

## **Session Program**

**13-15 Dec 2022**

**Asymptotic Safety meets Particle Physics and  
Friends**

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DESY Hamburg, FLASH experimental hall "Albert Einstein"

# Tuesday 13 December

10:00

## Asymptotic Safety meets Particle Physics and Friends: Asymptotic Safety meets Particle Physics and Friends

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

10:00-10:40 **Asymptotic safety as a limit of asymptotic freedom**

**Speaker**  
Roberto Percacci

10:40-11:20 **Asymptotic safety guaranteed at four loop**

**Speaker**  
Tom Steudtner

11:20-11:40 **Break/Discussion**

11:40-12:20 **Matching effective field theories**

**Speaker**  
Anders Eller Thomsen

12:20-12:30 **Discussion**

12:30

14:00

## Asymptotic Safety meets Particle Physics and Friends: Asymptotic Safety meets Particle Physics and Friends

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

14:00-14:40 **(TBA) Why should phenomenologists care about asymptotic safety?**

**Speaker**  
Gudrun Hiller

14:40-15:20 **Asymptotically free UV completions of Higgs models**

**Speakers**  
Luca Zambelli, Luca Zambelli

15:20-15:50 **Break/Discussion**

15:50-16:30 **Phenomenology with trans-Planckian asymptotic safety**

**Speaker**  
Kamila Kowalska

16:30-17:00 **Vector-like Fermion Portals into Higgs Stability**

**Speaker**  
Tim Höhne

17:00-17:30 **(TBA) Searches for flavorful VLLs**

**Speaker**  
Merve Nazlim Agaras

18:00

17:30-18:00

**Discussion**

# Wednesday 14 December

09:30

## Asymptotic Safety meets Particle Physics and Friends

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

09:30–10:10 **SO(4) multicriticality of 2D fermions**

**Speaker**

Michael Scherer

10:10–10:40 **Criticality in Gross-Neveu and Gross-Neveu-Yukawa theories**

**Speaker**

Charlie Cresswell-Hogg

10:40–11:00 **Break**

11:00–11:30 **Fixed points in Super Yang-Mills theories with chiral superfields**

**Speaker**

Gabriel Picanco Costa

11:30–12:10 **(TBA) Fixed points of quantum gravity**

**Speaker**

Yannick Kluth

12:10–12:30 **Discussion**

12:30

14:00

## Asymptotic Safety meets Particle Physics and Friends

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

14:00–14:40 **ALPs in the asymptotically safe landscape**

**Speaker**

Gustavo Pazzini de Brito

14:40–15:10 **Z' constraints with trans-Planckian safety**

**Speaker**

Daniele Rizzo

15:10–15:50 **Proton Stability and Quantum Gravity**

**Speaker**

Shouryya Ray

15:50–16:20 **Break**

16:20–16:50 **Asymptotically Safe Gravity with Higher Order Invariants**

**Speaker**

David Dullaway

16:50–17:30 **UV/IR mixing & causal diamonds**

**Speaker**  
Heinrich Päs

17:30-18:00 **Discussion**

18:00

# Thursday 15 December

09:30

## Asymptotic Safety meets Particle Physics and Friends

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

09:30–10:10 **Anomalous dimensions at five loops**

**Speaker**

Dr Andreas Martin Maier

10:10–10:50 **Spectral functions of gauge theories and gravity**

**Speaker**

Manuel Reichert

10:50–11:20 **(TBA) Quantum cubic Einstein gravity**

**Speaker**

Gabriel Assant

11:20–11:50 **Break**

11:50–12:20

### **The Asymptotically Safe Standard Model: From quantum gravity to dynamical chiral symmetry breaking**

**Speaker**

Alvaro Pastor Gutierrez

12:20–13:00 **(TBA) Quo vadis model building**

**Speaker**

Christophe Grojean

13:00–13:30 **Discussion and Closing**

14:10