

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