



# Solvay-PI-APC workshop on "Cosmological Frontiers in Fundamental Physics"

VENUE: ULB, Campus de la Plaine, Brussels Building N.O. - 5th Floor - SOLVAY ROOM

## Program (May 14 - 16, 2018)

### MONDAY 14 MAY 2018

- 09:00 - 09:15      Registration
- 09:15 - 09:30      Welcome Address
- 09:30 - 10:15      Vijay Balasubramanian: *Statistical couplings: a signature of entanglement with dark matter*
- 10:15 - 10:45      COFFEE BREAK (in hall adjacent to the solvay room)**
- 10:45 - 11:30      Jorge Santos: *Connecting the weak gravity conjecture to the weak cosmic censorship?*
- 11:30 - 12:15      Claudia De Rham: *Title TBA*
- 12:15 - 14:00      LUNCH BREAK (at the university's cafeteria)**
- 14:00 - 14:45      Tom Rudelius: *Emergence of the Swampland and Weak Gravity Conjectures*
- 14:45 - 15:30      Luis Ibanez: *Quantum gravity constraints on Particle Physics*
- 15:30 - 16:00      COFFEE BREAK (in hall adjacent to the solvay room)**
- 16:00 - 17:00      François Englert: *A story of Physics and Friendship*
- 17:00                Welcome drink (IN HALL ADJACENT TO THE SOLVAY ROOM)

### TUESDAY 15 MAY 2018

- 09:30 - 10:15      Gia Dvali: *Black holes as brains: Neural networks with area-law entropy and holography*
- 10:15 - 10:45      COFFEE BREAK (in hall adjacent to the solvay room)**
- 10:45 - 11:30      Arthur Hebecker: *Axionic Field Ranges, Weak Gravity and Euclidean Wormholes*

- 11:30 - 12:15 Gary Shiu: *The String Swampland and Cosmological Frontiers*
- 12:15 - 12:25** **GROUP PHOTO**
- 12:25 - 14:00** **LUNCH BREAK (at the university's cafeteria)**
- 14:00 - 14:45 Kyriakos Papadodimas: *Traversable wormholes and the interior of black hole microstates*
- 14:45 - 15:30 Niayesh Afshordi: *Quantum Black Holes in the Sky: From Quantum Gravity, to Cosmology and Astrophysics*
- 15:30 - 16:00** **COFFEE BREAK (in hall adjacent to the solvay room)**
- 16:00 - 16:45 Willy Fischler: *A holographic approach to cosmology*
- 16:45 - 17:30 William Cottrell: *Evidence and Consequences of Weak Gravity*

## **WEDNESDAY 16 MAY 2018**

- 09:30 - 10:15 Erik Verlinde: *Towards Non-AdS Holography and Emergent Gravity in de Sitter space*
- 10:15 - 10:45** **COFFEE BREAK (in hall adjacent to the solvay room)**
- 10:45 - 11:30 Gui Pimentel: *Inflationary Correlators from the Boundary*
- 11:30 - 12:15 Richard Woodard: *Infrared Effects in Cosmological Quantum Field Theory*
- 19:30** **BANQUET (Plaza Hotel, Blvd Adolphe Max 118-126, 1000 Brussels)**