

QCD@LHC 2023

Report of Contributions

Contribution ID: 2

Type: **not specified**

The inclusion of theory errors in PDF fitting

Monday, 4 September 2023 16:00 (30 minutes)

Primary author: BARONTINI, Andrea (University of Milan)

Presenter: BARONTINI, Andrea (University of Milan)

Session Classification: News from PDF

Contribution ID: 3

Type: **not specified**

PDF: Heavy Quarks

Monday, 4 September 2023 16:30 (30 minutes)

Primary author: HOBBS, Timothy (ANL)

Presenter: HOBBS, Timothy (ANL)

Session Classification: News from PDF

Contribution ID: 4

Type: **not specified**

Calculation of N³LO splitting Functions

Tuesday, 5 September 2023 14:00 (30 minutes)

Presenter: HERZOG, Franz

Session Classification: News from PDF

Contribution ID: 5

Type: **not specified**

Including QED corrections to PDFs: the NNPDF4.0QED set

Tuesday, 5 September 2023 14:30 (30 minutes)

Presenter: LAURENTI, Niccolò (University of Milan and INFN sezione di Milano)

Session Classification: News from PDF

Contribution ID: 6

Type: **not specified**

Resolved-photon PDF fit to photoproduction data

Tuesday, 5 September 2023 15:00 (30 minutes)

Presenter: BUCKLEY, Andy (University of Glasgow (GB))

Session Classification: News from PDF

Contribution ID: 7

Type: **not specified**

MSHT update on high-x PDFs

Wednesday, 6 September 2023 16:01 (30 minutes)

Presenter: HARLAND-LANG, Lucian (University College London)

Session Classification: News from PDF

Contribution ID: 8

Type: **not specified**

Potential of EIC data to constrain PDFs and the strong coupling

Wednesday, 6 September 2023 16:31 (30 minutes)

Presenter: NEWMAN, Paul (The University of Birmingham)

Session Classification: News from PDF

Contribution ID: 9

Type: **not specified**

Welcome

Monday, 4 September 2023 09:15 (15 minutes)

Presenter: KRAUSS, frank (ipp durham)

Session Classification: Plenary session

Contribution ID: 10

Type: **not specified**

Electroweak and QED effects in PDF determination

Monday, 4 September 2023 10:30 (30 minutes)

Presenter: STEGEMAN, Roy (The University of Edinburgh)

Session Classification: Plenary session

Contribution ID: 11

Type: **not specified**

Recent alphaS determination from the LHC

Tuesday, 5 September 2023 10:00 (30 minutes)

Presenter: CAMARDA, Stefano (CERN)

Session Classification: Plenary session

Contribution ID: 12

Type: **not specified**

Non-factorisable corrections to Higgs boson production in weak boson fusion

Monday, 4 September 2023 14:00 (30 minutes)

Presenter: BRØNNUM-HANSEN, Christian (Karlsruhe Institute of Technology)

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: 13

Type: **not specified**

Precision Higgs Calculations

Monday, 4 September 2023 09:30 (30 minutes)

Presenter: Prof. STEINHAUSER, Matthias (KIT)

Session Classification: Plenary session

Contribution ID: 14

Type: **not specified**

Two-loop five-points QCD amplitudes in full colour

Monday, 4 September 2023 14:30 (30 minutes)

Presenter: DEVOTO, Federica

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: 15

Type: **not specified**

Generalization of the nested soft-collinear subtraction method for NNLO QCD calculations

Monday, 4 September 2023 15:00 (30 minutes)

Presenter: TAGLIABUE, Davide Maria (Università degli Studi di Milano - Sezione INFN)

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: 16

Type: **not specified**

Recent results on jet physics at the LHC

Friday, 8 September 2023 10:00 (30 minutes)

Presenter: WICHMANN, Katarzyna (CMS)

Session Classification: Plenary session

Contribution ID: 17

Type: **not specified**

Calculations for the leading jet pT

Tuesday, 5 September 2023 16:00 (30 minutes)

Presenter: GAUNT, Jonathan (University of Manchester)

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: **18**

Type: **not specified**

Extraction of unpolarized TMDs at N4LL

Tuesday, 5 September 2023 16:30 (30 minutes)

Presenter: MOOS, Valentin (Regensburg)

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: 19

Type: **not specified**

Prospects for strong coupling measurements using soft-drop jet mass

Wednesday, 6 September 2023 14:00 (30 minutes)

Presenter: PATHAK, Aditya (DESY)

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: 20

Type: **not specified**

Automated Calculation of Beam Functions

Wednesday, 6 September 2023 14:30 (30 minutes)

Presenter: BRUNE, Kevin

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: 21

Type: **not specified**

Electroweak logarithms in OpenLoops

Wednesday, 6 September 2023 15:00 (30 minutes)

Presenter: MAI, Lorenzo

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: 22

Type: **not specified**

Advances in Resummed Calculations

Tuesday, 5 September 2023 09:30 (30 minutes)

Presenter: BANFI, Andrea (University of Sussex)

Session Classification: Plenary session

Contribution ID: 23

Type: **not specified**

PDF Constraints from new Data and from Future Experiments

Tuesday, 5 September 2023 10:30 (30 minutes)

Presenter: GIULI, Francesco (CERN - European Organization for Nuclear Research)

Session Classification: Plenary session

Contribution ID: 24

Type: **not specified**

Energy Correlators

Wednesday, 6 September 2023 09:30 (30 minutes)

Presenter: LEE, Kyle

Session Classification: Plenary session

Contribution ID: 25

Type: **not specified**

Power Corrections

Thursday, 7 September 2023 09:30 (30 minutes)

Presenter: JASKIEWICZ, Sebastian (Durham University, IPPP)

Session Classification: Plenary session

Contribution ID: 26

Type: **not specified**

Status and challenges in nuclear PDF fits

Wednesday, 6 September 2023 10:30 (30 minutes)

Presenter: NOCERA, Emmanuele

Session Classification: Plenary session

Contribution ID: 27

Type: **not specified**

Recent results on photon physics at the LHC

Wednesday, 6 September 2023 10:00 (30 minutes)

Presenter: GLASMAN, Claudia

Session Classification: Plenary session

Contribution ID: 28

Type: **not specified**

PDF: Missing Higher Order Uncertainties/N3LO

Thursday, 7 September 2023 10:00 (30 minutes)

Presenter: HARLAND-LANG, Lucian (University College London)

Session Classification: Plenary session

Contribution ID: 29

Type: **not specified**

Vector bosons in association with heavy flavour jets at the LHC

Friday, 8 September 2023 11:30 (30 minutes)

Presenter: CANDELISE, Vieri (CERN)

Session Classification: Plenary session

Contribution ID: 30

Type: **not specified**

Measurements involving W,Z bosons (either inclusive or in association with jets)

Tuesday, 5 September 2023 16:00 (30 minutes)

Presenter: DENG, Jianqiao (LHCb)

Session Classification: Experimental Results

Contribution ID: 31

Type: **not specified**

Measurements involving W,Z bosons (either inclusive or in association with jets) with the CMS detector

Tuesday, 5 September 2023 16:30 (30 minutes)

Presenter: BARBERIS, Emanuela (Northeastern)

Session Classification: Experimental Results

Contribution ID: 32

Type: **not specified**

Deep learning assisted unbinned measurements of jet substructure observables and azimuthal angular asymmetry in deep-inelastic scattering with the H1 detector

Wednesday, 6 September 2023 14:00 (30 minutes)

Presenter: REICHELT, Daniel (Durham University, IPPP)

Session Classification: Experimental Results

Contribution ID: 33

Type: **not specified**

Measurements involving jets and extraction of fundamental SM parameters with the CMS detector

Wednesday, 6 September 2023 15:00 (30 minutes)

Presenters: GUGLIELMI, Valentina (CERN); Ms GUGLIELMI, Valentina (DESY)

Session Classification: Experimental Results

Contribution ID: 34

Type: **not specified**

PanScales parton showers

Monday, 4 September 2023 11:30 (30 minutes)

Presenter: SALAM, Gavin (University of Oxford and All Souls College)

Session Classification: Plenary session

Contribution ID: 35

Type: **not specified**

Lattice observables for PDFs

Friday, 8 September 2023 12:30 (30 minutes)

Presenter: DEL DEBBIO, Luigi (Edinburgh)

Session Classification: Plenary session

Contribution ID: 36

Type: **not specified**

Measurement of electroweak gauge boson production in association with jets at ATLAS

Monday, 4 September 2023 14:30 (30 minutes)

Presenters: WAMORKAR, Tanvi (Argonne); Dr WAMORKAR, Tanvi (Argonne National Laboratory)

Session Classification: Experimental Results

Contribution ID: 37

Type: **not specified**

Precision measurements of W and Z production at ATLAS

Monday, 4 September 2023 14:00 (30 minutes)

Presenter: LI, Shu (CERN)

Session Classification: Experimental Results

Contribution ID: **38**

Type: **not specified**

Precision event generation for top-quark production

Monday, 4 September 2023 10:00 (30 minutes)

Presenter: RE, Emanuele (IPPP, Durham University)

Session Classification: Plenary session

Contribution ID: 39

Type: **not specified**

Top-pair events with B-hadrons at the LHC

Monday, 4 September 2023 16:00 (30 minutes)

Presenter: GENERET, Terry (RWTH Aachen University)

Session Classification: Heavy Quarks

Contribution ID: 40

Type: **not specified**

Vector boson plus heavy flavour at the LHC

Wednesday, 6 September 2023 11:30 (30 minutes)

Presenter: PELLEN, Mathieu (University of Freiburg)

Session Classification: Plenary session

Contribution ID: 41

Type: **not specified**

Flavoured jet algorithms at the LHC

Thursday, 7 September 2023 11:30 (30 minutes)

Presenter: SCYBOZ, Ludovic (Oxford)

Session Classification: Plenary session

Contribution ID: 42

Type: **not specified**

Precision QCD for associated top production

Friday, 8 September 2023 09:30 (30 minutes)

Presenter: DEVOTO, Simone (Università degli Studi di Milano)

Session Classification: Plenary session

Contribution ID: 43

Type: **not specified**

Towards automation of inclusive quarkonium production in MadGraph5_aMC@NLO

Tuesday, 5 September 2023 14:00 (30 minutes)

Presenter: FLETT, Chris (The University of Liverpool)

Session Classification: Heavy Quarks

Contribution ID: 44

Type: **not specified**

Quarkonium Production in Modified NRQCD

Tuesday, 5 September 2023 14:30 (30 minutes)

Presenter: SRIDHAR, Krishnamoorthy (Azim Premji University)

Session Classification: Heavy Quarks

Contribution ID: 45

Type: **not specified**

Inclusive Quarkonium Photoproduction at the LHC

Tuesday, 5 September 2023 15:00 (30 minutes)

Presenter: LYNCH, Kate (UCD and IJCLab)

Session Classification: Heavy Quarks

Contribution ID: 46

Type: **not specified**

Wbb production at NNLO QCD

Wednesday, 6 September 2023 16:00 (30 minutes)

Presenter: HARTANTO, Heribertus Bayu (University of Cambridge)

Session Classification: Heavy Quarks

Contribution ID: 47

Type: **not specified**

NLO QCD corrections to $t\bar{t}j$ in dilepton decay channel

Wednesday, 6 September 2023 16:30 (30 minutes)

Presenter: STREMMER, Daniel (RWTH Aachen)

Session Classification: Heavy Quarks

Contribution ID: 48

Type: **not specified**

Status and prospects of Sherpa

Tuesday, 5 September 2023 11:30 (30 minutes)

Presenter: BOTHMANN, Enrico (University of Goettingen)

Session Classification: Plenary session

Contribution ID: 49

Type: **not specified**

Status and prospects of Herwig

Wednesday, 6 September 2023 12:00 (30 minutes)

Presenter: Dr MASOUMINIA, Aidin (IPPP, Durham)

Session Classification: Plenary session

Contribution ID: 50

Type: **not specified**

Recent Soft and diffractive QCD measurements at the LHC

Friday, 8 September 2023 12:00 (30 minutes)

Presenter: BUSSEY, Peter (Glasgow)

Session Classification: Plenary session

Contribution ID: 51

Type: **not specified**

Fitting a Deep Generative Hadronization Model

Thursday, 7 September 2023 10:30 (30 minutes)

Presenter: SIODMOK, Andrzej (KIT)

Session Classification: Plenary session

Contribution ID: 52

Type: **not specified**

Elimination of negative weights in MC event samples

Wednesday, 6 September 2023 14:00 (30 minutes)

Presenter: MAIER, Andreas (IPPP, Durham University)

Session Classification: Parton Showers and Event Generators

Contribution ID: 53

Type: **not specified**

Photon splitting corrections to soft-photon resummation

Wednesday, 6 September 2023 14:30 (30 minutes)

Presenter: FLOWER, Lois (IPPP)

Session Classification: Parton Showers and Event Generators

Contribution ID: 54

Type: **not specified**

Parallelism for hard event generation in MadGraph5_aMC@NLO

Wednesday, 6 September 2023 15:00 (30 minutes)

Presenter: WETTERSTEN, Zenny (CERN)

Session Classification: Parton Showers and Event Generators

Contribution ID: 55

Type: **not specified**

ALARIC

Monday, 4 September 2023 14:00 (30 minutes)

Presenter: REICHELT, Daniel (Durham University, IPPP)

Session Classification: Parton Showers and Event Generators

Contribution ID: 56

Type: **not specified**

KrkNLO matching

Monday, 4 September 2023 14:30 (30 minutes)

Presenter: WHITEHEAD, James (IPPP, Durham)

Session Classification: Parton Showers and Event Generators

Contribution ID: 57

Type: **not specified**

A new method for the reconstruction of rational functions

Tuesday, 5 September 2023 17:00 (30 minutes)

Presenter: LIU, Xiao (Oxford)

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: 58

Type: **not specified**

Simultaneous fits of PDFs and SMEFT in the top-sector

Tuesday, 5 September 2023 12:00 (30 minutes)

Presenter: MADIGAN, Maeve (University of Heidelberg)

Session Classification: Plenary session

Contribution ID: 59

Type: **not specified**

Novel approach to measure quark/gluon jets at the LHC

Monday, 4 September 2023 15:00 (30 minutes)

Presenter: Mr BARON, Petr (IFJ PAN, Krakow)

Session Classification: Parton Showers and Event Generators

Contribution ID: **60**

Type: **not specified**

Soft QCD in Monte Carlo Generators

Monday, 4 September 2023 12:00 (30 minutes)

Presenter: SKANDS, Peter (CERN)

Session Classification: Plenary session

Contribution ID: **61**

Type: **not specified**

Recent progress on Track Functions

Tuesday, 5 September 2023 12:30 (30 minutes)

Presenter: WAALEWIJN, Wouter

Session Classification: Plenary session

Contribution ID: 62

Type: **not specified**

Recent progress in Double Parton Scattering Theory

Wednesday, 6 September 2023 12:30 (30 minutes)

Presenter: PLÖSSL, Peter (DESY)

Session Classification: Plenary session

Contribution ID: 63

Type: **not specified**

Recent Double Parton Scattering Measurements

Thursday, 7 September 2023 12:00 (30 minutes)

Presenter: LEONTSINIS, Stefanos (CERN)

Session Classification: Plenary session

Contribution ID: **64**

Type: **not specified**

Central Exclusive Production

Friday, 8 September 2023 10:30 (30 minutes)

Presenter: HARLAND-LANG, Lucian (University College London)

Session Classification: Plenary session

Contribution ID: 65

Type: **not specified**

Exploring high-purity multi-parton scattering at hadron colliders

Monday, 4 September 2023 16:00 (30 minutes)

Presenter: SALAM, Gavin (University of Oxford and All Souls College)

Session Classification: Soft QCD

Contribution ID: 66

Type: **not specified**

Small-x Factorization from Effective Field Theory

Monday, 4 September 2023 16:30 (30 minutes)

Presenter: PATHAK, Aditya (DESY)

Session Classification: Soft QCD

Contribution ID: 67

Type: **not specified**

Studies on system-size dependence of particle production with ALICE

Tuesday, 5 September 2023 14:00 (30 minutes)

Presenter: OPPEDISANO, Chiara (INFN Torino)

Session Classification: Soft QCD

Contribution ID: 68

Type: **not specified**

Baryons as a Probe for Hadronization

Tuesday, 5 September 2023 14:30 (30 minutes)

Presenter: KIEBACHER, Stefan (ITP - KIT)

Session Classification: Soft QCD

Contribution ID: 69

Type: **not specified**

Towards Double Parton Distributions from First Principles using Large Momentum Effective Theory

Tuesday, 5 September 2023 15:00 (30 minutes)

Presenter: RAHN, Rudi (The University of Manchester)

Session Classification: Soft QCD

Contribution ID: 70

Type: **not specified**

Jet substructure observables and azimuthal angular asymmetry in deep-inelastic scattering with H1

Wednesday, 6 September 2023 14:30 (30 minutes)

Presenter: MIKUNI, Vinicius (Lawrence Berkeley National Laboratory)

Session Classification: Experimental Results

Contribution ID: 71

Type: **not specified**

Multi-loop helicity amplitudes for V+jet production at hadron colliders

Wednesday, 6 September 2023 15:59 (30 minutes)

Presenter: JAKUBČÍK, Petr (University of Zurich)

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: 72

Type: **not specified**

Subleading Effects in Soft-Gluon Emission at One-Loop in Massless QCD

Wednesday, 6 September 2023 16:30 (30 minutes)

Presenter: SCHELLENBERGER, Tom (RWTH-Aachen)

Session Classification: Perturbative and resummed predictions in QCD

Contribution ID: 73

Type: **not specified**

Closing Remarks

Friday, 8 September 2023 13:00 (5 minutes)

Presenter: SCHOENHERR, Marek (IPPP Durham)

Session Classification: Plenary session