

Ph.D. day of the Institut de Physique Théorique

Tuesday December 8th, 2020

100% online

=== Session 1 ===

- 09h30- 9h50 **Stavros Mougiakakos** (dir. P. Vanhove) "Scattering Amplitudes in effective gravitational theories and Gravitational Waves"
- 09h50-10h10 **Massimiliano Riva** (dir. F. Vernizzi) "Testing gravity with gravitational waves"
- 10h10-10h30 **Cheng Peng** (dir. R. Minasian) "String theory and quantum field theory in various dimensions"
- 10h30-10h50 **Francesca Mignacco** (dir. P. Urbani & L. Zdeborova) "Understanding the dynamics of gradient-descent algorithms in supervised learning problems"

10 min. break

=== Session 2 ===

- 11h00-11h20 **Adrien Ooms** (dir. B. Eynard) "Topological recursion and resurgence"
- 11h20-11h40 **Nivesvivat Rongvoram** (dir. S. Ribault) "Logarithmic CFTs at generic central charge"
- 11h40-12H00 **Gwenael Ferrando** (dir. D. Serban) "Integrable Spin Chains: QQ-system and Transfer Matrices"
- 12h00-12h20 **Linnea G. Samuelsson** (dir. H. Saleur) "The action of the Virasoro algebra in quantum spin chains"

10 min. break

=== Session 3 ===

1st year students presentations (~2 minutes each)

12h30-12h55

Alexis Boudon (Gravitational dynamic of scalar field dark matter), **Raquel Galazo Garcia** (Scalar dark matter dynamics), **Silvia Georgescu** (Holography beyond AdS), **Ngoc Duc Le** (Quantum Hall effect in graphene and p-n junction), **Hector Parra de Freitas** (The limits of the string landscape), **Erwan Taillanter** (Analyse statistique du trafic routier urbain), **Dimitrios Toulikas** (de Sitter vacua in String Theory), **Xavier Valcarce** (Device-independent certification: from Foundations to Applications), **Julian Zivy** (Quantum Turing Machine with a Spin-ensemble quantum memory).

Lunch break

=== Session 4 ===

- 14h30-14h50 **Vincent Verbavatz** (dir. M. Barthelemy) "Modelling urban systems"
- 14h50-15h10 **Maxence Grandadam** (dir. C. Pépin) "Fractionalization and pseudogap in cuprate superconductors"
- 15h10-15h30 **Ingrid Holm** (dir J.-J. Carrasco) "Loop-Level Double-Copy for Massive Quantum Particles"
- 15h30-15h50 **Sebastian Poegel** (dir. D. Kosower) "Rational Remainders of Two-loop All-Plus Amplitudes"

20 min. break

=== Session 5 ===

- 16h10-16h30 **Yixuan Li** (dir. I. Bena) "Black hole Microstate Geometries in String Theory"
- 16h30-16h50 **Anthony Houpe** (dir. I. Bena) "Black hole microstate geometries"
- 16h50-17h10 **Bernardo Fraiman** (dir. M. Grana) "Dualities and symmetries in String Theory"
- 17h10-17h30 **Valentin Baillard** (dir. B. Eynard) "Large Deviations for random matrices with eigenvalues on complex paths"