Young Scientists Meeting of the CRC TRR 257

Report of Contributions

https://indico.kit.edu/e/3705

Contribution ID: **1** Type: **not specified**

NLO electroweak corrections to gg -> HH

Tuesday, October 17, 2023 9:30 AM (30 minutes)

We consider the next-to-leading order electroweak corrections to the Higgs boson pair productions in gluon fusion. This requires the computation of two-loop four-point amplitudes with massive internal particles such as top quarks, Higgs and gauge bosons. We perform analytic calculations both in the high-energy and large top-quark mass limits. In particular, we show that our high energy expansion can even yield precise results above p_t 120 GeV. The technical challenges are described and results for the virtual corrections are presented.

Authors: ZHANG, Hantian (Karlsruhe Institute of Technology); Prof. STEINHAUSER, Matthias (KIT); SCHOENWALD, Kay (KIT); DAVIES, Joshua (KIT)

Presenter: ZHANG, Hantian (Karlsruhe Institute of Technology)

Session Classification: Young Scientists Talks

Contribution ID: **2** Type: **not specified**

Phenomenological Aspects of Flavoured Majorana Dark Matter

Tuesday, October 17, 2023 5:30 PM (30 minutes)

As the non-observation of simple WIMP candidates puts these models under severe pressure, we introduce an extended dark sector with a non-trivial flavor structure. The model extends the Standard Model by a Majorana flavor triplet and a scalar mediator which couples Dark Matter to right-handed up-type quarks. This allows for a single new source of flavor and CP violation. The rich phenomenology of this model can be studied by combining constraints of various probes. Furthermore, we explore the possibility of a conversion-driven freeze-out. This can enhance the relic abundance and therefore open up new regions in the parameter space.

Author: RATHMANN, Lena

Presenter: RATHMANN, Lena

Session Classification: Young Scientists Talks

Contribution ID: **3** Type: **not specified**

Subleading effects in soft-gluon emission at one-loop in QCD

Tuesday, October 17, 2023 3:00 PM (30 minutes)

While the knowledge of the leading-power behaviour of QCD amplitudes in the soft limit is crucial for the construction of subtraction schemes, next-to-leading power (NLP) results can be used to increase precision, which has successfully been applied to QED calculations. In this talk, I will present a universal expression for the soft limit of one-loop QCD amplitudes at NLP, that is, an extension of the LBK theorem to the loop level. The calculation was done with the Expansion by Regions method. An NLP collinear expression for general tree-level amplitudes was obtained along the way while analysing the collinear region.

Authors: ESCHMENT, Felix (RWTH Aachen - TTK); SCHELLENBERGER, Tom (RWTH Aachen); Prof. CZAKON, Michal (RWTH Aachen)

Presenter: ESCHMENT, Felix (RWTH Aachen - TTK)

Session Classification: Young Scientists Talks

Contribution ID: **4** Type: **not specified**

Top-quark loops for precision Higgs physics

Wednesday, October 18, 2023 9:00 AM (30 minutes)

Theoretical calculations for Higgs-related processes at the LHC have reached an impressive level of accuracy. One of the technical challenges that still need to be addressed is the computation of two-loop box diagrams with massive internal lines, e.g. those arising in the NLO QCD corrections for $gg \to ZH$ and $gg \to ZZ$.
In this talk I will present a method for approximating these diagrams analytically, via an expansion in terms of a small transverse momentum. Combining this approximation with a complementary expansion in the high-energy limit, the two-loop amplitude can be efficiently evaluated over the complete phase space.

Author: VITTI, Marco (Karlsruhe Institute of Technology)

Presenter: VITTI, Marco (Karlsruhe Institute of Technology)

Session Classification: Young Scientists Talks

Contribution ID: **5** Type: **not specified**

Top-quark pair production with two isolated photons at NLO QCD

Tuesday, October 17, 2023 11:00 AM (30 minutes)

In this talk we present the calculation of NLO QCD corrections to $pp \to t\bar{t}\gamma\gamma$ in the dilepton and lepton+jet decay channel. The top-quark and W-boson decays are performed in the narrow width approximation preserving spin correlations. We discuss the size of NLO QCD corrections at the integrated and differential fiducial level. In addition, we investigate the distribution of photon bremsstrahlung in $t\bar{t}$ production and its decays, as well as the mixed contribution in which photons occur simultaneously in the production and decays of the top-quark pair.

Author: STREMMER, Daniel (RWTH Aachen University)

Presenter: STREMMER, Daniel (RWTH Aachen University)

Session Classification: Young Scientists Talks

Contribution ID: **6** Type: **not specified**

Numerical Multi-Loop Calculations with pySecDec

Tuesday, October 17, 2023 3:30 PM (30 minutes)

We present a new version of pySecDec, a program to calculate multi-loop integrals numerically. The main theory and underlying algorithms will be explained, along with an overview of new features from the latest release. In addition, examples and timings for multi-loop integrals needed for LHC precision physics will be provided.

Authors: HEINRICH, Gudrun (KIT); JONES, Stephen (Durham University); KERNER, Matthias (KIT); MAGERYA, Vitaly; OLSSON, Anton (Karlsruhe Institute of Technology); SCHLENK, Johannes (University of Zurich)

Presenter: OLSSON, Anton (Karlsruhe Institute of Technology)

Session Classification: Young Scientists Talks

Contribution ID: **7** Type: **not specified**

How to be a Kind and Happy Researcher

Monday, October 16, 2023 4:15 PM (2 hours)

Author: GEOFFRAY, Emma (Heidelberg University)

Presenter: GEOFFRAY, Emma (Heidelberg University)

Session Classification: Workshop

Contribution ID: **8** Type: **not specified**

Non-factorizable corrections to Higgs production in Vector Boson Fusion

Tuesday, October 17, 2023 10:00 AM (30 minutes)

In this talk, I will present two improvements in the understanding of the non-factorizable corrections to Higgs production in VBF. One is to go beyond eikonal approximation and obtain the first power correction. Another is to address the problem of strong dependence on the renormalization scale of the leading eikonal corrections. The new sub-leading contribution will change the current estimate of the non-factorizable corrections to VBF cross section by about 20 percent. Furthermore, including the effects of the running coupling constant reduces the scale dependence in cross section and kinematic distributions.

Author: Dr LONG, Mingming (KIT-TTP)

Presenter: Dr LONG, Mingming (KIT-TTP)

Session Classification: Young Scientists Talks

Contribution ID: **9** Type: **not specified**

NLO QCD predictions for off-shell $t\bar{t}W$ production in association with a light jet at the LHC

Tuesday, October 17, 2023 4:00 PM (30 minutes)

We present full off-shell NLO QCD results for $pp \to t\bar{t}W^+ j + X$. We concentrate on the multi-lepton decay channel at the LHC with $\sqrt{s} = 13$ TeV. In our calculation off-shell top quarks and gauge bosons are described by Breit-Wigner propagators, furthermore, double-, single- as well as non-resonant top-quark contributions along with all interference effects are consistently incorporated at the matrix element level. We present results for both integrated and differential fiducial cross sections for various renormalisation and factorization scales and different PDF sets. Lastly we investigate the effects of the additional jet activity by comparing $pp \to e^+\nu_e\,\mu^-\bar{\nu}_\mu\,\tau^+\nu_\tau\,b\bar{b}\,j + X$ and $pp \to e^+\nu_e\,\mu^-\bar{\nu}_\mu\,\tau^+\nu_\tau\,b\bar{b} + X$.

Author: REINARTZ, Minos (RWTH Aachen University)

Presenter: REINARTZ, Minos (RWTH Aachen University)

Session Classification: Young Scientists Talks

Contribution ID: **10** Type: **not specified**

Four top final states with NLO accuracy in perturbative QCD: 4 lepton decay channel

Tuesday, October 17, 2023 12:00 PM (30 minutes)

In this talk, I will present NLO QCD results for the process $pp \to tt\overline{t}\overline{t}$, focusing on the 4-lepton channel at the LHC with $\sqrt{s} = 13.6$ TeV. In our calculation, the top quark and the W boson are treated in the Narrow Width Approximation (NWA). We are analyzing our findings in two distinct situations: a full one where we have incorporated QCD corrections during both the production and decay processes of the top quarks, and another where we have only considered QCD corrections at the production stage, assuming that all unstable particles decay with LO accuracy.

Authors: Mr DIMITRAKOPOULOS, Nikolaos (RWTH Aachen University); WOREK, Malgorzata (RWTH Aachen University)

Presenter: Mr DIMITRAKOPOULOS, Nikolaos (RWTH Aachen University)

Session Classification: Young Scientists Talks

Contribution ID: **11** Type: **not specified**

Back to the Roots: Tree-Based Algorithms for Weakly Supervised Anomaly Detection

Wednesday, October 18, 2023 1:30 PM (30 minutes)

Weakly supervised methods have emerged as a powerful tool for model agnostic anomaly detection at the LHC. While these methods have shown remarkable performance on specific signatures such as di-jet resonances, their application in a more model-agnostic manner requires dealing with a larger number of potentially noisy input features. We show that neural networks struggle with noisy input features and that this issue can be solved by using boosted decision trees. Overall, boosted decision trees have a superior performance in the weakly supervised setting than neural networks. Additionally, we significantly improve the performance by using an extended set of features.

Authors: FINKE, Thorben (RWTH Aachen University); HEIN, Marie (RWTH Aachen University); KASIECZKA, Gregor (Universität Hamburg); KRÄMER, Michael (RWTH Aachen University); MÜCK, Alexander (RWTH Aachen University); PRANGCHAIKUL, Parada (Universität Hamburg); QUADFASEL, Tobias (Universität Hamburg); SHIH, David (Rutgers University); SOMMERHALDER, Manuel (Universität Hamburg)

Presenter: HEIN, Marie (RWTH Aachen University)

Session Classification: Young Scientists Talks

Contribution ID: **12** Type: **not specified**

Inclusive $B \to X_c \ell \bar{\nu}$ to order 1/m^5 and the precision determination of Vcb

Tuesday, October 17, 2023 9:00 AM (30 minutes)

The Heavy Quark Expansion has become the major tool for precision calculations for inclusive heavy hadron decays. The HQE is an expansion in $1/m_b$. Recently, moments of the dilepton spectrum of inclusive $B \to X_c \ell \bar{\nu}$ were used to precisely extract the CKM matrix element V_{cb}. Usually, one assumes that the charm quark is heavy, leading to $\Lambda_{\rm QCD}^n/m_c^n$-contributions. A consistent power counting therefore needs to be set up. Numerically, we find that $m_c^2 \sim m_b \Lambda_{\rm QCD}$. Therefore, m_c^2 should be counted as one power of m_b. Consequently, we need to include $1/m_b^3 \cdot 1/m_c^2$-contributions to complete the existing calculation at $\mathcal{O}(1/m_b^4)$, which we will present here.

Authors: Mr MILUTIN, Ilija (University of Siegen); VOS, Keri (University of Maastricht); MANNEL, Thomas (Siegen University)

Presenter: Mr MILUTIN, Ilija (University of Siegen)

Session Classification: Young Scientists Talks

Contribution ID: **13** Type: **not specified**

Axion-like particle reconstruction and experimental design with simulation-based inference

Wednesday, October 18, 2023 12:00 PM (30 minutes)

Axion-like particles (ALPs) arise in BSM theories with global symmetry breaking. Beam-dump experiments have been constructed and proposed to look for them at the sub-GeV scale. Given a successful signal observation, would we be able to reconstruct the ALP properties even from inaccurate detectors? We use a simulation-based inference approach to reconstruct the posterior probability of the ALP parameters. The derived posterior is both narrow and reliable. Moreover, the neural network can be quickly trained for different detector properties, making it an ideal framework for optimizing experimental design

Author: Dr MORANDINI, Alessandro (KIT, IAP)

Co-authors: FERBER, Torben (KIT ETP); KAHLHOEFER, Felix (KIT)

Presenter: Dr MORANDINI, Alessandro (KIT, IAP)

Session Classification: Young Scientists Talks

Contribution ID: **14** Type: **not specified**

Higgs Production With Full Quark Mass Dependence

Monday, October 16, 2023 2:45 PM (30 minutes)

We present new results for the Higgs production cross section in the gluon fusion channel at NNLO in QCD with the inclusion of top, bottom and charm mass effects. With these results one of the largest remaining uncertainties on the Higgs production cross section is eliminated.

Authors: SCHELLENBERGER, Tom (RWTH Aachen); ESCHMENT, Felix (RWTH Aachen - TTK); Prof. CZAKON, Michal (RWTH Aachen)

Presenter: SCHELLENBERGER, Tom (RWTH Aachen)

Session Classification: Young Scientists Talks

Contribution ID: **16** Type: **not specified**

Precision tests of the Standard Model in global SMEFT analyses: Fitting with a CLEW

Wednesday, October 18, 2023 3:00 PM (30 minutes)

Recent examinations of the semileptonic charged-current have underscored discrepancies with the Standard Model, particularly in the Cabibbo Angle Anomaly, which demonstrates a 3-sigma deviation. We undertake a rigorous analysis using SMEFT to shed light on potential BSM sources of the Cabibbo anomaly. By integrating Collider processes, Low-energy processes, and EWPO, we establish a holistic CLEW framework, dedicated to a flavor-assumption-independent analysis sidelining severe phenomenological constraints. We have also incorporated the Akaike Information Criterion, which promotes a model that not only aligns well with experimental data but also circumvents unnecessary complexities, accentuating the challenges and prospective avenues for model-independent global analyses.

Author: TONG, Tom (University of Siegen)

Presenter: TONG, Tom (University of Siegen)

Session Classification: Young Scientists Talks

Contribution ID: **17** Type: **not specified**

Looking for Massive ALPs from SN1987A with Cherenkov Detectors

Wednesday, October 18, 2023 11:30 AM (30 minutes)

In this talk I present new constraints on the axion-nucleon coupling g_{aNN} for massive ALPs using SN1987A. Standard arguments that restrict the energy loss of core-collapse supernovae are used, and novel bounds from modern water Cherenkov detectors are derived for axion masses in the MeV range. Recasting the invisible nucleon decay data of SNO+, a new exclusion limit can be found in the range of $7.7 \times 10^{-7}\,\mathrm{GeV}^{-1}$ to $5.0 \times 10^{-4}\,\mathrm{GeV}^{-1}$ for masses between 170 keV and 400 keV. Thus, water Cherenkov detectors allow to extend the constraints by roughly three additional orders of magnitude.

Author: Mr KRETZ, Tim (Karlsruher Institut für Technologie (KIT - TTP))

Co-author: Dr ZIEGLER, Robert (KIT)

Presenter: Mr KRETZ, Tim (Karlsruher Institut für Technologie (KIT - TTP))

Session Classification: Young Scientists Talks

Contribution ID: **18** Type: **not specified**

Higgsstrahlung and Higgs production beyond the Standard Model

Wednesday, October 18, 2023 9:30 AM (30 minutes)

The status of Higgsstrahlung and single Higgs production cross-section predictions with the program SusHi is presented. It includes predictions in the Standard Model but also other models like the MSSM. A discussion of the calculation of total cross sections is followed by a description of the calculation of the invariant mass distribution of the Higgsstrahlung cross section. Lastly, methods for the implementation of the calculation of fully differential cross sections as a possible upcoming feature of SusHi is elaborated which results in a short introduction to subtraction schemes.

Author: KLEIN, Sven Yannick (TTK - RWTH Aachen University)

Presenter: KLEIN, Sven Yannick (TTK - RWTH Aachen University)

Session Classification: Young Scientists Talks

Contribution ID: **19** Type: **not specified**

Linear power corrections to hadron collider processes with top-quarks

Tuesday, October 17, 2023 11:30 AM (30 minutes)

In this talk the $\mathcal{O}(\Lambda_{QCD})$ corrections to processes with top-quarks will be discussed. A general method to compute these corrections based on renormalon calculus and the Low-Burnett-Kroll theorem will be discussed. We will show that linear power corrections vanish for the total cross-section. We also compute such corrections to top-quark kinematic distributions and show that they can be as large as a percent in certain kinematic regions.

Authors: MAKAROV, Sergei (TTP KIT); Prof. MELNIKOV, Kirill (TTP KIT); Prof. NASON, Paolo (INFN, Sezione di Milano-Bicocca, and Universita di Milano-Bicocca); OZCELIK, Melih A. (Universite Paris-Saclay, CNRS, IJCLab)

Presenter: MAKAROV, Sergei (TTP KIT)

Session Classification: Young Scientists Talks

Contribution ID: **20** Type: **not specified**

Diagrammatic resummation of double logarithms in $B_c \to \eta_c$ form factors

Wednesday, October 18, 2023 2:30 PM (30 minutes)

Exclusive B-decays are sensitive to contributions from new physics and can thus be used to test the Standard Model. At large hadronic recoil Soft-Collinear Effective Theory is the appropriate theory to describe the QCD dynamics and to resum logarithmic corrections to all orders in perturbation theory. However, since the relevant hadronic matrix elements are power suppressed, the factorisation of soft and collinear contributions is spoilt by endpoint divergences. We therefore resort to diagrammatic resummation techniques to derive the double-logarithmic series of the "soft-overlap"contribution to $B_c \to \eta_c$ transition form factors, assuming the scale hierarchy $m_b \gg m_c \gg \Lambda_{\rm QCD}$. We find that the leading double logarithms arise from a peculiar interplay of soft-quark "endpoint logarithms"from ladder diagrams with energy-ordered spectator-quark propagators, as well as standard Sudakov-type soft-gluon corrections. We elucidate the all-order systematics, and show that their resummation proceeds via a novel type of integral equations.

Authors: BELL, Guido (University of Siegen); HORSTMANN, Dennis (Siegen University); Dr SHTABOVENKO, Vladyslav (University of Siegen); FELDMANN, Thorsten (Siegen University); BÖER, Philipp (JGU Mainz)

Presenter: HORSTMANN, Dennis (Siegen University)

Session Classification: Young Scientists Talks

Contribution ID: **21** Type: **not specified**

Implications of the B-Mesogenesis on the Phenomenological Observables of B Mesons

Tuesday, October 17, 2023 5:00 PM (30 minutes)

The aim of our work is to explore the implications of the Baryogenesis model, which is based on the B-Mesogenesis paradigm proposed by G. Elor, M. Escudero, and A. E. Nelson, on the phenomenological observables of the Bmeson. Specifically, we focus on analyzing the non-standard decay channels of the B-meson into a SM baryon and a dark sector antibaryon, which were proposed by the model to address the problems of matter-antimatter asymmetry and the origin of dark matter in the Universe. Building upon recent work by Alonso-Álvarez, G. Elor, M.Escudero [PRD 104, 035028 (2021),arXiv:2101.02706], where the model is further scrutinized, we employ the Heavy Quark Expansion (HQE) framework to investigate the contributions of these new decay channels to the ratio $(B+)/(Bd)$ as well as to mixing observables, such as M, , and a_{sl}, in the B systems.

Authors: LENZ, Alexander (Siegen University); MOHAMED, Ali (Siegen University); WÜTHRICH, Zachary (Siegen university); PISCOPO, Maria Laura (University of Siegen); RUSOV, Aleksey (University of Siegen)

Presenter: MOHAMED, Ali (Siegen University)

Session Classification: Young Scientists Talks

Contribution ID: **22** Type: **not specified**

Anomalies, Representations and Self-Supervision

Wednesday, October 18, 2023 2:00 PM (30 minutes)

Autoencoders are an effective analysis tool for model-agnostic searches at the LHC. Unfortunately, it is known that their OOD detection performance is not robust and heavily depends on the compressibility of the signals. Even if a neural network can learn the physical content of the low-level data, the gain in sensitivity to features of interest can be hindered by redundant information already explainable in terms of known physics. This poses the problem of constructing a representation space where known physical symmetries are manifest and discriminating features are retained. I will present ideas in both directions. I will introduce a Machine Learning framework, known as Contrastive Learning, that allows for the definition of observables invariant to transformations and show how to use them for Autoencoders-based anomaly detection.

Authors: FAVARO, Luigi (ITP Heidelberg); PLEHN, Tilman; MODAK, Tanmoy; DILLON, Barry; FRIEDRICH, Feiden

Presenter: FAVARO, Luigi (ITP Heidelberg)

Session Classification: Young Scientists Talks

Contribution ID: **23** Type: **not specified**

Using Gradient Flow to Renormalise Matrix Elements for Meson Mixing and Lifetimes

Monday, October 16, 2023 1:45 PM (30 minutes)

Neutral meson mixing and meson lifetimes are theory-side parametrised in terms four-quark operators which can be determined by calculating weak decay matrix elements using lattice QCD. While calculations of meson mixing matrix elements are standard, determinations of lifetimes typically suffer from complications in renormalisation procedures because dimension-6 four-quark operators can mix with operators of lower mass dimension and, moreover, quark-line disconnected diagrams contribute.

We present work detailing the idea to use fermionic gradient flow to non-perturbatively renormalise matrix elements describing meson mixing or lifetimes, which later is to be combined with a perturbative calculation to match to the $\overline{\mathrm{MS}}$ scheme.

Author: BLACK, Matthew (University Siegen)

Presenter: BLACK, Matthew (University Siegen)

Session Classification: Young Scientists Talks

Contribution ID: **24** Type: **not specified**

Progress in N3LO zero-jettiness soft functions calculation

Monday, October 16, 2023 2:15 PM (30 minutes)

The increasing accuracy of measurements at the LHC requires a transition from NNLO to N3LO in QCD theory predictions. The growing complexity of the IR-divergencies structure at N3LO order requires developing new schemes for treating IR-divergencies. One of the promising solutions is the N-jettiness slicing scheme.
One of the last missing ingredients for applying this scheme at N3LO order is a 0-jettiness soft function defined as phase-space integral with the integration domain constrained by several theta functions.
The complexity of the analytical calculation of the 0-jettiness soft function due to the presence of integrals with theta functions requires the development of new calculation methods.
In this talk, we will discuss the application of modern techniques of multi-loop calculations to integrals with Heaviside theta functions and report recent progress in calculating both triple-real and real-virtual corrections to N3LO zero-jettiness soft-function in QCD.

Author: PIKELNER, Andrey (TTP KIT)

Presenter: PIKELNER, Andrey (TTP KIT)

Session Classification: Young Scientists Talks

Contribution ID: **25** Type: **not specified**

Rare $B_s \to l^+l^-$ decays in a two-Higgs-doublet model with Three Spurions

Wednesday, October 18, 2023 11:00 AM (30 minutes)

Leptonic decays of neutral B mesons provide an excellent probe of physics beyond the Standard Model, due to the absence of tree-level flavour-changing neutral currents in the Standard Model and the corresponding smallness of the branching ratio. We present a two-Higgs-doublet model in which flavour-changing neutral Higgs couplings to up-type quarks can lift part of the SM suppression. The model contains three Yukawa spurions, allowing to systematically suppress FCNC couplings in the down-type quark sector. Within this model, the leading contributions to the scalar and pseudoscalar Wilson coefficients are calculated through next-to-leading order in QCD. Several experimental constraints from other $|\Delta B| = 1$ and $|\Delta B| = 2$ processes are discussed.

Authors: LANG, Martin (Department of Physics); NIERSTE, Ulrich (Institut fuer Theoretische Teilchenphysik, KIT CS)

Presenter: LANG, Martin (Department of Physics)

Session Classification: Young Scientists Talks

Contribution ID: **26** Type: **not specified**

Dimension-6 HQET Sum Rules for Beyond the Standard Model

Monday, October 16, 2023 3:15 PM (30 minutes)

Precise determination of hadronic matrix elements is crucial for interpreting possible deviations from the Standard Model observed in flavor physics experiments. While lattice QCD provides first-principles calculations, current results are still limited to a subset of the operators that may appear in theories of new physics. The sum rule approach employed here allows for a complementary determination of matrix elements directly from QCD, with theoretical uncertainties that can be systematically improved order-by-order in perturbation theory. The Standard Model hadronic matrix elements of dimension-six $\Delta F = 0, 2$ operators have previously been determined, and have been shown to be competitive with lattice results. We intend to extend these results to include the full set of four-quark QCD operators which may appear Beyond the Standard Model, and for which no lattice results exist yet. We thus include operators with Dirac structures which have not previously been considered in a sum rules analysis reported in the literature. This will provide for the first time bag parameter results which can increase the precision of a wide variety of new physics theories. The bag parameter results will be determined using HQET sum rules for three-point correlators, which requires a three-loop computation. In addition there is a one-loop computation of the QCD-HQET matching required.

Author: WÜTHRICH, Zachary (Siegen)

Co-authors: LENZ, Alexander (Siegen University); BLACK, Matthew (University Siegen)

Presenter: WÜTHRICH, Zachary (Siegen)

Session Classification: Young Scientists Talks

Contribution ID: **27** Type: **not specified**

Staying in Academia: Fellowship, Grants & More to Know

Tuesday, October 17, 2023 1:30 PM (1 hour)

Author: WOREK, Malgorzata (RWTH Aachen University)

Presenter: WOREK, Malgorzata (RWTH Aachen University)

Session Classification: CRC Talk

Contribution ID: **28** Type: **not specified**

News from the Outreach Team

Wednesday, October 18, 2023 10:00 AM (30 minutes)

Author: BOUSHMELEV, Anastasia

Co-authors: LENZ, Alexander (Siegen University); OLSSON, Anton (Karlsruhe Institute of Technology); KAHLHOEFER, Felix (KIT); SCHAAF, Magnus (RWTH Aachen University); HEIN, Marie (RWTH Aachen University); HARLANDER, Robert (RWTH Aachen University); PLEHN, Tilman; WÜTHRICH, Zachary (Siegen)

Presenter: BOUSHMELEV, Anastasia

Session Classification: CRC Talk

Contribution ID: **29** Type: **not specified**

The current status of flavour physics - Theory challenges and prospects for the LHC

Monday, October 16, 2023 11:45 AM (1 hour)

Author: MANNEL, Thomas (Siegen University)

Presenter: MANNEL, Thomas (Siegen University)

Session Classification: CRC Talk