Belgian-Dutch Gravitational Wave Meeting 2022

Report of Contributions

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

Keynote presentation: Fundamental Physics and Cosmology with the Einstein Telescope

Thursday 13 October 2022 09:40 (50 minutes)

Presenter: MAGGIORE, Michele (Universite de Geneve (CH))

Session Classification: Keynote presentation: Michele Maggiore

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

Virgo Instrumentation

Thursday 13 October 2022 10:55 (20 minutes)

Presenter: STEINLECHNER, Sebastian (Maastricht University & Nikhef)

Session Classification: Updates from other experiments / collaborations

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

ETPathfinder

Thursday 13 October 2022 11:15 (20 minutes)

Presenter: KUIJER, Paul (Nikhef National institute for subatomic physics (NL))

Session Classification: Updates from other experiments / collaborations

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

E-TEST

Friday 14 October 2022 10:55 (20 minutes)

Presenter: COLLETTE, Christophe

Session Classification: Updates from other experiments / collaborations

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

LIGO-Virgo-KAGRA Observational Science

Thursday 13 October 2022 11:35 (30 minutes)

Presenter: VAN DEN BROECK, Chris

Session Classification: Updates from other experiments / collaborations

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

LISA Science

Friday 14 October 2022 12:00 (30 minutes)

Presenter: ROSSI, Elena

Session Classification: Updates from other experiments / collaborations

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

The Quest of Subsolar-mass (Primordial) Black Holes

Thursday 13 October 2022 13:50 (20 minutes)

Presenter: CLESSE, Sebastien

Session Classification: Data Analysis and Observations

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

Why gravitational waves need neutrinos

Thursday 13 October 2022 12:05 (20 minutes)

Presenter: W DE WASSEIGE, Gwen (UCLouvain)

Session Classification: Updates from other experiments / collaborations

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

Correcting biases from overlapping signals in the third generation era: parameter estimation methods

Thursday 13 October 2022 15:10 (10 minutes)

Presenter: BAKA, Tomasz

Session Classification: Data Analysis and Observations

Contribution ID: **10**

Type: **not specified**

Prospects of testing late-time cosmology with weak lensing of gravitational waves and galaxy surveys

Thursday 13 October 2022 17:05 (10 minutes)

Presenter: BALAUDO, Anna

Session Classification: Data Analysis and Observations

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

Probing the Large Scale Structure of the Universe using Gravitational Waves

Thursday 13 October 2022 17:15 (10 minutes)

Presenter: BEIRNAERT, Freija

Session Classification: Data Analysis and Observations

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

Neural ratio estimation for precision analysis of GW signals

Thursday 13 October 2022 14:40 (10 minutes)

Presenter: BHARDWAJ, Uddipta (GRAPPA, University of Amsterdam)

Session Classification: Data Analysis and Observations

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

Galaxy catalogs for electromagnetic follow-up and cosmology

Thursday 13 October 2022 16:25 (10 minutes)

Presenter: DÁLYA, Gergely (Ghent University)

Session Classification: Data Analysis and Observations

Contribution ID: **14**   Type: **not specified**

Stochastic Gravitational-Wave Background and Pulsar Glitches

Thursday 13 October 2022 14:20 (10 minutes)

Presenter: DE LILLO, Federico

Session Classification: Data Analysis and Observations

Contribution ID: **15** Type: **not specified**

On the identification of strongly-lensed gravitational waves

Thursday 13 October 2022 15:55 (10 minutes)

Presenter: JANQUART, Justin (Nikhef / Utrecht University)

Session Classification: Data Analysis and Observations

Contribution ID: **16** Type: **not specified**

REMOTE: Tests of sub-dominant mode amplitude structure of Binary black hole coalescences

Thursday 13 October 2022 14:50 (10 minutes)

Presenter: KALAGHATGI, Chinmay

Session Classification: Data Analysis and Observations

Contribution ID: **17** Type: **not specified**

Gravitational-wave constraints on the GeV excess in the galactic center

Thursday 13 October 2022 14:10 (10 minutes)

Presenter: MILLER, Andrew

Session Classification: Data Analysis and Observations

Contribution ID: **18** Type: **not specified**

Constraining deviations from general relativity using quadruply lensed gravitational waves

Thursday 13 October 2022 16:15 (10 minutes)

Presenter: NAROLA, Harsh

Session Classification: Data Analysis and Observations

Contribution ID: **19** Type: **not specified**

Identification of strongly lensed gravitational-wave pairs with deep learning

Thursday 13 October 2022 16:05 (10 minutes)

Presenter: OFFERMANS, Arthur (KU Leuven)

Session Classification: Data Analysis and Observations

Contribution ID: **20**   Type: **not specified**

Unraveling information about supranuclear-dense matter from the complete binary neutron star coalescence using future gravitational-wave detector networks

Thursday 13 October 2022 15:00 (10 minutes)

Presenter: PUECHER, Anna (Nikhef)

Session Classification: Data Analysis and Observations

Contribution ID: **21**   Type: **not specified**

Model-independent searches for anisotropic stochastic gravitational wave background

Thursday 13 October 2022 14:30 (10 minutes)

Presenter: SURESH, Jishnu (Université catholique de Louvain)

Session Classification: Data Analysis and Observations

Contribution ID: **22**   Type: **not specified**

REMOTE: Gravitational wave spectral synthesis

Friday 14 October 2022 16:35 (10 minutes)

Presenter: VAN ZEIST, Wouter (Radboud University)

Session Classification: Theory and Astrophysics

Contribution ID: **23**   Type: **not specified**

Detectability of a spatial correlation between stellar mass black hole mergers and Active Galactic Nuclei

Thursday 13 October 2022 16:45 (10 minutes)

Presenter: VERONESI, Niccolò (Leiden Observatory)

Session Classification: Data Analysis and Observations

Contribution ID: **24**   Type: **not specified**

The impact of galaxy redshift uncertainty models on the Hubble constant from gravitational waves

Thursday 13 October 2022 16:35 (10 minutes)

Presenter: TURSKI, Cezary (Ghent University)

Session Classification: Data Analysis and Observations

Contribution ID: **25** Type: **not specified**

Nonlinear effects in the black hole ringdown: absorption-induced mode excitation

Friday 14 October 2022 14:20 (10 minutes)

Presenter: BOSCH, Pablo (GRAPPA - University of Amsterdam)

Session Classification: Theory and Astrophysics

Contribution ID: **26**   Type: **not specified**

Gradient corrections to the one-loop effective action for strong electroweak phase transitions

Friday 14 October 2022 15:00 (10 minutes)

Presenter: CANEVAROLO, Sofia

Session Classification: Theory and Astrophysics

Contribution ID: **27**   Type: **not specified**

Black hole multipoles in higher-derivative gravity

Friday 14 October 2022 14:00 (10 minutes)

Presenter: CANO, Pablo Antonio (KU Leuven)

Session Classification: Theory and Astrophysics

Contribution ID: **28**   Type: **not specified**

Modelling neutron star matter

Friday 14 October 2022 13:50 (10 minutes)

Presenter: CHAR, Prasanta

Session Classification: Theory and Astrophysics

Contribution ID: **29**   Type: **not specified**

The motion of test bodies in curved spacetime and its applications to GWs physics

Friday 14 October 2022 14:40 (10 minutes)

Presenter: DRUART, Adrien (ULB)

Session Classification: Theory and Astrophysics

Contribution ID: **30**   Type: **not specified**

Wave-optics limit of the stochastic gravitational wave background

Thursday 13 October 2022 16:55 (10 minutes)

Presenter: GAROFFOLO, Alice (Leiden University)

Session Classification: Data Analysis and Observations

Contribution ID: **31**
Type: **not specified**

POSTER: Binary dynamics from Einstein-Maxwell theory at second post-Newtonian order using effective field theory

Presenter: GUPTA, Pawan

Session Classification: Poster session

Contribution ID: **32**   Type: **not specified**

Relativistic modelling of EMRIs environment

Friday 14 October 2022 14:50 (10 minutes)

Presenter: MACHET, Ludovico

Session Classification: Theory and Astrophysics

Contribution ID: **33**   Type: **not specified**

Searching higher-derivative extensions to GR in black holes' ringdown

Friday 14 October 2022 14:10 (10 minutes)

Presenter: MAENAUT, Simon (KU Leuven)

Session Classification: Theory and Astrophysics

Contribution ID: **34**   Type: **not specified**

How do binary stars form compact object mergers?

Friday 14 October 2022 16:05 (20 minutes)

Presenter: MARCHANT, Pablo (Institute of Astronomy, KU Leuven)

Session Classification: Theory and Astrophysics

Contribution ID: **35**   Type: **not specified**

Forming merging double compact objects with stable mass transfer

Friday 14 October 2022 16:25 (10 minutes)

Presenter: PICCO, Annachiara (KU Leuven)

Session Classification: Theory and Astrophysics

Contribution ID: **36** Type: **not specified**

Tidally perturbed isolated horizons

Friday 14 October 2022 14:30 (10 minutes)

Presenter: RIBES METIDIERI, Ariadna (Radboud University)

Session Classification: Theory and Astrophysics

Contribution ID: **37** Type: **not specified**

Finding quiescent black holes in massive binaries

Friday 14 October 2022 15:55 (10 minutes)

Presenter: SANA, Hugues (KU Leuven)

Session Classification: Theory and Astrophysics

Contribution ID: **38** Type: **not specified**

REMOTE: SOBBH with LISA: forecasts of background and events detectability in the light of GWTC-3

Friday 14 October 2022 16:45 (10 minutes)

Presenter: TORRADO, Jesus (Université Libre de Bruxelles)

Session Classification: Theory and Astrophysics

Contribution ID: **39**   Type: **not specified**

Gravitational waves from dark matter production

Friday 14 October 2022 15:10 (10 minutes)

Presenter: VANVLASSELAER, Miguel (VUB)

Session Classification: Theory and Astrophysics

Contribution ID: **40** Type: **not specified**

Entanglement Limits in Hybrid Spin-Mechanical GW Detectors

Friday 14 October 2022 09:20 (10 minutes)

Presenter: AGASTI, Souvik (University of Hasselt)

Session Classification: Instrumentation

Contribution ID: 41   Type: **not specified**

POSTER: High resolution compact vertical inertial sensor for atomic quantum gravimeter hybridizing

Presenter: AMOROSI, Anthony (ULiège)

Session Classification: Poster session

Contribution ID: 42 Type: **not specified**

A first Proof-of-Concept for Gravity-Gradient Noise Mitigation with Spatio-Temporal Neural Networks at the Einstein-Telescope

Friday 14 October 2022 11:45 (10 minutes)

Presenter: BERTRAM, David (RWTH Aachen University)

Session Classification: Instrumentation

Contribution ID: 43   Type: **not specified**

Mode mismatch in Advanced Virgo: Commissioning for O4 and future prospects with the phase camera

Friday 14 October 2022 09:00 (10 minutes)

Presenter: DE ABREU SILVÉRIO CABRITA, Ricardo

Session Classification: Instrumentation

Contribution ID: 44   Type: **not specified**

Status of frequency dependent squeezing for AdV+

Friday 14 October 2022 09:10 (10 minutes)

Presenter: GUO, Yuefan (Nikhef)

Session Classification: Instrumentation

Contribution ID: 45   Type: **not specified**

OmniSens - Reimagining Seismic Isolation for the Einstein Telescope

Friday 14 October 2022 10:10 (10 minutes)

Presenter: HOLLAND, Nathan

Session Classification: Instrumentation

Contribution ID: 46   Type: **not specified**

A model for reproducing ice formation in gravitational-wave detectors and studying its impact on thermal noise

Friday 14 October 2022 09:40 (10 minutes)

Presenter: IANDOLO, Guido Alex (GWFP, Maastricht University (Nikhef))

Session Classification: Instrumentation

Contribution ID: 47 Type: **not specified**

Impact of correlated seismic and correlated Newtonian noise on the Einstein Telescope

Friday 14 October 2022 10:20 (10 minutes)

Presenter: JANSSENS, Kamiel Daniel K

Session Classification: Instrumentation

Contribution ID: **48**   Type: **not specified**

Advancements in the Rasnik readout system and applications

Friday 14 October 2022 09:50 (10 minutes)

Presenter: KOUSHIK, Anoop Nagesh

Session Classification: Instrumentation

Contribution ID: 49 Type: **not specified**

Construction and development of position sensors for seismic attenuators of the ETpathfinder experiment

Friday 14 October 2022 10:00 (10 minutes)

Presenter: LI, Pengbo

Session Classification: Instrumentation

Contribution ID: **50**   Type: **not specified**

Development and testing of composite vacuum tubes for Einstein Telescope

Friday 14 October 2022 11:35 (10 minutes)

Presenter: REVATHI, Purnalingam (RWTH Aachen University)

Session Classification: Instrumentation

Contribution ID: **51** Type: **not specified**

E-TEST: A compact low-frequency isolator for large cryogenic mirror

Friday 14 October 2022 11:15 (10 minutes)

Presenter: Mr SIDER, Ameer (PML - Precision Mechatronics Laboratory, Université de Liège, B-4000 Liège, Belgium)

Session Classification: Instrumentation

Contribution ID: **52**   Type: **not specified**

The coatings research lab at Maastricht University

Friday 14 October 2022 09:30 (10 minutes)

Presenter: SPAGNUOLO, Viola (Maastricht University)

Session Classification: Instrumentation

Contribution ID: **53**   Type: **not specified**

POSTER: Towards precise absolute quantum gravimeters

Presenter: TELOI, Mayana (Université libre de Bruxelles)

Session Classification: Poster session

Contribution ID: 54   Type: **not specified**

Leaf-spring suspension of a ultra-high performance vertical inertial sensor used for active seismic isolation

Friday 14 October 2022 11:25 (10 minutes)

Presenter: ZEOLI, Morgane (Université Catholique de Louvain-la-Neuve)

Session Classification: Instrumentation

Contribution ID: **55** Type: **not specified**

POSTER: R&D facility for 2μm optical characterization

Presenter: PASCUCCI, Daniela (Ghent University)

Session Classification: Poster session