

Dr Rene Poncelet

Curriculum Vitae

Name: Dr. rer. nat. Rene Poncelet
Affiliation: Institute of Nuclear Physics Polish Academy of Sciences, Kraków, Poland
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Academic degrees

Doctor habilitated (dr hab.) 24 Nov 2025

IFJ PAN, Kraków, Poland

Thesis: Precision QCD phenomenology for multi-scale processes at the LHC
Committee: dr hab. Michał Praszałowicz, dr hab. Chihiro Sasaki,
prof. dr hab. Hanna Zbroszczyk, prof. dr hab. Wiesław Płaczek.

Doktor der Naturwissenschaften (Dr. rer. nat.) 24 Sep 2018

RWTH Aachen University, Aachen, Germany

Thesis: Precision Top-Quark Physics with Leptonic Final States
Referees: Prof. Dr. Michal Czakon and Prof. Dr. Robert Harlander

Master of Science (M.Sc.) 30 Sep 2015

Georg-August University, Göttingen, Germany

Thesis: Monte Carlo event generation with the $(MC)^3$ sampling algorithm

Referee: Prof. Dr. Steffen Schumann

Bachelor of Science (B.Sc.) 27 Sep 2013

Georg-August University, Göttingen, Germany

Thesis: Systematic studies on the production of bottom-quarks in parton shower
simulations

Referee: Prof. Dr. Steffen Schumann

Employment by academic and scientific institutions

Staff scientist Since Oct 2023

Institute of Nuclear Physics Polish Academy of Sciences, Kraków, Poland

Division of Theoretical Physics – Particle Physics

Leverhulme Early Career Fellow Oct 2021 – Sep 2023

Cavendish Laboratory, Cambridge, UK

Theoretical High Energy Physics

Research Associate (PostDoc) Oct 2018 – Sep 2021

Cavendish Laboratory, Cambridge, UK

Theoretical High Energy Physics

Research Assistant (Doctoral student) Oct 2015 – Sep 2018

RWTH Aachen University, Aachen, Germany

Institute for Theoretical Particle Physics and Cosmology

Member of DFG Graduate School (GK)

”Teilchen- und Astroteilchenphysik im Lichte von LHC”

Awards and research grants

Distinctions

Guido Altarelli Award <i>for outstanding contributions to precision calculations of the top quark and Higgs bosons, which have profoundly influenced LHC analyses</i>	2025
IFJ PAN Directors Award Award for scientific and organisational activity for <i>Work on b-quark mass effects in Higgs-production</i>	2024

Research projects where identified as PI

ERC Starting Grant 2025 STAPLE - Shower Thoughts About Precision LHC Eventsimulation Total amount: 1.1M EUR	Start: Feb 2026
NCN Sonata 20 High Precision Predictions to Probe the EWSB Total amount: 323k EUR	2025–2028
Leverhulme Early Career Fellowship The ‘NNLO revolution’: pushing the boundary of perturbative QCD. Awarded by the Leverhulme Trust and the Isaac Newton Trust. (168 kGBP)	2021–2023

Research projects where identified as co-PI

DiRAC RAC - computing resources Precision LHC Phenomenology Total volume: 53 MCPU hours.	2024–2027
DiRAC RAC - computing resources Precision LHC Phenomenology Total volume: 16 MCPU hours.	2023–2024

Funding for individual activities

COST ITC conference grants - COMETA Participation at ICHEP 2024 conference, 1600 Euro	2024
Participation at PhysTeV 2025 workshop (Les Houches), 1400 Euro	2025
Participation MBI, Brandeis University, 1500 Euro	2025

Simons Foundation Grant Funding to participate in the Aspen Summer Programme, 4500 USD	2024
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Other awards

College Research Associate Emmanuel College, Cambridge	2021
Cavendish Laboratory staff reward (Note: Award of extra pay-grade jump due to extraordinary performance.)	2019

References

- Prof. Dr. rer. nat. Michał Wiktor Czakon
RWTH University, Institute for Theoretical Particle Physics and Cosmology
Otto-Blumenthal-Str. 12, 52074 Aachen, Germany
E-mail: mczakon@physik.rwth-aachen.de
- Prof Alexander Mitov
University of Cambridge, Cavendish Laboratory
JJ Thomson Avenue, Cambridge CB3 0US, UK
E-mail: adm74@cam.ac.uk
- Prof Simon David Badger
University of Turin, Physics Department
Via Verdi 8, 10124 Torino, Italy
Email: simondavid.badger@unito.it

Publications

Below are various metrics of scientific output and citations as provided by the InSpire HEP database. The database considers pre-prints published on ArXiv and other online repositories citable works. Works marked "published" have undergone a rigorous peer-reviewing process.

Date: 23 December 2025

InSpire HEP Profile: <https://inspirehep.net/authors/1812055>

Published works (JCR-indexed journals)	32
Citable works	48
Total citations (excluding self-citations) for JCR works	1454 (1143)
Total citations (excluding self-citations) for citable works	1594 (1215)
h-index (JCR works)	19 (17)
h-index (citable works)	21 (18)

Journal Articles

1. **Flavoured jet algorithms: a comparative study,**
A. Behring et al.,
JHEP 09 (2025) 149
2. **Sampling NNLO QCD phase space with normalizing flows,**
T. Janßen, **R. Poncelet**, S. Schumann,
JHEP 09 (2025) 194
3. **Precise Standard-Model predictions for polarised Z-boson pair production and decay at the LHC,**
C. Carrivale et al.,
Eur.Phys.J.C 85 (2025) 11, 1342
4. **Small radius inclusive jet production at the LHC through NNLO+NNLL,**
T. Generet, K. Lee, I. Moult, **R. Poncelet**, X. Zhang,
JHEP 08 (2025) 015
5. **Identified hadron production at hadron colliders in NNLO QCD,**
M. Czakon, T. Generet, A. Mitov, **R. Poncelet**,
Phys. Rev. Lett. 135 (2025) 17, 171902
6. **Robust estimates of theoretical uncertainties at fixed-order in perturbation theory,**
M. Lim, **R. Poncelet**,
Phys.Rev.D 112 (2025) 11, L111901
7. **Full-colour double-virtual amplitudes for associated production of a Higgs boson with a bottom-quark pair at the LHC,**

- S. Badger, B. Hartanto, **R. Poncelet**, Z. Wu, Y. Zhang, S. Zoia,
JHEP 03 (2025), 066
8. **Open B production at hadron colliders in NNLO+NNLL QCD**,
M. Czakon, T. Generet, A. Mitov, **R. Poncelet**,
Phys.Rev.Lett. 135 (2025) 16, 161903
 9. **Quark mass effects in Higgs production**,
M. Czakon, F. Eschment, M. Niggetiedt, **R. Poncelet**, T. Schellenberger,
JHEP 10 (2024) 210
 10. **Top-Bottom Interference Contribution to Fully-Inclusive Higgs Production**,
M. Czakon, F. Eschment, M. Niggetiedt, **R. Poncelet**, T. Schellenberger,
Phys.Rev.Lett. 132 (2024) 21, 211902
 11. **Measurement of the production cross section for a W boson in association with a charm quark in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$** ,
CMS Collaboration et al.,
Eur.Phys.J.C 84 (2024), 27
 12. **Isolated photon production in association with a jet pair through next-to-next-to-leading order in QCD**,
S. Badger, M. Czakon, B. Hartanto, R. Moodie, T. Peraro, **R. Poncelet**, S. Zoia,
JHEP 10 (2023) 071
 13. **HighTEA: High energy Theory Event Analyser**,
M. Czakon, Z. Kassabov, A. Mitov, **R. Poncelet**, A. Popescu,
J.Phys.G 51 (2024) 11, 115002
 14. **NNLO QCD corrections to event shapes at the LHC**,
M. Alvarez, J. Cantero, M. Czakon, J. Llorente, A. Mitov, **R. Poncelet**,
JHEP 03 (2023) 129
 15. **A detailed investigation of W+c-jet at the LHC**,
M. Czakon, A. Mitov, M. Pellen, **R. Poncelet**,
JHEP 02 (2023) 241
 16. **NNLO B-fragmentation fits and their application to $t\bar{t}$ production and decay at the LHC**, M. Czakon, T. Generet, A. Mitov, **R. Poncelet**,
JHEP03 (2023) 251
 17. **NNLO QCD corrections to $Wb\bar{b}$ production at the LHC**
H. Bayu Hartanto, **R. Poncelet**, A. Popescu, S. Zoia,
Phys.Rev.D 106 (2022) 7, 074016
 18. **Infrared-safe flavoured anti- k_T jets**,
M. Czakon, A. Mitov, **R. Poncelet**,
JHEP 04 (2023), 138
 19. **Angular coefficients in W+j production at the LHC with high precision**
M. Pellen, **R. Poncelet**, A. Popescu, T. Vitos,
Eur.Phys.J.C 82 (2022) 8, 693
 20. **Polarised W+j production at the LHC: a study at NNLO QCD accuracy**,
M. Pellen, **R. Poncelet**, A. Popescu,
JHEP 02 (2022) 160
 21. **Next-to-Next-to-Leading Order Study of Three-Jet Production at the LHC**,
M. Czakon, A. Mitov, **R. Poncelet**,
Phys.Rev.Lett. 127 (2021) 15, 152001
 22. **NNLO QCD corrections to diphoton production with an additional jet at the LHC**,
H. Chawdhry, M. Czakon, A. Mitov, **R. Poncelet**,
JHEP 09 (2021) 093
 23. **Two-loop leading-colour QCD helicity amplitudes for two-photon plus jet production at the LHC**,
H. Chawdhry, M. Czakon, A. Mitov, **R. Poncelet**,
JHEP 07 (2021) 164

24. **NNLO QCD study of polarised W^+W^- production at the LHC,**
R. Poncelet, A. Popescu,
JHEP 07 (2021) 023
25. **B-hadron hadro-production in NNLO QCD: application to LHC $t\bar{t}$ events with leptonic decays**, M. Czakon, T. Generet, A. Mitov, **R. Poncelet**,
JHEP 10 (2021) 216
26. **Two-loop leading-color helicity amplitudes for three-photon production at the LHC**,
H. Chawdhry, M. Czakon, A. Mitov, **R. Poncelet**,
JHEP 06 (2021) 150
27. **NNLO QCD predictions for $W+c$ -jet production at the LHC**,
M. Czakon, A. Mitov, M. Pellen, **R. Poncelet**,
JHEP 06 (2021) 100
28. **NNLO QCD corrections to leptonic observables in top-quark pair production and decay**,
M. Czakon, A. Mitov, **R. Poncelet**,
JHEP 05 (2021) 212
29. **NNLO QCD corrections to three-photon production at the LHC**,
H. Chawdhry, M. Czakon, A. Mitov, **R. Poncelet**,
JHEP 02 (2020) 057
30. **Single-jet inclusive rates with exact color at $\mathcal{O}(\alpha_s^4)$** ,
M. Czakon, A. van Hameren, A. Mitov, **R. Poncelet**,
JHEP 10 (2019) 262
31. **Higher order corrections to spin correlations in top quark pair production at the LHC**,
A. Behring, M. Czakon, A. Mitov, A. Papanastasiou, **R. Poncelet**,
Phys. Rev. Lett. 123 (2019) no.8, 082001
32. **Polarized double-virtual amplitudes for heavy-quark pair production**,
L. Chen, M. Czakon, **R. Poncelet**,
JHEP 03 (2018) 085

Pre-print articles

1. **How much color do we really need? Two-loop subleading-color effects in photon and jet physics**,
M. Czakon, R. Poncelet,
e-Print: 2512.17591 [hep-ph]
2. **Higher-order QCD corrections to top-quark pair production in association with a jet**,
S. Badger, M. Becchetti, C. Brancaccio, M. Czakon, B. Hartanto, R. Poncelet, S. Zoia,
e-Print: 2511.11431 [hep-ph]
3. **Double virtual QCD corrections to $t\bar{t}$ +jet production at the LHC**,
S. Badger, M. Becchetti, C. Brancaccio, M. Czakon, B. Hartanto, R. Poncelet, S. Zoia,
e-Print: 2511.11424 [hep-ph]
4. **Precise predictions for joint polarisation fractions in WZ production at the LHC**,
G. Pelliccioli, **R. Poncelet**,
e-Print: 2510.25898 [hep-ph]
5. **Associated production of a W -boson and a charm meson at NNLO in QCD**,
T. Generet, **R. Poncelet**, M. Muškinja,
e-Print: 2510.24525 [hep-ph]
6. **Flavour anti- k_T algorithm applied to $Wb\bar{b}$ production at the LHC**,
B. Hartanto, **R. Poncelet**, A. Popescu, S. Zoia,
e-Print: 2209.03280 [hep-ph]

Proceedings, community efforts and other publications

1. Precision Predictions for Polarized Electroweak Bosons,
R. Poncelet,
PoS ICHEP2024 (2025), 395
2. Les Houches 2023: Physics at TeV Colliders: Standard Model Working Group Report,
J. Andersen, B. Assi, K. Asteriadis, P. Azzurri, G. Barone et al.,
e-Print: 2406.00708 [hep-ph]
3. High-precision prediction for multi-scale processes at the LHC,
R. Poncelet,
e-Print: 2405.01330 [hep-ph]
4. Precision comparisons between theory and data in $t\bar{t}$ -production at the LHC,
R. Poncelet,
e-Print: 2212.06019 [hep-ph]
5. Report of the Topical Group on Top quark physics and heavy flavor production for Snowmass 2021,
K. Agashe et al. ,
e-Print: 2209.11267 [hep-ph]
6. Snowmass White Paper: prospects for the measurement of top-quark couplings,
G. Durieux, A. Gutiérrez Camacho, L. Mantani, V. Miralles, M. Miralles López, M. Llácer Moreno,
R. Poncelet, E. Vryonidou, M. Vos,
e-Print: 2205.02140 [hep-ph]
7. NNLO QCD study of polarised W^+W^- production at the LHC,
A. Popescu, **R. Poncelet**,
PoS LHCP2021 (2021), 211
8. W+c-jet production at the LHC with NNLO QCD accuracy,
M. Czakon, A. Mitov, M. Pellen, **R. Poncelet**,
e-Print: 2110.05104 [hep-ph]
9. NNLO QCD Calculations with the Sector-improved Residue Subtraction Scheme,
R. Poncelet,
Acta Phys. Polon. B 51 (2020), 1503
10. Sector-improved residue subtraction: Improvements and Applications,
A. Behring, M. Czakon, **R. Poncelet**,
PoS LL2018 (2018), 024
11. Precision Top-Quark physics with leptonic final states,
R. Poncelet,
RWTH Aachen publications (2018)

————— Scientific, organizational, and popularization activity Service and organization work

Conference and workshop organization:

- 2026: LOC Boost 26 Krakow.
- 2026: LHC 2026, QCD working group convener.
- 2026: DIS 2026, EW working group convener.
- 2025: PhysTeV 2025 (Les Houches), SM convener.
- S2025: International advisory committee for the TOP workshop.
- 2025/4: LOC chair for the "2nd General Meeting" of the COMETA COST action at the IFJ PAN.
- 2024/7: ICHEP, convener of "Top+EW" session.
- 2024/5: SM@LHC, convener of "Top-quark" session.
- 2023/11: Local organization committee and social chair of "Polish Particle and Nuclear Physics Summit (2PiNTS)" workshop at IFJ PAN Kraków
- 2023/9: QCD@LHC23, convener of "Processes with heavy quarks" session.
- 2023/3: DIS2023, convener of WG4 "QCD and heavy flavor".

Seminar organization:

- 2024–2025: Co-organizer of COMETA Colloquium series.
- 2020–2023: Organizer of the DAMPT-Cavendish Joint Seminar Series.

Management:

- Since Oct 2025: COMETA WG1 co-leader
- Since 2024: Polish representative in COMETA Management Committee (COST action <https://www.cost.eu/actions/CA22130/>)

Journal refereeing:

- Since 2021: EPJC
- Since 2021: JHEP
- Since 2023: SciPost
- Since 2025: Physical Review D

Institutional activities

- Since 2023: IFJ PAN Theory Division IT administration

Scientific outreach activities

- Popular science article: "The Higgs does not seem to contain any factors from new physics", Eurekalert, 11 Jul 2024, <https://www.eurekalert.org/news-releases/1051057>
- 2024/5: Dzień Otwarty IFJ PAN dla studentów 2024, Kraków.
Poster: "Normalising Flows for Phasespace Integration".
- 2023/7: Public Engagement workshop, The Science Museum, London.
Introduction To Public Engagement, a course organized by DiRAC.
- 2023/5: Isaac Newton Trust Fellows' Event, Cambridge University, Cambridge.
Public talk to the general public: "Exploring Quantum Effects at the Terascale".
- 2021/3: Engaged Researcher Online, Cambridge University, Cambridge.
Introduction To Public Engagement, course at the University of Cambridge.
- 2018/6: Science Fair, Wirsberg Gymnasium, Würzburg.
Scientific contact for student feedback and advice on project design and result analysis.

Other activity

- 2024/9: Aspen Summer Programme, Tightening the Gap Between Scattering Amplitudes and Events at the LHC at Higher Orders.
- 2024/8: CERN workshop: Frontiers in precision phenomenology: Resummation, Amplitudes, and Subtraction.
- 2023/6: PhysTev 23, workshop in Les Houches.
- 2022/8: MIAPbP workshop: Gearing up for high-precision LHC physics.
- 2022/6: DiRAC workshop: Accelerated Computing with Cuda.
- 2021/2: DiRAC workshop: DiRAC AI-athon.
- 2016/7: CTEQ - MCnet School at DESY.
- 2015/4: Helmholtz Alliance Monte-Carlo School at DESY.
- 2013/7: Summer student at DESY, supervisor: Simon Plätzer.
- 2013/2: Helmholtz Alliance Introduction to the Terascale at DESY.

Academic presentations

Invited colloquia at university and laboratories

1. **State of the art higher order calculations for LHC physics,**
Aachen, RWTH RTG colloquium, 2025.12.09
2. **Pinning down the Standard Model - Precision phenomenology at the LHC,**

Cracow, IFJPAN, 2025.10.02

3. **Precision Predictions for Polarized Electroweak Bosons,**
Amsterdam, NIKHEF, 2025.03.07
4. **Precision QCD phenomenology for multi-scale processes at the Large Hadron Collider,**
Kraków, IFJ PAN, 2024.04.25
5. **Jet identification and flavoured jet algorithms,**
Aachen, RTG colloquium, 2023.04.18

Presentations at national and international conferences

1. **Results from the COMETA ZZ polarization study,**
Waltham - Brandeis University, MBI, 2025.10.09
2. **Theory uncertainties from theory nuisance parameters in fixed-order QCD Korfu (remote),**
ISMD, 2025.09.24,
3. **Quark Mass Effects in Higgs Boson Processes,**
Durham, SM@LHC, 2025.04.09
4. **Robust estimates of theoretical uncertainties at fixed-order in perturbation theory,**
La Thuile, 59th Moriond, 2025.04.03
5. **Altarelli prize talk,**
Capetown, XXXII DIS conference, 2025.03.24
6. **Flavoured jets and how to define them,**
Kraków, XXXI Epiphany Conference, 2025.01.15
7. **Precision calculations for heavy-quark production,**
Freiburg, QCD@LHC, 2024.10.09
8. **Precision Predictions for Polarized Electroweak Bosons,**
Prague, ICHEP, 2024.10.09
9. **Polarized predictions in diboson final states,**
Rome, SM@LHC, 2024.05.09
10. **Precise polarisation predictions,**
Izmir, COMETA 1st General Meeting, 2024.02.28
11. **High precision prediction for multi-scale processes at the LHC,**
Kraków, XXX Epiphany Conference, 2024.01.08
12. **N(N)LO 3-jet predictions,**
FermiLab (remote), SM@LHC, 2023.07.10
13. **NNLO QCD corrections to event-shapes at the LHC,**
Crieff, RadCor, 2023.05.30
14. **Precision phenomenology with multi-jet final states at the LHC,**
MSU, DIS, 2023.03.30
15. **NNLO QCD corrections to W+2 b-jet production,**
Paris, QCD@LHC, 2022.11.28
16. **Jet calculations with the Sector-improved residue subtraction scheme,**
Newcastle, HP2, 2022.09.21
17. **Precision comparisons between theory and data in ttbar production at the LHC,**
Durham, TOP, 2022.09.05
18. **Polarization modelling in MBI processes / Precision Predictions for Polarized Electroweak Bosons,**
Shanghai (remote), MBI, 2022.08.22
19. **Progress on precision QCD calculations,**
Taipei (remote), LHCP, 2022.05.19
20. **Status of (N)NNLO calculations,**
CERN, SM@LHC, 2022.04.13
21. **NNLO QCD corrections for three-jet production,**

La Thuile, Moriond, 2022.03.24

22. **NNLO QCD predictions for 2 to 3 processes,**
Tallahassee (remote), RadCor+LoopFest, 2021.05.21
23. **NNLO QCD corrections to top-quark production and decay,**
Durham (remote), TOP, 2020.09.14
24. **NNLO QCD calculations with the Sector-improved residue subtraction scheme,**
Kraków, Epiphany Conference, 2020.01.10
25. **Towards 2 → 3 NNLO QCD calculations,**
Avignon, RadCor, 2019.09.10
26. **State-of-the-art precision calculations for top quark production and decay,**
Puebla, LHCP, 2019.05.16
27. **Top production at the LHC,**
Torino, DIS, 2019.04.09
28. **NNLO QCD top quark pair production and decay,**
Bad Neuenahr, TOP, 2018.09.17
29. **NNLO predictions for top-quark pair production with leptonic final states,**
MSU, LoopFest, 2018.07.19
30. **Towards top-quark pair production and decay at NNLO QCD,**
St. Gilgen, RadCor, 2017.09.27
31. **Improvements of the sector-improved residue subtraction scheme,**
Debrecen, QCD@LHC, 2017.08.29
32. **Polarised amplitudes for top quark pair production at NNLO,**
Münster, DPG, 2017.03.27
33. **NLO event generation with the (MC)3 sampling algorithm,**
Hamburg, DPG, 2016.03.01

Invited seminars

1. **Pinning down the Standard Model - Precision phenomenology at the LHC - ,**
Krakow, AGH Bialasowka, 2025.11.24
2. **Pinning down the Standard Model - Precision phenomenology at the LHC - ,**
Providence - Brown University, 2025.10.15
3. **Pinning down the Standard Model - Precision phenomenology at the LHC - ,**
New Haven - Yale University, NPA seminar, 2025.10.14
4. **Theory uncertainties from theory nuisance parameters,**
Gent, Particle physics seminar, 2025.09.09
5. **Theory uncertainties from theory nuisance parameters,**
Munich, MPP-TUM Phenomenology seminar, 2025.07.08
6. **Robust estimates of theoretical uncertainties at fixed-order in perturbation theory,**
Milan, Milan-Bicocca, 2025.03.19
7. **Robust estimates of theoretical uncertainties at fixed-order in perturbation theory,**
Cambridge, DAMPT-Cavendish seminar, 2025.02.21
8. **Precision phenomenology with heavy-flavour jets at the LHC,**
Münster, University of Münster, 2024.07.01
9. **Precision phenomenology with the sector-improved residue subtraction scheme,**
Dresden, Institute of Nuclear and Particle Physics seminar, 2024.06.27
10. **Techniques and phenomenology of NNLO QCD calculations for LHC processes,**
Hamburg, DESY Theory seminar, 2024.04.15
11. **Precision phenomenology with heavy-flavour jets at the LHC,**
Warsaw, NCBJ, 2024.04.09
12. **Techniques and phenomenology of cutting-edge higher-order calculations for LHC processes,**

Göttingen, Georg-August University, 2023.12.18

13. **Techniques and phenomenology of cutting-edge higher-order calculations for LHC processes,**
Kraków, AGH, 2023.12.15
14. **Precision phenomenology with heavy-flavour jets at the LHC,**
Kraków, Jagiellonian University, 2023.12.05
15. **High-precision calculations for W+charm at the LHC,**
DESY Zeuthen, 2023.11.02
16. **Precision phenomenology with heavy-flavour jets at the LHC,**
CERN, QCD seminar, 2023.10.23
17. **Precision Predictions for Polarized Electroweak Bosons,**
Kraków, IFJ theory division seminar, 2023.10.12
18. **Precision phenomenology with multi-jet final states at the LHC,**
Milano Bicocca, 2023.09.22
19. **Precision phenomenology with multi-jet final states at the LHC,**
Torino, INFN, 2023.03.22
20. **Precision phenomenology with multi-jet final states at the LHC,**
Kraków, IFJ particle physics theory department seminar, 2023.03.20
21. **Precision Predictions for Polarized Electroweak Bosons,**
Würzburg, 2023.01.19
22. **NNLO QCD corrections to W+2 b-jet production,**
Zürich, UZH, 2022.09.27
23. **Tasty jets at the LHC,**
Munich, MPI, 2022.07.01
24. **Jets at the LHC: a fixed order perspective,**
Freiburg, 2022.05.17
25. **HighTEA,**
Cambridge, Cavendish-DAMPT, 2022.02.04
26. **Jets at the LHC: a fixed order perspective,**
University of Sussex, 2021.10.25
27. **NNLO QCD predictions for 2 to 3 processes,**
CERN (remote), QCD-seminar, 2021.06.18
28. **Three photon production at the LHC: Amplitudes and Phenomenology,**
Milano Bicocca, 2020.02.19
29. **Three photon production at the LHC: Amplitudes and Phenomenology,**
Oxford, 2020.02.13
30. **Spin correlation in top-quark pair production in the 'precision'-era of the LHC,**
Dortmund, 2019.07.01
31. **Fixed-order predictions for top-quark pair production and decay at the LHC,**
Cambridge, Cavendish-DAMPT, 2019.05.16
32. **Improvements of the sector-improved residue subtraction scheme,**
Zürich, ETH, 2018.03.20
33. **NNLO QCD calculations with the sector-improved residue subtraction scheme,**
Würzburg, 2017.11.30
34. **Improvements of the sector-improved residue subtraction scheme,**
Freiburg, 2017.11.21

Presentations at workshops and working group meetings

1. **Impact of higher-order theory uncertainties on alpha-S extractions at the LHC,**
Aussois, alphas-2025: Workshop on precision measurements of the strong coupling constant, 2025.12.17

2. **Polarised-boson predictions in multi-boson processes,**
CERN, General LHC EW Meeting, 2025.11.17
3. **Fixed-order parton-level ‘events’,**
CERN (remote), Monte Carlo Working Group, 2025.10.02
4. **Higher-order QCD calculations for hard scattering processes,**
Cracow, Joint ECFA-NuPECC-APPEC Workshop “Synergies between the EIC and the LHC”, 2025.09.23
5. **Precision Measurements - Theory opening talk,**
Les Houches, PhysTeV25 workshop, 2025.06.17
6. **Treatment of non-positive definite integrands with Normalising Flows,**
CERN, Negative-weights suppression in Monte Carlo samples, 2025.05.07
7. **High precision prediction for multi-scale processes at the LHC,**
Pohang, APCTP Workshop on Precision Calculation and Collider Phenomenology, 2024.11.05
8. **Polarisation computations in the STRIPPER framework**
Toulouse (remote), COMETA workshop on vector-boson polarisation, 2024.09.23
9. **Fixed Order as a proxy to realistic LHC observables?**
Aspen Center for Physics, Tightening the Gap Between Scattering Amplitudes and Events at the LHC at Higher Orders, 2024.09.04
10. **STRIPPER subtraction scheme,**
CERN, Frontiers in precision phenomenology: Resummation, Amplitudes, and Subtraction, 2024.08.28
11. **CMP,**
online, LHCb flavoured jets public meeting, 2024.05.20
12. **VVLV: Precision Predictions for Polarized Electroweak Bosons,**
COMETA online meeting WG1, 2024.01.17
13. **Fixed-order calculations with massive quarks,**
Edinburgh, Heavy Flavour At High PTs, 2023.11.30
14. **High precision prediction for multi-scale processes at the LHC,**
Kraków, 2PiNTS, 2023.11.22
15. **HighTEA,**
Les Houches, 2023.06.16
16. **Flavour anti-kT,**
Les Houches, 2023.06.14
17. **Isolated photon production in association with a jet pair through next-to-next-to-leading order in QCD,**
ATLAS PDF Forum (remote), 2023.05.26
18. **HighTEA,**
CMS TOP WG (remote), 2022.12.13
19. **Combined tt and tW analyses,**
ATLAS TOP WG (remote), 2022.11.17
20. **Infrared-safe flavoured anti-kT jets,**
ATLAS PDF Forum (remote), 2022.05.13
21. **NNLO QCD predictions for jet observables,**
CMS hadronic workshop, 2022.02.24
22. **NNLO predictions for three-jet cross sections at the LHC,**
LHC EW WG general meeting, 2022.02.15
23. **NNLO predictions for three-jet cross sections at the LHC,**
LHC EW WG, 2021.11.29
24. **Precision predictions for jet rates,**
CERN (remote), Jets And Their Substructure, 2021.05.31
25. **Predictions for ttbar differential cross sections,**
CMS TOP WG, 2019.11.20
26. **NNLO predictions for ttbar spin correlations,**

27. **ttbar production and decay at NNLO QCD,**
Bad Honnef, GK report week, 2016.08.30

Other presentations

1. **Precision QCD phenomenology for multi-scale processes at the Large Hadron Collider,**
Cracow - IFJ PAN, habilitation defense, 2025.10.20
2. **Spin correlation in top-quark pair production,**
CERN, collider cross-talk, 2022.07.21
3. **Precision Top-Quark Physics with Leptonic Final States,**
Aachen, PhD defense, 2018.09.24

Teaching

Teaching at IFJ PAN

- 2024: Supervision of two IFJ summerstudents.
- Since 2024: Quantum Field Theory, lecture for PhD students (4x90 mins + exercises).

Teaching at Cambridge University

- 2024: Co-supervision of Louis Christou as Part III student at the Cavendish Laboratory.
- 2023: Supervision of Louis Christou in the summer-student programme of the Cavendish Laboratory.
- 2021-2023: Undergraduate supervision for Physics 1B A (wave-mechanics, quantum mechanics, statistical methods, solid-state physics) at Emmanuel College.
- 2019-2022: Graduate Lecture “HEP computing tools” at the Cavendish Laboratory (2x90 mins + tutorial per year).
- 2019-2022: PhD project co-supervision of Andrei Popescu.
- 2019: Part III project co-supervision of Weijun Li.

Teaching at RWTH Aachen University

- Summer term 2016: exercise classes for ”Relativistic quantum mechanics” (graduate course)
- Winter term 2016/17: Tutor for ”Theoretische Physik 0” (undergraduate course, mathematical methods for theoretical physics)
- Summer term 2017: Tutor for ”Theoretische Physik I: Mechanik” (undergraduate course, classical mechanics)
- Winter term 2017/18: Tutor for ”Statistische Mechanik” (undergraduate course, statistical physics)

Teaching at the University of Göttingen

- Winter term 2012/13: tutor for ”Analytische Mechanik” (undergraduate course, classical mechanics)
- Summer term 2013: tutor for ”Physik II” (undergraduate course, electrodynamics)
- Winter term 2013/14: tutor for ”Mathematische Methoden der Physik II” (undergraduate course, mathematical methods for physics)
- Summer term 2014: tutor for ”Quantenmechanik I” (undergraduate course, quantum mechanics)
- Winter term 2014/2015: tutor for ”Rechenmethoden der Physik” (undergraduate course, mathematical methods for physics)
- Summer term 2015: tutor for ”Analytische Mechanik” (undergraduate course, classical mechanics)

Other

- Sep 2023: Maria Laach Herbstschule, Maria Laach, Germany, theory coordinator
- Nov 2025: Terascale Monte Carlo School, DESY Hamburg, Germany, ”Higher-order QCD” lecture