interior equation of state, local burst environments, pulsar binary evolution, or any other area of astrophysics that might elucidate the origins of FRBs. We especially encourage contributions that draw a direct line between these topics and possible advances in our understanding of FRBs and aim to feature a diverse range of experts who use cutting edge facilities with sensitivity across the entire EM spectrum.

Theme 2: Propagation through Galactic & extragalactic diffuse ionized gas. FRB propagation effects are sensitive to the structure and fluctuations of magnetized plasmas across a range of physical environments and density-temperature phases. With a rapidly and ever-expanding sample, FRBs are poised to address the fundamental conditions of ionized gas across interstellar, circumgalactic, and intergalactic media. Such progress must be pursued in tandem with alternative tracers of ionized gas spanning cosmic history. As such, we solicit talks tackling every portion of FRB sightlines, from the Milky Way, to circum- and intergalactic environments, to circum-source media. We encourage talks that address information gained from complementary, multi-wavelength tracers of ionized gas, including but not limited to radio pulsars.

Theme 3: probes of large-scale structure. Rapid progress in FRB science has opened up the possibility of using FRBs as probes of cosmology, galaxy formation, and large scale structure. We solicit talks on applications of FRBs towards these areas, using existing and upcoming samples, and from theoretical perspectives. These possibilities should be placed in the context of existing observational efforts in cosmology: CMB experiments, imaging and spectroscopic galaxy surveys, line intensity mapping, and wide-area surveys for supernovae and other transients, to name a few. We are particularly interested in talks exploring possible synergies between existing efforts in observational cosmology and their connection to FRB science.