

# Mathieu Pellen

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Date and place of birth: 4<sup>th</sup> of June 1987 in Brest, France  
Nationality, Gender, Status: French, Male, Married  
Languages: French (native), English (fluent), German (fluent)

## Research Positions

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- 10/20 - present Senior Postdoctoral researcher / Habilitation track (of German universities)  
Physics Institute, University of Freiburg (Germany)
- 10/18 - 09/20 Research associate  
Cavendish laboratory, University of Cambridge (United Kingdom)
- 10/15 - 09/18 Postdoctoral researcher  
Institute for Theoretical Physics und Astrophysics, University of Würzburg (Germany)
- 10/11 - 09/15 PhD student  
*Precision Calculations for Physics Beyond the Standard Model*,  
Supervisor: Michael Krämer - RWTH Aachen (Germany)
- 03 - 08/11 Master student  
*Energy and momentum conservation rules for the intersection of branes*  
Supervisor: David Wands - ICG, University of Portsmouth (United Kingdom)
- 06 - 08/10 Bachelor student  
*Modelling proton-proton collisions at the LHC*  
Supervisor: Arthur Moraes - University of Glasgow (United Kingdom)
- 07 - 08/09 Summer student  
*Calculations for Coupling of a SQUID with a coplanar resonant line*  
Supervisor: Olivier Buisson - Institut Néel (CNRS), Grenoble (France)

## Education

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- 10/11 - 06/15 PhD in natural science  
Institute for Theoretical Particle Physics and Cosmology,  
RWTH Aachen University (Germany)
- 09/10 - 09/11 International Master in Subatomic and Astroparticle Physics  
Joseph Fourier University / LPSC (CNRS), Grenoble (France)
- 09/08 - 09/11 Master in Physics and Nanoscience  
Grenoble Institute of Technology (France)
- 09/05 - 09/08 Classe préparatoire aux Grandes écoles (equivalent to first and second year of university)  
Lycée de Kérichen, Brest (France)

**Articles:**

- [1] M. Pellen, R. Poncelet and A. Popescu, *Polarised  $W+j$  production at the LHC: a study at NNLO QCD accuracy*, Submitted to *JHEP* (9, 2021) [2109.14336].
- [2] A. Denner, R. Franken, M. Pellen and T. Schmidt, *Full NLO predictions for vector-boson scattering into  $Z$  bosons and its irreducible background at the LHC*, Accepted for publication in *JHEP* (7, 2021) [2107.10688].
- [3] R. Covarelli, M. Pellen and M. Zaro, *Vector-Boson scattering at the LHC: Unraveling the electroweak sector*, *Int. J. Mod. Phys. A* **36** (2021), no. 16 2130009 [2102.10991].
- [4] M. Czakon, A. Mitov, M. Pellen and R. Poncelet, *NNLO QCD predictions for  $W+c$ -jet production at the LHC*, *JHEP* **06** (2021) 100 [2011.01011].
- [5] A. Denner, R. Franken, M. Pellen and T. Schmidt, *NLO QCD and EW corrections to vector-boson scattering into  $ZZ$  at the LHC*, *JHEP* **11** (2020) 110 [2009.00411].
- [6] A. Denner, J.-N. Lang and M. Pellen, *Full NLO QCD corrections to off-shell  $ttbb$  production*, Accepted for publication in *Phys. Rev. D* (2020) [2008.00918].
- [7] F. A. Dreyer, A. Karlberg, J.-N. Lang and M. Pellen, *Precise predictions for double-Higgs production via vector-boson fusion*, *Eur. Phys. J. C* **80** (2020), no. 11 1037 [2005.13341].
- [8] S. Bräuer, A. Denner, M. Pellen, M. Schönherr and S. Schumann, *Fixed-order and merged parton-shower predictions for  $WW$  and  $WWj$  production at the LHC including NLO QCD and EW corrections*, *JHEP* **10** (2020) 159 [2005.12128].
- [9] M. Pellen, *Exploring the scattering of vector bosons at LHCb*, *Phys. Rev. D* **101** (2020), no. 1 013002 [1908.06805].
- [10] A. Denner, S. Dittmaier, M. Pellen and C. Schwan, *Low-virtuality photon transitions  $\gamma^* \rightarrow f\bar{f}$  and the photon-to-jet conversion function*, *Phys. Lett. B* **798** (2019) 134951 [1907.02366].
- [11] M. Chiesa, A. Denner, J.-N. Lang and M. Pellen, *An event generator for same-sign  $W$ -boson scattering at the LHC including electroweak corrections*, *Eur. Phys. J. C* **79** (2019), no. 9 788 [1906.01863].
- [12] A. Denner, S. Dittmaier, P. Maierhöfer, M. Pellen and C. Schwan, *QCD and electroweak corrections to  $WZ$  scattering at the LHC*, *JHEP* **06** (2019) 067 [1904.00882].
- [13] L. Di Menza, J.-P. Nicolas and M. Pellen, *A new type of charged black hole bomb*, *Gen. Rel. Grav.* **52** (2020), no. 1 8 [1903.02941].
- [14] A. Ballestrero et. al., *Precise predictions for same-sign  $W$ -boson scattering at the LHC*, *Eur. Phys. J. C* **78** (2018), no. 8 671 [1803.07943].
- [15] A. Denner and M. Pellen, *Off-shell production of top-antitop pairs in the lepton+jets channel at NLO QCD*, *JHEP* **02** (2018) 013 [1711.10359].
- [16] B. Biedermann, A. Denner and M. Pellen, *Complete NLO corrections to  $W^+W^+$  scattering and its irreducible background at the LHC*, *JHEP* **10** (2017) 124 [1708.00268].
- [17] B. Biedermann, S. Bräuer, A. Denner, M. Pellen, S. Schumann and J. M. Thompson, *Automation of NLO QCD and EW corrections with Sherpa and Recola*, *Eur. Phys. J. C* **77** (2017) 492 [1704.05783].
- [18] A. Denner, J.-N. Lang, M. Pellen and S. Uccirati, *Higgs production in association with off-shell top-antitop pairs at NLO EW and QCD at the LHC*, *JHEP* **02** (2017) 053 [1612.07138].
- [19] L. Ali Cavazonza, H. Gast, M. Krämer, M. Pellen and S. Schael, *Constraints on leptophilic dark matter from the AMS-02 experiment*, *Astrophys. J.* **839** (2017), no. 1 36 [1612.06634].
- [20] B. Biedermann, A. Denner and M. Pellen, *Large electroweak corrections to vector-boson scattering at the Large Hadron Collider*, *Phys. Rev. Lett.* **118** (2017), no. 26 261801 [1611.02951].
- [21] A. Denner and M. Pellen, *NLO electroweak corrections to off-shell top-antitop production with leptonic decays at the LHC*, *JHEP* **08** (2016) 155 [1607.05571].

- [22] C. Arina, M. Backović, E. Conte, B. Fuks, J. Guo, J. Heisig, B. Hespel, M. Krämer, F. Maltoni, A. Martini, K. Mawatari, M. Pellen and E. Vryonidou, *A comprehensive approach to dark matter studies: exploration of simplified top-philic models*, *JHEP* **11** (2016) 111 [1605.09242].
- [23] J. Heisig, M. Krämer, M. Pellen and C. Wiebusch, *Constraints on Majorana Dark Matter from the LHC and IceCube*, *Phys. Rev.* **D93** (2016), no. 5 055029 [1509.07867].
- [24] M. Backović, M. Krämer, F. Maltoni, A. Martini, K. Mawatari and M. Pellen, *Higher-order QCD predictions for dark matter production at the LHC in simplified models with s-channel mediators*, *Eur. Phys. J.* **C75** (2015), no. 10 482 [1508.05327].
- [25] L. Ali Cavazonza, M. Krämer and M. Pellen, *Electroweak fragmentation functions for dark matter annihilation*, *JCAP* **1502** (2015), no. 02 021 [1409.8226].
- [26] R. Gavin, C. Hangst, M. Krämer, M. Mühlleitner, M. Pellen, E. Popena and M. Spira, *Squark Production and Decay matched with Parton Showers at NLO*, *Eur. Phys. J.* **C75** (2015), no. 1 29 [1407.7971].
- [27] M. Pellen, *Conservation laws for colliding branes with induced gravity*, *Astrophys. Space Sci.* **357** (2015), no. 1 24 [1309.6750].
- [28] R. Gavin, C. Hangst, M. Krämer, M. Mühlleitner, M. Pellen, E. Popena and M. Spira, *Matching Squark Pair Production at NLO with Parton Showers*, *JHEP* **10** (2013) 187 [1305.4061].

### **Proceedings and Reports:**

- [1] M. Czakon, A. Mitov, M. Pellen and R. Poncelet, *W+c-jet production at the LHC with NNLO QCD accuracy*, 15th International Symposium on Radiative Corrections and LoopFest XIX. [arXiv:2110.05104 [hep-ph]].
- [2] D. Buarque, *et al.* *Vector Boson Scattering Processes: Status and Prospects*, [arXiv:2106.01393 [hep-ph]].
- [3] M. Pellen, *Vector bosons and jets at the LHC*, Eighth Annual Conference on Large Hadron Collider Physics-LHCP2020, 25-30 May. [arXiv:2009.12236 [hep-ph]].
- [4] J. Baglio *et al.*, *VBSCan Mid-Term Scientific Meeting*, [arXiv:2004.00726 [hep-ph]].
- [5] S. Amoroso *et al.*, *Les Houches 2019: Physics at TeV Colliders: Standard Model Working Group Report*, [arXiv:2003.01700 [hep-ph]].
- [6] A. Denner, J.-N. Lang, M. Pellen and S. Uccirati, *NLO QCD + electroweak predictions for off-shell ttH production at the LHC*, [arXiv:1912.08493 [hep-ph]].
- [7] R. Bellan *et al.*, *VBSCan Thessaloniki 2018 Workshop Summary*, [arXiv:1906.11332 [hep-ph]].
- [8] P. Azzi *et al.*, *Standard Model Physics at the HL-LHC and HE-LHC*, [arXiv:1902.04070 [hep-ph]].
- [9] J. R. Andersen *et al.*, *Les Houches 2017: Physics at TeV Colliders Standard Model Working Group Report*, [arXiv:1803.07977 [hep-ph]].
- [10] C. F. Anders *et al.*, *Vector boson scattering: Recent experimental and theory developments*, *Rev. Phys.* **3**, 44 (2018) [arXiv:1801.04203 [hep-ph]].
- [11] A. Denner, J.-N. Lang, M. Pellen and S. Uccirati, *NLO QCD and EW corrections to processes involving off-shell top quarks*, *PoS RADCOR* **2017**, 060 (2017) [arXiv:1711.08910 [hep-ph]].
- [12] B. Biedermann, A. Denner and M. Pellen, *Electroweak corrections to vector-boson scattering*, *PoS RADCOR* **2017**, 072 (2017) [arXiv:1711.02932 [hep-ph]].
- [13] M. Pellen, *Automated computations of electroweak corrections using Sherpa+Recola*, 29th Rencontres de Blois on Particle Physics and Cosmology Blois, France, May 28-June 2, 2017 [arXiv:1709.05791 [hep-ph]].
- [14] B. Biedermann, A. Denner and M. Pellen, *NLO electroweak corrections to vector-boson scattering at the LHC*, *PoS DIS* **2017**, 164 (2018) [arXiv:1708.00646 [hep-ph]].
- [15] L. Ali Cavazonza, M. Krämer and M. Pellen, *Exploring Dark Matter with AMS-02 through Electroweak Corrections*, Proceedings, 11th Patras Workshop on Axions, WIMPs and WISPs (Axion-WIMP 2015): Zaragoza, Spain, June 22-26, 2015

- [16] J. Heisig and M. Pellen, *Dark Matter at the LHC and IceCube - a Simplified Model Interpretation*, Proceedings, 11th Patras Workshop on Axions, WIMPs and WISPs (Axion-WIMP 2015): Zaragoza, Spain, June 22-26, 2015 [arXiv:1509.08640 [hep-ph]].
- [17] R. Gavin, C. Hangst, M. Krämer, M. Mühlleitner, M. Pellen, E. Popena and M. Spira, *Squark Production and Decay at NLO matched with Parton Showers*, PoS DIS 2014, 125 (2014).
- [18] L. Ali Cavasonza, M. Krämer and M. Pellen, *Electroweak fragmentation functions for dark matter annihilation*, Proceedings, 10th Patras Workshop on Axions, WIMPs and WISPs (AXION-WIMP 2014): Geneva, Switzerland, June 29-July 4, 2014

## Teaching - Supervision

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- 2021-22 **Senior assistant** *Mathematics II* (in German) - University of Freiburg, Germany  
→ Co-organiser of tutorials and designing of exercise sheets/exam
  - 2021 **Senior assistant** *Classical Mechanics* (in German) - University of Freiburg, Germany  
→ Co-organiser of tutorials and designing of exercise sheets/exam
  - 2020-21 **Senior assistant** *Classical Electrodynamics* (in German) - University of Freiburg, Germany  
→ Co-organiser of tutorials and designing of exercise sheets/exam
  - 04/2019 **Lecturer** *Standard model, higher orders, and VBF/VBS* - University of Pavia, Italy  
→ PhD programme (10 hours)
  - 04/2018 **Lecturer** *Introduction to electroweak corrections*  
→ *First EWSB spring school* (3 hours) - Maratea, Italy
  - 2018 **Teaching assistant** *Classical Electrodynamics* (in German) - University of Würzburg, Germany  
→ Exercise classes and designing of exercise sheets
  - 2017-18 **Teaching assistant** *Advanced Quantum Field Theory* - University of Würzburg, Germany  
→ Exercise classes and designing of exercise sheets
  - 2015 **Teaching assistant** *Classical Mechanics* (in German) - RWTH Aachen, Germany  
→ Exercise classes and corrections of students' sheets
  - 2014 **Teaching assistant** *Quantum Mechanics* - RWTH Aachen, Germany  
→ Exercise classes and corrections of students' sheets
  - 2012-13 **Teaching assistant** *Classical Electrodynamics* - RWTH Aachen, Germany  
→ Exercise classes and corrections of students' sheets
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- 2021-22 **Co-supervision** of a Master student - University of Freiburg, Germany  
→ *Higher-order corrections for tau decays*
  - 2021 **Co-supervision** of a Bachelor student - University of Freiburg, Germany  
→ *Anomalous electromagnetic moments of  $\tau$  leptons*
  - 2019-20 **Co-supervision** of a PhD student - University of Cambridge, United Kingdom  
→ *Higher-order corrections in QCD*
  - 2014-15 **Supervision** of two Master students - RWTH Aachen, Germany  
→ *Indirect Dark-Matter detection*
  - 2013 **Supervision** of two Bachelor students for their thesis - RWTH Aachen, Germany  
→ *Supersymmetric quantum mechanics*  
→ *Two Higgs doublet model*
  - 2012 **Supervision** of two Master students for literature seminar - RWTH Aachen, Germany  
→ *Extra dimension models*

## Leadership - Scientific Management

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2021-now	<b>Convener</b> of the VBF sub-group in LHC Higgs Working Group
2017-2021	<b>Working-group leader</b> of the VBSCan COST network
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2021	<b>Session Chair</b> , <i>MBI conference 2021</i> , Milan (Italy)
2021	<b>Group coordinator</b> , <i>Fall school for high-energy physics: Maria Laach</i> , Bad Honnef (Germany)
2021	<b>Convener</b> , <i>Les Houches workshop 2021: Physics at TeV Colliders</i> , Les Houches (France)
2021	<b>Session Chair</b> , <i>DPG Meeting - QCD and electroweak interactions</i> , Dortmund (Germany)
2020	<b>Organiser</b> , <i>Workshop on Effective Field Theory in Polarised VBS</i> , online
2020	<b>Programme organiser and Chair</b> , VBSCan meeting, Helsinki (Finland)
2019	<b>Programme organiser</b> , VBSCan meeting, Istanbul (Turkey)
2019	<b>Convener</b> of the EW session at LHCP 2019 - Puebla (Mexico)
2019	<b>Programme organiser and Chair</b> , VBSCan meeting, Ljubljana (Slovenia)
2018	<b>Programme organiser and Chair</b> , VBSCan meeting, Thessaloniki (Greece)
2018	<b>Programme organiser and Chair</b> , VBSCan meeting, CERN, Geneva (Switzerland)
2017	<b>Programme organiser and Chair</b> , VBSCan meeting, Split (Croatia)
2020	<b>Editor</b> , <i>VBSCan Mid-Term Scientific Meeting: proceedings</i> [2004.00726]
2019	<b>Editor</b> , <i>VBSCan Thessaloniki 2018 Workshop: proceedings</i> [1906.11332]
2018	<b>Editor</b> , <i>Vector-boson scattering: Recent experimental and theory developments</i> [1801.04203]
2017	<b>Section coordinator</b> , <i>Les Houches workshop 2017 Standard-Model report: Physics at TeV Colliders</i> [1803.07977]
2017-now	<b>Referee</b> for EPJC, JHEP, and PRD
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2021-now	<b>Representative</b> of postdoctoral researchers in graduate school (University of Freiburg)
2019	<b>Member of Scientific Committee</b> of international workshop <i>BSM models in Vector-Boson Scattering processes</i> – Lisbon (Portugal)
2018-20	<b>Representative</b> of the United Kingdom in VBSCAN COST action
2017-18	<b>Representative</b> of Germany in VBSCAN COST action
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2021-22	<b>Organiser</b> of bi-weekly graduate-school seminar (University of Freiburg)
2020-now	<b>Organiser</b> of bi-weekly student research seminar (University of Freiburg)
2018-20	<b>Organiser</b> of weekly institute seminar (University of Cambridge)
2015-18	<b>Organiser</b> of weekly institute seminar (University of Würzburg)
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2020-now	<b>Mentor</b> of 5 PhD students (University of Freiburg)

## Funding

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06/2020	Step 2 of the <b>ERC Starting Grant 2020</b> call (ERC-2020-StG). Not funded.
11/2019	<b>Travel grant</b> from COST EU agency - 800 Euros. One-week visit at University of Würzburg, Germany.
03/2017	<b>Travel grant</b> from COST EU agency - 1000 Euros. One-week visit at Nikhef - Amsterdam, Netherlands.
03/2011	<b>Mobility grant</b> Explo'RA, Rhone-Alpes region - 2000 Euros. Six-months project at University of Portsmouth, United Kingdom.
07/2010	<b>Summer Studentship</b> Scheme, University of Glasgow - 1000 Pounds. Three-months project at University of Glasgow, United Kingdom.

## Invited Presentations

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- 01/2022 *New physics opportunities for  $W$ +jet at the LHC,*  
**Seminar**, University of Würzburg (Germany).
- 09/2021 *Precise predictions for di-Higgs VBF production,*  
**Plenary**, Higgs Hunting 2021, Paris (France).
- 06/2021 *EW corrections for SM processes,*  
**Plenary**, Physics at TeV Colliders 2021, Les Houches (France).
- 05/2021 *Fixed-order and merged parton-shower predictions for  $WW$  and  $WWj$  production at the LHC including NLO QCD and EW corrections,*  
LHC EW working group, CERN (Switzerland).
- 04/2021 *Vector-boson scattering at the LHC: unravelling the Electroweak sector,*  
**Seminar**, University of Freiburg (Germany).
- 03/2021 *Stress testing the Standard Model via vector-boson scattering at the LHC,*  
DPG Meeting, Dortmund (Germany) - **invited topical talk**.
- 12/2020 *Theoretical predictions for Higgs measurements at the LHC,*  
**Seminar**, Heidelberg (Germany).
- 11/2020 *Full NLO QCD corrections to off-shell  $ttbb$  production,*  
**Seminar**, RWTH Aachen (Germany).
- 10/2020 *Multi-particle final states at 1-loop EW,*  
CEPC workshop, Shanghai (China).
- 07/2020 *Precise predictions for double-Higgs production via vector-boson fusion,*  
LHC-HH Subgroup Meeting (online).
- 05/2020 *Vector bosons plus jets at the LHC,*  
LHCP2020, Paris (France).
- 05/2020 *Theoretical predictions for processes with many legs at the LHC,*  
**Seminar**, Milan (Italy).
- 01/2020 *Off-shell effects in  $tt$  and  $ttH$  production,*  
**Plenary**, ZPW2020, Zurich (Switzerland).
- 11/2019 *Theoretical predictions for processes with many legs at the LHC,*  
**Seminar**, Nikhef (Netherlands).
- 09/2019 *Theoretical predictions for  $ttH$  production - NLO QCD + NLO EW,*  
**Plenary**, TOP2019, Beijing (China).
- 09/2019 *What can we do better: Precision electroweak,*  
**Plenary**, ATLAS Standard-Model workshop, Belgrade (Serbia).
- 02/2019 *Theory predictions for vector-boson scattering at the LHC,*  
**Seminar**, IPPP Durham (United Kingdom).
- 10/2018 *Vector-boson scattering at the LHC,*  
**Seminar**, University of Cambridge (United Kingdom).
- 09/2018 *Production of top quark pairs at the LHC: NLO corrections and off-shell effects,*  
**Seminar**, University of Zurich (Switzerland).
- 08/2018 *Theory input for VBS,*  
QCD@LHC, Dresden (Germany).
- 07/2018 *Top quark at the LHC: NLO corrections and off-shell effects,*  
**Seminar**, Desy Hamburg (Germany).
- 04/2018 *Theory developments in VBS simulations,*  
**Plenary**, SM@LHC, Berlin (Germany).

- 03/2018 *Vector-boson scattering at the LHC*,  
**Seminar**, University of Cambridge (United Kingdom).
- 02/2018 *High-precision description of VBS at the LHC*,  
CMS meeting, CERN (Switzerland).
- 01/2018 *NLO corrections for processes involving off-shell top quarks*,  
**Seminar**, Freiburg (Germany).
- 08/2017 *Status of EW NLO corrections for multi-boson processes*,  
**Plenary**, MBI 2017, KIT / Karlsruhe (Germany).
- 05/2017 *Automatised computations of EW corrections using Sherpa+Recola*,  
Rencontres de Blois 2017, Blois (France).
- 05/2017 *NLO EW corrections for processes involving off-shell top quarks*,  
**Seminar**, Göttingen University (Germany).
- 04/2017 *Higgs production in association with off-shell top-antitop pairs at NLO EW and QCD*,  
CMS generator meeting, CERN - Geneva, (Switzerland).
- 03/2017 *NLO electroweak corrections to off-shell top-antitop production with leptonic decays at the LHC*,  
DPG Meeting - Münster University (Germany).
- 01/2015 *NLO accuracy for Supersymmetric processes at the LHC*,  
**Seminar** - Würzburg University (Germany).
- 03/2013 *Basics of AdS / CFT correspondence*,  
**Seminar** - Department of Mathematics - University of Brest (France).

#### Other Presentations

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- 06/2021 *NNLO QCD predictions for  $W+c$ -jet production at the LHC*,  
Jets and their substructure from LHC data, CERN (Switzerland).
- 05/2021 *NNLO QCD predictions for  $W+c$ -jet production at the LHC*,  
Radcor & LoopFest, Tallahassee (USA).
- 10/2020 *Off-shell effects for  $t\bar{t}b\bar{b}$  at NLO QCD*,  
Higgs Cross Section Working Group, ttH/tH subgroup, CERN (Switzerland).
- 02/2020 *Review of theoretical predictions for VBS*,  
VBSCAN meeting, Helsinki (Finland).
- 11/2018 *Production of off-shell top pairs in the lepton+jets channel at NLO QCD*,  
LHC top WG meeting, CERN (Switzerland).
- 10/2018 *NLO corrections to VBS*,  
HL/HE-LHC WG1 Meeting, CERN (Switzerland).
- 11/2017 *EW, QCD, and interference contributions for VBS*,  
Workshop Monte-Carlo description of VBS, Nikhef (Netherlands).
- 09/2017 *NLO QCD and EW corrections for processes involving off-shell top quarks*,  
RADCOR 2017, St Gilgen (Austria).
- 06/2017 *Complete NLO corrections to  $pp \rightarrow \mu^+\nu_\mu e^+\nu_e jj$* ,  
VBSCAN meeting, Split (Croatia).
- 06/2017 *EW corrections: Recola, Automation, VBS*,  
Les Houches workshop: Physics at TeV Colliders, Les Houches (France).

- 04/2017 *Large electroweak corrections to vector-boson scattering at the LHC,*  
DIS 2017 - Birmingham University (United Kingdom).
- 03/2017 *Higgs production in association with off-shell top-antitop pairs at NLO EW and QCD,*  
DPG Meeting - Münster University (Germany).
- 08/2016 *NLO EW corrections to off-shell top quark pair production,*  
QCD@LHC 2016 - Zurich (Switzerland).
- 12/2015 *Simplified models in Madgraph,*  
LHC Dark Matter WG meeting - CERN - Geneva (Switzerland).
- 11/2015 *Precise predictions for Dark Matter production at the LHC,*  
Helmholtz Alliance meeting *Physics at the Terascale* - Hamburg Desy (Germany).
- 10/2015 *Higher-order NLO-QCD predictions for dark matter production at the LHC,*  
New Physics meeting - Bonn (Germany).
- 10/2015 *NLO predictions for Dark Matter production at the LHC,*  
HAP meeting - Karlsruhe (Germany).
- 06/2015 *Exploring Dark Matter with AMS-02 through Electroweak Corrections,*  
Patras Workshop - Zaragoza (Spain).
- 03/2015 *NLO accuracy and spin effects for squark-gluino production and decay,*  
DPG Meeting - Wuppertal (Germany).
- 12/2014 *Supersymmetry: from the algebra to LHC phenomenology,*  
**Seminar** - RWTH Aachen (Germany).
- 10/2014 *NLO accuracy for production and decay of squarks matched with parton shower,*  
Theory meeting - BCTP Bonn (Germany).
- 09/2014 *NLO accuracy for production and decay of squarks matched with parton shower,*  
Desy Theory Workshop - Desy Hamburg (Germany).
- 07/2014 *Next-to-leading order accuracy for production and decay of squarks and gluino,*  
SUSY 2014 - University of Manchester (United Kingdom).
- 03/2014 *Next to leading order accuracy for production and decay of squarks and gluino,*  
DPG Meeting - Mainz University (Germany).
- 03/2013 *Supersymmetric Cascade Decays at Next-to-Leading Order: Squark decay,*  
DPG Meeting - TU Dresden (Germany).
- 02/2013 *Instanton and Strong CP problem,*  
Literature Seminar - RWTH Aachen (Germany).
- 08/2012 *Supersymmetric Cascade Decays at Next-to-Leading Order,*  
GK Berichtswoche - Vaals (Netherlands).
- 05/2012 *Strong vs. Weak Electroweak symmetry breaking (AdS / CFT),*  
Literature Seminar, RWTH Aachen (Germany).
- 08/2011 *Rules for colliding branes in higher-dimensions,*  
**Seminar**, ICG-Portsmouth (United Kingdom).
- 08/2010 *Modelling proton-proton collisions at the LHC,*  
**Seminar**, University of Glasgow (United Kingdom).



## Referees

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- David Wands

Institute of Cosmology and Gravitation,  
University of Portsmouth,  
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- Michael Krämer

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- Margarete Mühlleitner

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