

Session Program

24-30 Aug 2025

The XIX International Conference on Topics in Astroparticle and Underground Physics (TAUP2025)

Gravitational Waves

Xichang Qionghai Hotel
Xichang, Sichuan, China

Tuesday 26 August

14:00

Gravitational Waves: parallel session 3

Session | **Location:** Conference Room F1-R3 | **Convener:** Kejia Lee

14:00–14:20

Constraints on Lorentz and parity violations with gravitational waves

Speaker

Tao Zhu

14:20–14:40

Wave Effects of Gravitational Waves

Speaker

Jian-hua He

14:40–15:00

Gravitational Wave Birefringence in Fuzzy Dark Matter and Symmetron Cosmology

Speaker

Da Huang

15:00–15:20

A treatment to gravitational perturbations and Lorentz-violating effects with Lagrangian analysis

Speaker

Chao Zhang

15:40

16:00

Gravitational Waves: parallel session 4

Session | **Location:** Conference Room F1-R3 | **Convener:** Jun Zhang

16:00–16:20

Implications of Cosmological Gravitational Wave Sources for Fundamental Physics

Speaker

Jing Liu

16:20–16:40

Probing Dark Matter with Space and Ground-based Gravitational Waves Detectors

Speaker

Ju Chen

16:40–17:00

Bayesian model selection of Primordial Black Holes and Dressed Primordial Black Holes with lensed Gravitational Waves

Speaker

Dr Xin-yi Lin

17:20

Wednesday 27 August

14:00

Gravitational Waves: parallel session 5

Session | **Location:** Conference Room F1-R3 | **Convener:** Xian Chen

14:00–14:20

Gravitational wave emission from merging strange quark star - strange planet.

Speaker

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14:20–14:40

Multiband Gravitational Wave and Multimessenger Astronomy with Galactic compact binaries

Speaker

Yan Wang

14:40–15:00

Long-term multi-messenger signal simulation of a supernova

Speaker

Masamitsu Mori

15:00–15:20

Gravitational Waves with Complex Features as Precision Probes of Cosmology

Speaker

Tao Yang

15:20–15:40

Detecting Gravitational Waves from Exoplanets Orbiting Binary Neutron Stars with B-DECIGO and DECIGO

Speaker

Wenlong Guo

15:40

16:00

Gravitational Waves: parallel session 6

Session | **Location:** Conference Room F1-R3 | **Convener:** Huaikuo Guo

16:00–16:20

Gravitational waves from preheating in the early Universe

Speaker

Anna Tokareva

16:20–16:40

Search for an isotropic Gravitational Wave Background with ground based detectors and cosmological implications

Speaker

Alba Romero-Rodríguez

16:40–17:00

Enhancing Taiji's Estimation on Galactic Binaries and Instrumental Noises Against Non-Stationaries with Time-Frequency Domain Formalism

Speaker

Minghui Du

17:00-17:20

Dawning of a new era in gravitational wave data analysis: Unveiling cosmic mysteries via artificial intelligence — A systematic review**Speaker**

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17:20-17:40

Accelerating Stochastic Gravitational Wave Backgrounds Parameter Estimation in Pulsar Timing Arrays with Flow Matching**Speaker**

Bo Liang

17:40-18:00

Impact of Massive Black Hole Binaries Source Confusion on Uncertainties of Parameters Estimation in Space-based Gravitational Wave Detection for the Taiji Mission**Speaker**

Qing Diao

18:00

Thursday 28 August

14:00

Gravitational Waves: parallel session 7

Session | **Location:** Conference Room F1-R3 | **Convener:** Yiqiu Ma

14:00–14:20

The status of KAGRA Large-scale Cryogenic Gravitational Wave Telescope

Speaker

Prof. Shinji MIYOKI

14:20–14:40

Use of phase sensitive amplifier for the back-action evasion scheme

Speaker

Kentaro Somiya

14:40–15:00

Quantum entanglement for gravitational-wave detectors

Speaker

Mr Yohei Nishino

15:00–15:20

Space-based optical lattice clocks as gravitational wave detectors

Speaker

Bo Wang

15:20–15:40

Fundamental Quantum Limits for Detecting Ultra-high Frequency Gravitational Waves

Speaker

Xinyao Guo

15:40

15:55

Gravitational Waves: parallel session 8

Session | **Location:** Conference Room F1-R3 | **Convener:** Bram Slagmolen

16:00–16:20

New dark matter production mechanism and the gravitational wave signals

Speaker

Fa Peng Huang

16:20–16:40

Gravitational wave spectrum from metastable cosmic string network and the delayed scaling scenario

Speaker

Kohei Kamada

16:40–17:00

The Equilibrium Spectrum of Stochastic Gravitational Wave Background and Its Role in Cosmic Evolution

Speaker

Manjia Liang

17:00-17:20

Detecting Gravitational Waves from Cosmic Phase Transitions in Space

Speaker

Qingyuan Liang

17:20-17:40

Compact Four degree-of-freedom Seismometer with Capacitive Readout

Speaker

Yulin Xia

17:40