

Session Program

Sep 25 - 27, 2024



Young Scientists Meeting of the CRC TRR 257

Young Scientist Talks

KIT, EBI Hörsaal
Engler-Bunte-Ring 1-7 76131 Karlsruhe

Wed, September 25

1:00 PM

Young Scientist Talks: Session 1

Session | **Location:** KIT, EBI Hörsaal, Engler-Bunte-Ring 1-7 76131 Karlsruhe | **Convener:** Marius Höfer

13:00 – 13:25 **Satisfiability modulo theories solvers and particle physics**

Speaker

Bakar Chargeishvili

13:25 – 13:50 **AsyInt for massive two-loop four-point integrals at high energies**

Speaker

Hantian Zhang

13:50 – 14:15

Emulation of cosmic-ray antideuteron fluxes from dark matter annihilation

Speaker

Lena Rathmann

2:15 PM

4:10 PM

Young Scientist Talks: Session 2

Session | **Location:** KIT, EBI Hörsaal, Engler-Bunte-Ring 1-7 76131 Karlsruhe | **Convener:** Hantian Zhang

16:10 – 16:35

Higgs boson production in weak-boson fusion and $H \rightarrow b\bar{b}$ decay at NNLO with realistic event selection criteria

Speaker

Ivan Novikov

16:35 – 17:00 **Anomalous Couplings in Higgs plus Jet Production**

Speaker

Benjamin Campillo

5:00 PM

Thu, September 26

9:30 AM

Young Scientist Talks: Session 3

Session | **Location:** KIT, EBI Hörsaal, Engler-Bunte-Ring 1-7 76131 Karlsruhe | **Convener:** Ivan Novikov

09:30 – 09:55

Quark-Mass Effects in Higgs Production

Speaker

Tom Schellenberger

09:55 – 10:20

Towards HH at NNLO QCD: the α_s^2 contribution

Speaker

Marco Vitti

10:20 – 10:45

Yukawa- and Higgs self-coupling corrections to di-Higgs production

Speaker

Augustin Vestner

10:45 AM

11:30 AM

Young Scientist Talks: Session 4

Session | **Location:** KIT, EBI Hörsaal, Engler-Bunte-Ring 1-7 76131 Karlsruhe | **Convener:** Marco Vitti

11:30 – 11:55

Heavy sterile Neutrinos from B decays and new QCD corrections to their semi-hadronic decay rates

Speaker

Mr Tim Kretz

11:55 – 12:20

Nonleptonic B-decays at NNLO

Speaker

Manuel Egner

12:20 – 12:45

A look into the $f_0(980)$ through the lens of rare B meson decays

Speaker

Jaime del Palacio Lirola

12:45 PM

Fri, September 27

9:30 AM

Young Scientist Talks: Session 5

Session | **Location:** KIT, EBI Hörsaal, Engler-Bunte-Ring 1-7 76131 Karlsruhe | **Convener:** Marco Bonetti

09:30 – 09:55 **N-jettiness soft function at NNLO in QCD**

Speaker

Prem Agarwal

09:55 – 10:20 **Four top final states - fixed order NLO vs. NLO+PS**

Speaker

Manal Alsairafi

10:20 – 10:45 **Heavy-to-light form factors to three loops**

Speaker

Jakob Müller

10:45 AM

11:30 AM

Young Scientist Talks: Session 6

Session | **Location:** KIT, EBI Hörsaal, Engler-Bunte-Ring 1-7 76131 Karlsruhe | **Convener:** Dr Benedetta Belfatto

11:30 – 11:55 **The gradient flow extended to the Standard Model**

Speaker

Janosch Borgulat

11:55 – 12:20 **Choosing the Right Features for Anomaly Detection**

Speaker

Marie Hein

12:20 – 12:45

Lorentz-Equivariant Geometric Algebra Transformers for High-Energy Physics

Speaker

Jonas Spinner

12:45 PM

2:15 PM

Young Scientist Talks: Session 7

Session | **Location:** KIT, EBI Hörsaal, Engler-Bunte-Ring 1-7 76131 Karlsruhe | **Convener:** Dr Surabhi Tiwari

14:15 – 14:40 **Higher-order QED×QCD Corrections To Semi-leptonic Decays**

Speaker

Francesco Moretti

14:40 – 15:05

Can we predict $B \rightarrow K a_1$ decay rate without specifying UV physics?

Speaker

Xiyuan Gao

15:05 – 15:30 **NNLO QCD corrections to $\Delta\Gamma$ in the B anti- B system**

Speaker

Pascal Reeck

3:30 PM