Gravitational-Wave Astronomy: A Decade of Discovery Schedule

Talks

Monday 09h00-10h30

09h00: Advanced Gravitational Wave Detectors (Invited) (Johannes Eichholz)

09h21: Advancing Gravitational-Wave Detectors Towards Design Sensitivity (Invited) (Keiko Kokeyama)

09h42: Future Ground-Based Gravitational Wave Detectors (Invited) (Anna Green)

10h03: The Laser Interferometer Space Antenna: Science, Signals and Data Analysis (Invited) (Christian Chapman-Bird)

10h24: Poster sparkler presentations (1-minute each)

Monday 14h15-15h45

14h15: Parameter Estimation and Waveform Modelling in Gravitational-Wave Astronomy (Invited) (Patricia Schmidt)

14h45: Orbital Eccentricity in a Neutron Star – Black Hole Merger (Patricia Schmidt – presented by Geraint Pratten)

14h57: Search for Eccentric Compact Binary Mergers in LIGO-Virgo detectors' data and selection function of gravitational-wave detectors network to compact binaries on eccentric orbit (Khun Sang Phukon)

15h09: Search for Precessing Binary Black Holes in Advanced LIGO's Third Observing Run using Harmonic Decomposition (Rahul Dhurkunde)

15h21: Ringdown Amplitudes in Precessing Binary Black Hole Mergers (Swetha Bhagwat)

15h33: Quasinormal modes and how to find them (Richard Dyer)

Monday 16h15-17h45

16h15: Probing the formation environments of binary compact objects with orbital eccentricity (Isobel Romero-Shaw)

16h28: Accelerated Sequential Posterior Inference via Reuse for Gravitational-Wave Analyses (Michael J. Williams)

16h41: Fast neural network surrogate for effective-one-body waveforms from generically precessing binaries (Christopher Whittall)

16h54: Combining gravitational wave search algorithms with conformal prediction (Ann-Kristin Malz)

17h07: Parameter Estimation of Black Hole Mergers in Non-Gaussian Noise Using Simulation-Based Inference (Elizabeth Todd)

17h20: Relaxing Gaussianity in parameter estimation: a case study of GW231123 with Student's t likelihood (Julianna Ostrovska)

17h33: Incorporating model accuracy into gravitational-wave Bayesian inference (Charlie Hoy)

Tuesday 09h00-10h30

09h00: Will we be able to distinguish black hole and neutron star binaries from double white dwarf systems with LISA? (Hannah Middleton)

09h13: Unveiling massive black hole astrophysics with highly-eccentric extreme-mass-ratio inspirals (Christian Chapman-Bird)

09h26: Wavelet-Domain Inference for LISA: Toward Robust, Fast Matched Filtering (Tomasz Kinowski)

09h39: An update on the development of searches for massive binaries using LISA (Debnandini Mukherjee)

09h52: A Model-Agnostic Approach to Sky Localization of Gravitational Wave Sources with LISA (Raissa Costa Barroso)

10h05: Improving the IMBH searches in LIGO with XGBoost (Tanmaya Mishra)

10h18: The role of GOTO and wide-field optical telescopes in the era of gravitational-wave astronomy (Kendall Ackley)

Tuesday 14h15-15h45

14h15: Astronomy and astrophysics from the LIGO-Virgo-KAGRA fourth observing run - invited (Daniel Williams)

14h45: Universal Eccentricity Distribution for Dynamical Gravitational-Wave Merger Channels (Mor Rozner)

15h00: Binary black hole mergers with detailed binary models (Max Briel)

15h15: Universality in the Mass Distribution of Black Hole Mergers in Globular Clusters (Lana Alabbasi)

15h30: The Formation and Evolution of Extreme Mass Ratio Inspirals in Accretion Discs (Jupiter Stevenson)

Tuesday 16h15-17h45

16h15: Exploring the Gravitational Wave Universe with PTAs: where we are and where we are going - invited (Andrea Mitridate)

16h45: Cosmological interpretation of the observed gravitational-wave signal in the European Pulsar Timing Array DR2 data (Philippe Turgeon)

17h00: Probing the millisecond pulsar origin of the γ-ray excess in the Galactic centre with LISA (Andrei Igoshev)

17h15: The Depletion of Collisionless Dark Matter Spikes (Charlie Sharpe)

17h30: GWTC-5.0: Constraints on the Cosmic Expansion Rate and Modified Gravitational-wave Propagation (Alexander Papadopoulos)

Posters

- The LIGO Magazine (Hannah Middleton (for the LIGO Magazine Editorial Team))