

When the M meets the P

Report of Contributions

Contribution ID: 1

Type: **not specified**

συμπλεκτικός and Complexus when two complexities (almost) meet

Thursday, 12 December 2019 15:00 (1 hour)

(joint work with Michel Cahen)

Symplectic geometry has its origins in the Hamiltonian formulation of classical mechanics. Complex geometry is on the crossroad of algebraic and differential geometry. In differential geometry it yields the notion of almost complex structures.

Kähler geometry is at the intersection of symplectic and complex geometry.

I shall recall examples and properties of those three geometries and examples of symplectic manifolds which are not Kähler.

All symplectic manifolds admit almost complex structures.

I shall exhibit geometrical structures associated to (non complex) almost complex structures on a symplectic manifold.

Presenter: Dr GUTT, Simone (ULB)

Session Classification: IRMP

Contribution ID: 2

Type: **not specified**

Exploring new frontiers in strong-field gravity with gravitational waves

Thursday, 12 December 2019 14:00 (1 hour)

The recent detections of gravitational waves from merging black holes and neutron stars have established gravitational waves as a new cosmological messenger and opened unique opportunities for probing gravity and matter in unexplored regimes. I will discuss the basic physics of gravitational waves, the facilities and methods for detecting and interpreting the signals, and the remarkable insights we have gained from the observations to date. I will conclude with an outlook onto the exciting prospects and challenges for the next years as the field of gravitational wave physics moves from the discovery era to one of precision physics.

Presenter: Dr HINDERER, Tanja (university of amsterdam)

Session Classification: IRMP

Contribution ID: 5

Type: **not specified**

Have we detected primordial black holes?

Thursday, 12 December 2019 16:20 (7 minutes)

Presenter: CLESSE, Sebastien

Session Classification: IRMP: gong session

Contribution ID: **13**

Type: **not specified**

Measurements of the $pp \rightarrow ttW$ process at the LHC

Thursday, 12 December 2019 16:27 (7 minutes)

Presenter: DAVID, Pieter (CP3)

Session Classification: IRMP: gong session

Contribution ID: 14

Type: **not specified**

A characterisation of Lie algebras via action representability

Thursday, 12 December 2019 16:34 (7 minutes)

Presenter: VIENNE, Corentin

Session Classification: IRMP: gong session

Contribution ID: 15

Type: **not specified**

MURAVES: An experiment of muon radiography at Vesuvius

Thursday, 12 December 2019 16:48 (7 minutes)

Presenter: WUYCKENS, Sophie (Universite Catholique de Louvain (UCL) (BE))

Session Classification: IRMP: gong session

Contribution ID: **16**

Type: **not specified**

Einstein's relations in and out of equilibrium

Thursday, 12 December 2019 16:41 (7 minutes)

Presenter: Dr LAZARESCU, Alexandre

Session Classification: IRMP: gong session

Contribution ID: 17

Type: **not specified**

Muon collider: a unique discovery and precision machine

Thursday, 12 December 2019 17:02 (7 minutes)

Presenter: MANTANI, Luca (CP3)

Session Classification: IRMP: gong session

Contribution ID: **18**

Type: **not specified**

Quandles

Thursday, 12 December 2019 16:55 (7 minutes)

Presenter: RENAUD, Francois

Session Classification: IRMP: gong session

Contribution ID: **19**

Type: **not specified**

Weakly confined Freud ensemble

Thursday, 12 December 2019 17:09 (7 minutes)

Presenter: MINAKOV, Oleksandr

Session Classification: IRMP: gong session

Contribution ID: **20**

Type: **not specified**

SMEFT: 1-loop implications

Thursday, 12 December 2019 17:16 (7 minutes)

Presenter: VASQUEZ TOCORA, Andres Felipe (UCLouvain)

Session Classification: IRMP: gong session