

**Name:** Dr. rer. nat. Rene Poncelet  
**Affiliation:** Institute of Nuclear Physics Polish Academy of Sciences, Kraków, Poland  
**Email:** rene.poncelet@ifj.edu.pl  
**ORCID:** 0000-0003-4889-9396  
**Website:** <https://th.ifj.edu.pl/poncelet>

### 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 Przaszłowicz, 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)<sup>3</sup> 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

<b>Guido Altarelli Award</b> <i>for outstanding contributions to precision calculations of the top quark and Higgs bosons, which have profoundly influenced LHC analyses</i>	2025
<b>IFJ PAN Directors Award</b> 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

<b>ERC Starting Grant 2025</b> STAPLE - Shower Thoughts About Precision LHC Eventsimulation Total amount: 1.1M EUR	Start: Feb 2026
<b>NCN Sonata 20</b> High Precision Predictions to Probe the EWSB Total amount: 323k EUR	2025–2028
<b>Leverhulme Early Career Fellowship</b> 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

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

### Funding for individual activities

<b>COST ITC conference grants - COMETA</b> Participation at ICHEP 2024 conference, 1600 Euro Participation at PhysTeV 2025 workshop (Les Houches), 1400 Euro Participation MBI, Brandeis University, 1500 Euro	2024 2025 2025
<b>Simons Foundation Grant</b> Funding to participate in the Aspen Summer Programme, 4500 USD	2024

### Other awards

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

## References

- Prof. Dr. rer. nat. Michal 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. Moul, **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  $\sqrt{s} = 13$  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: LHCP 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.

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## **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  $2 \rightarrow 3$  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. **VLVL: 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**,

CERN TOP WG, 2018.11.21

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