

Session Program

16-19 Dec 2024

**Asymptotic Safety meets Particle Physics &
Friends**

Talks

DESY Hamburg, FLASH experimental hall "Albert Einstein"

Monday 16 December

13:45

Talks: BSM I

Session | **Location:** DESY Hamburg, FLASH experimental hall "Albert Einstein"

13:45–14:00 **Welcome**

Speaker

Daniel Litim

14:00–14:45

Probing Quantum Gravity Effects via Magnetic Conversion of Electromagnetic Waves into Gravitational Waves and Vice Versa?

Speaker

Andreas Ringwald

14:45–15:15

The cosmological constant problem and the effective potential of a gravity-coupled scalar

Speaker

Roberto Percacci

15:15–15:45 **Coffee**

15:45–16:30

Exploring the Majorana Landscape: Planck Safe Models with Majorana Fermions

Speaker

Kai Jürgen Spychala

16:30–17:00 **Avoiding quantum gravity-induced chiral symmetry breaking**

Speaker

Gabriel Picanco Costa

17:00–17:45 **Asymptotic Safety and a CPT-Symmetric Universe**

Speaker

Latham Boyle

17:45–18:00 **Discussion**

18:15

Tuesday 17 December

09:30

Talks: QFT / CFT

Session | **Location:** DESY Hamburg, FLASH experimental hall "Albert Einstein"

09:30–10:15 **A Nonlocal Schwinger Model**

Speaker

Christopher Herzog

10:15–10:45 **Emergent Symmetries in 2D Dirac Systems**

Speaker

Max Uetrecht

10:45–11:15 **Coffee**

11:15–12:00 **Dilaton Physics from Asymptotic Freedom**

Speaker

Charlie Cresswell-Hogg

12:00–12:30 **Quantum critical Dirac semimetals and finite-temperature effects**

Speakers

Mireia Tolosa Simeon, Mireia Tolosa Simeón

12:30

14:00

Talks: Quantum Gravity with and beyond Perturbation Theory

Session | **Location:** DESY Hamburg, FLASH experimental hall "Albert Einstein"

14:00–14:45 **Fixed Points of Quantum Gravity from Dimensional Regularisation**

Speaker

Mr Yannick Kluth

14:45–15:30 **Asymptotic Safety within on-shell perturbation theory**

Speaker

Renata Ferrero

15:30–16:00 **Coffee**

16:00–16:45 **Exploring Asymptotically Safe Quantum Gravity on the lattice**

Speaker

Marc Schiffer

16:45–17:30 **Substructures of the Weyl group**

Speaker

Riccardo Martini

17:30–18:00 **Discussion**

18:00

Wednesday 18 December

09:30

Talks: QFT at finite Temperature

Session | **Location:** DESY Hamburg, FLASH experimental hall "Albert Einstein"

09:30–10:15 **A seeded electroweak phase transition**

Speaker

Dr Simone Blasi

Location

DESY Main Auditorium, Main Auditorium

10:15–10:45

UV complete local field theory of persistent symmetry breaking in 2+1 dimensions

Speaker

Bilal Hawashin

Location

DESY Main Auditorium

10:45–11:15 **Coffee**

11:15–12:00

BSMPT v3 A Tool for Phase Transitions and Primordial Gravitational Waves in Extended Higgs Sectors

Speakers

João Viana, João Viana

Location

DESY Main Auditorium

12:00–12:30 **Planck Safe Phase Transitions in a Complex Singlet Model**

Speaker

Moritz Bosse

Location

DESY Main Auditorium

12:30

14:00

Talks: Quantum Gravity / Scattering

Session | **Location:** DESY Hamburg, FLASH experimental hall "Albert Einstein"

14:00–14:45 **Entanglement in flavored scalar scattering**

Speaker

Enrico Maria Sessolo

14:45–15:15 **Multiloop calculations (with MaRTIn)**

Speaker

Joachim Brod

15:15–15:45 **Coffee**

15:45–16:30 **Extended scalar sectors**

Speaker
Tania Natalie Robens

16:30–17:00 **Physical running in higher derivative gravity**

Speaker
Diego Buccio

17:00–17:30 **Spectral Functions of Lorentzian Quantum Gravity**

Speaker
Gabriel Assant

17:30–18:00 **Discussion**

18:00

Thursday 19 December

09:30

Talks: BSM II

Session | **Location:** DESY Hamburg, FLASH experimental hall "Albert Einstein"

09:30–10:00 **Vacuum Stability in the Standard Model and Beyond**

Speaker

Tom Steudtner

10:00–10:45 **Extraction of top quark mass and strong coupling in experiment**

Speaker

Katerina Lipka

10:45–11:15 **Coffee**

11:15–12:00 **TBD**

Speaker

Geraldine Servant

12:00–12:30 **Searching for a dark matter induced galactic axion gradient**

Speaker

Juri Smirnov

12:30–13:00 **Discussion and Goodbye**

13:00