GW:UK@Nottingham

Report of Contributions

https://indico.global/e/16345

Contribution ID: **1** Type: **not specified**

10 years of GW - Stephen Fairhust (Cardiff University)

Thursday, 15 January 2026 10:15 (45 minutes)

Contribution ID: **2** Type: **not specified**

GW astrophysics and multimessenger - Fabio Antonini (Cardiff University)

Thursday, 15 January 2026 11:15 (30 minutes)

Contribution ID: **3** Type: **not specified**

Tests of GR - Michalis Agathos (QMUL)

Thursday, 15 January 2026 11:45 (30 minutes)

Contribution ID: **4** Type: **not specified**

Instrumentation - Ian Wilmut (RAL)

Thursday, 15 January 2026 14:15 (45 minutes)

Contribution ID: **5** Type: **not specified**

Progress in GW cosmology - Tessa Baker (Portsmouth U.)

Thursday, 15 January 2026 15:15 (30 minutes)

Contribution ID: **6** Type: **not specified**

GW searches and parameter estimation - Michael Williams (Portsmouth U.)

Thursday, 15 January 2026 15:45 (30 minutes)

Contribution ID: **7** Type: **not specified**

GW in the UK - Introduction

Friday, 16 January 2026 09:30 (15 minutes)

Contribution ID: **8** Type: **not specified**

Parallel Panel discussions: Funding for GWs in the UK

Friday, 16 January 2026 09:45 (1h 30m)

Contribution ID: **9** Type: **not specified**

Parallel Panel discussions: ECR opportunities

Friday, 16 January 2026 09:45 (1h 30m)

Contribution ID: **10** Type: **not specified**

Group introductions

Friday, 16 January 2026 11:30 (1 hour)

Contribution ID: **11** Type: **not specified**

Community Building Exercise

Friday, 16 January 2026 13:30 (1 hour)

Contribution ID: **12** Type: **not specified**

Contributed talks

Contribution ID: **13** Type: **not specified**

Wrap up

Friday, 16 January 2026 15:55 (20 minutes)

Contribution ID: **88** Type: **not specified**

Machine Learning for Parameter Estimation

Thursday, 15 January 2026 13:15 (5 minutes)

Presenter: AL-SHAMMARI, Sama (Cardiff University)

Contribution ID: **89** Type: **not specified**

Residual neural likelihood estimation for gravitational wave parameter estimation

Thursday, 15 January 2026 13:20 (5 minutes)

Presenter: EMMA, Mattia (Royal Holloway University of London)

Contribution ID: **90** Type: **not specified**

Testing general relativity with black hole ringdowns

Thursday, 15 January 2026 13:25 (5 minutes)

Presenter: POMPILI, Lorenzo (University of Nottingham)

Contribution ID: **91** Type: **not specified**

Observability of eccentricity in a population of merging compact binaries

Thursday, 15 January 2026 13:30 (5 minutes)

Presenter: SINGH, Mukesh (Cardiff University)

Contribution ID: **92** Type: **not specified**

Calibrated uncertainty quantification for improved GW signal detection efficiency

Thursday, 15 January 2026 13:35 (5 minutes)

Presenter: MALZ, Ann-Kristin (Royal Holloway University of London)

Contribution ID: **93** Type: **not specified**

Gravitational Wave Probes of Dark Matter in Neutron Star Mergers

Thursday, 15 January 2026 13:40 (5 minutes)

Presenter: Dr SAGUN, Violetta (University of Southampton)

Contribution ID: **94** Type: **not specified**

Tidal dissipation in binary neutron star mergers

Thursday, 15 January 2026 13:45 (5 minutes)

Presenter: GHOSH, Suprovo (University of Southampton)

Contribution ID: **95** Type: **not specified**

Leveraging indirect observations about merging neutron star binaries

Thursday, 15 January 2026 13:50 (5 minutes)

Presenter: SARIN, Nikhil (Cambridge University)

Contribution ID: **96** Type: **not specified**

Stochastic gravitational wave backgrounds from cosmic phase transitions

Thursday, 15 January 2026 13:55 (5 minutes)

Presenter: Dr GOULD, Oliver (University of Nottingham)

Contribution ID: **97** Type: **not specified**

Polarisation Singularities of Gravitational Waves.

Thursday, 15 January 2026 14:00 (5 minutes)

Presenter: RIGOUZZO, Claire (King's College London)

Contribution ID: **98** Type: **not specified**

Quasinormal modes from numerical relativity with Bayesian inference

Thursday, 15 January 2026 14:05 (5 minutes)

Presenter: DYER, Richard (Institute of Astronomy, Cambridge University)

Contribution ID: **99** Type: **not specified**

Accelerating parameter estimation for parameterized tests of general relativity with gravitational-wave observations

Thursday, 15 January 2026 14:10 (5 minutes)

Presenter: KUMAR, Dhruv (University of Glasgow, Scotland)

Contribution ID: **100** Type: **not specified**

Astrophysical implications of eccentricity in neutron star-black hole binaries

Thursday, 15 January 2026 16:15 (5 minutes)

Presenter: ROMERO-SHAW, Isobel (Cardiff University)

Contribution ID: **101** Type: **not specified**

Accelerating Reduced-Order Quadrature Construction using Multi-Band Waveforms

Thursday, 15 January 2026 16:20 (5 minutes)

Presenter: NEWELL, Murdoc (Queen Mary University of London)

Contribution ID: **102** Type: **not specified**

What can the future GW detectors tell us about the peak of star formation?

Thursday, 15 January 2026 16:25 (5 minutes)

Presenter: ., Divyajyoti (Cardiff University)

Contribution ID: **103** Type: **not specified**

Corrections to the energy and angular momentum for eccentric orbits

Thursday, 15 January 2026 16:30 (5 minutes)

Presenter: TRESTINI, David (University of Southampton)

Contribution ID: **104** Type: **not specified**

Rapid parameter estimation in minutes with physical insights from eccentric harmonics

Thursday, 15 January 2026 16:35 (5 minutes)

Presenter: PATTERSON, Ben (Cardiff University)

Contribution ID: **105** Type: **not specified**

Extremal Black Hole Spectroscopy

Thursday, 15 January 2026 16:40 (5 minutes)

Presenter: WAN, Hongyi (Queen Mary University of London)

Contribution ID: **106** Type: **not specified**

Analytic and numerical modeling of boson-star scattering

Thursday, 15 January 2026 16:45 (5 minutes)

Presenter: SPERHAKE, Ulrich (University of Cambridge)

Contribution ID: **107** Type: **not specified**

Constraining the luminosity distance-redshift relation with GWs

Thursday, 15 January 2026 16:50 (5 minutes)

Presenter: COLANGELI, Elena (ICG - University of Portsmouth)

Contribution ID: **108** Type: **not specified**

Early Warning in Gravitational-Wave Astronomy with Deep Learning.

Thursday, 15 January 2026 16:55 (5 minutes)

Presenter: ALFAIDI, Reem (University of Glasgow)

Contribution ID: **109** Type: **not specified**

The potential of hierarchical inference with extreme mass-ratio inspiral observations

Thursday, 15 January 2026 17:00 (5 minutes)

Presenter: SINGH, Shahswat (University of Glasgow)

Contribution ID: **110** Type: **not specified**

Fast, Faithful, and Future-Proof: Gravitational-Wave Inference at GPU Speed

Thursday, 15 January 2026 17:05 (5 minutes)

Presenter: PRATHABAN, Metha (University of Cambridge)

Contribution ID: **111** Type: **not specified**

Gravity Spy: Building a Community of Citizen Scientists

Thursday, 15 January 2026 17:10 (5 minutes)

Presenter: TODD, Elizabeth (University of Glasgow)

Contribution ID: **112** Type: **not specified**

Detecting Exoplanets beyond Local Super cluster with GW

Thursday, 15 January 2026 17:15 (5 minutes)

Presenter: ZHENG, Liming (Beijing Normal University, Cardiff Universtiy)

Contribution ID: **113** Type: **not specified**

Independent Optical Calibration of Gravitational-Wave Detectors via Scattered Light Injection

Friday, 16 January 2026 15:00 (5 minutes)

Presenter: JAIN, Kushal (Cardiff University)

Contribution ID: **115** Type: **not specified**

GW230814: black hole spectroscopy with a single detector binary black hole merger

Friday, 16 January 2026 15:05 (5 minutes)

Presenter: SHARKEY, Joshua (University of Glasgow)

Contribution ID: **116** Type: **not specified**

Source Inference for Unmodelled Sources

Friday, 16 January 2026 15:10 (5 minutes)

Presenter: NEESON, James (Cardiff University)

Contribution ID: **117** Type: **not specified**

The High–Mass-Ratio Challenge in Gravitational-Wave Modelling

Friday, 16 January 2026 15:15 (5 minutes)

Presenter: MAHAPATRA, Parthapratim (Cardiff University)

Contribution ID: **118** Type: **not specified**

O4 EM Follow-up Observations with GOTO

Friday, 16 January 2026 15:20 (5 minutes)

Presenter: ACKLEY, Kendall (University of Warwick)

Contribution ID: **119** Type: **not specified**

Application of summary data for Simulation-based inference

Friday, 16 January 2026 15:25 (5 minutes)

Presenter: IWAYA, Masaki (Cardiff University)

Contribution ID: **120** Type: **not specified**

The Formation and Evolution of EMRIs in Accretion Discs

Friday, 16 January 2026 15:30 (5 minutes)

Presenter: STEVENSON, Jupiter (University of Nottingham Gravity Group)

Contribution ID: **121** Type: **not specified**

Probing accelerating binary black hole coalescences with deep learning

Friday, 16 January 2026 15:35 (5 minutes)

Presenter: ROUSSOPOULOS, Alexander (University of Nottingham)

Contribution ID: **122** Type: **not specified**

Frequency contamination from new fundamental fields in black hole bringdowns

Friday, 16 January 2026 15:40 (5 minutes)

Presenter: LESTINGI, Jacopo (University of Nottingham)

Contribution ID: **123** Type: **not specified**

Optimisation of thermal compensation systems in Gravitational wave detectors

Friday, 16 January 2026 15:45 (5 minutes)

Presenter: DUMBRECK, Ruaraidh (Cardiff University)

Contribution ID: **124** Type: **not specified**

Stable black hole solutions with cosmological hair

Friday, 16 January 2026 15:50 (5 minutes)

Presenter: SMULDERS, Laurens (University College London)

Contribution ID: **125** Type: **not specified**

An overview of Coatings and Core Optic research in Glasgow

Thursday, 15 January 2026 17:20 (5 minutes)

Presenter: MCGHEE, Graeme

Contribution ID: **126** Type: **not specified**

Amorphous Alumina: a low absorption material for future detectors

Thursday, 15 January 2026 17:25 (5 minutes)

Presenter: FITZGERALD, Scott (University of Glasgow)

Contribution ID: **127** Type: **not specified**

He-BAR: A Helium Bulk Acoustic Resonator for Gravitational Wave Detection

Thursday, 15 January 2026 17:30 (5 minutes)

Presenter: HIBBITT, Sean (Royal Holloway University of London)

Contribution ID: **128** Type: **not specified**

Multifidelity Approach to Simulation-Based Inference in Gravitational-Wave Data Analysis

Thursday, 15 January 2026 17:35 (5 minutes)

Simulation-based inference (SBI) is opening new possibilities in gravitational-wave data analysis, including the use of computationally expensive simulators to generate waveforms. When simulators are computationally expensive, generating sufficient training data becomes challenging. Multifidelity methods combine the accuracy of high-fidelity (expensive and accurate) models with the computational efficiency of low-fidelity (fast and less accurate) models. This transfer learning approach makes inference tractable even with limited simulation budgets, potentially enabling analyses that would otherwise require prohibitive computational resources.

Presenter: FABBRI, Cecilia (University of Nottingham)