

PERSONALIA:

- Name: Freya Blekman
- Nationality: Dutch
- Gender: Female
- Email: freya.blekman@cern.ch
- Languages: Dutch (native), English (near-native, C2), German (conversational), French (conversational)
- Bibliometry: <https://inspirehep.net/author/profile/Freya.Blekman.1>
(see also end of this document)

EMPLOYMENT:

- 2021-present: Lead Scientist at DESY and professor at the University of Hamburg. Primary focus: Searches for physics beyond the standard model in the top quark sector with the CMS experiment at the LHC. Also spending a fraction of research on future colliders and science communication.
- 2021-present: Visiting Professor at Vrije Universiteit Brussel.
- 2019-2021: Professor at Vrije Universiteit Brussel.
- 2020-present: Visiting Professor (2017-2020 Visiting Researcher) at University of Oxford.
- 2014-2018: Associate Professor at Vrije Universiteit Brussel.
- 2010-2014: Assistant Professor at Vrije Universiteit Brussel.
- 2007-2010: Research Associate at Cornell University, CMS experiment. Primary focus: CMS Pixel detector and measurement of the top quark pair production cross section in first LHC data.
- 2005-2007: Research Associate at Imperial College London, CMS experiment and Dzero experiment. Primary focus: CMS software, CMS trigger, particle flow, tau identification.

EDUCATION:

- 2005: Ph.D. University of Amsterdam (Nikhef), Thesis: *Measurement of the top quark pair production cross section in the all-hadronic channel with the Dzero experiment*. Supervisors: Prof. Frank Linde and Prof. Marcel Demarteau.
- 2000: M.Sc. University of Amsterdam (Nikhef), Thesis: R&D for LHCb outer tracker.
- CERN Summer Student 1999 in group of Gigi Rolandi (Scuola Normale Superiore)

CAREER BREAKS:

- 1995-1997 break in university studies due to the death of parents in 1994 and 1996.

FELLOWSHIPS AND AWARDS:

- 2023: CMS Achievement Award for starting up the CMS Physics Briefing program.
- 2019-21: USA Department of Energy LHC Physics Center Senior Distinguished Researcher.
- 2016: "Jaarprijs Science Communication" of the Royal Flemish Academy of Belgium for the Arts and Sciences (KVAB) for Promotion of particle physics on social media, particularly twitter and youtube.
- 2013: USA Department of Energy LHC Physics Center Fellow.
- 2011: Odysseus II Grant awarded by the Flemish funding agency FWO.
- 2004: Awarded funding for extra year PhD from Dutch National Science Foundation due to accelerator delays (NWO).

SELECTED COLLECTIVE AWARDS:

- 2025: Breakthrough Prize in Fundamental Physics (CMS Collaboration)
- 2019: European Physics Society HEPP prize for physics of Top quark (D0 Collaboration)
- 2013: European Physics Society HEPP prize for discovery Higgs boson (CMS Collaboration)
- 2012: Science "Breakthrough of the Year 2012" for the discovery of the Higgs boson.

MENTORSHIP:

- Promotor 20 PhD students (6 ongoing at, 14 graduated),
- Supervisor of 12 postdoctoral researchers (4 ongoing). Postdoctoral alumni from my group have successfully gained tenure track positions; Dr. R. Gonzalez Suarez (now faculty at Uppsala U) and Dr. J. Keaveney (now faculty at U of Cape Town). Informal mentorship of multiple postdocs not associated with my institute incl. Prof. Dr. Emanuele Usai (faculty at UAlabama), Prof. Dr. R. Bartek (faculty at The Catholic University of America) and Dr. T. Du Pree (faculty at Nikhef).
- Of the MSc students who did a Master thesis in my group, ~50% pursued further research in a PhD programme.

SCIENTIFIC LEADERSHIP IN LARGE COLLABORATIONS (highlights):

- 2024-present: Internal Communications Director for the CMS Collaboration, responsible for the technical and social systems of communication of 4000+ international scientists at CERN.
- 2024-present: Co-Chair of the CMS awards committee overseeing awards to collaboration members.
- 2023-present: Elected member of the CMS Diversity Monitoring and Oversight Committee.
- 2018-2022: First ever CMS Physics Communication Officer, responsible for the communication and outreach of 130+ scientific papers per year by 4000+ international scientists at CERN.
- 2017-2019: (co)chairperson of the CMS Supersymmetry Publication Committee Board, responsible for the editing, publishing of CMS papers on Supersymmetry and coordination with journals (member of same committee 2016-2017).
- 2016-2018: Co-convenor of the Top physics group for the future electron-positron collider study, coordinating an international group of 50+ experimental and theoretical physicists aiming to assess the machine's feasibility and resulting in a conceptional design report.
- 2012-2014: As the founder of the Beyond-Two-Generations physics group in the CMS experiment at CERN with 250 members world-wide, I have enabled the rapidly growing new research area of the CMS experiment with output (as of 2019) 60+ journal publications (12 produced during my tenure as convenor) on the topic of searches for new physics using top quarks in the exotica sector.
- 2008-2009: Convenor CMS pixel offline software group, leading an international team of 50 people working on silicon pixel reconstruction software, i.e. simulation, digitization and reconstruction of pixel detector data, data quality monitoring, databases and calibration, including cosmic ray studies.

INSTITUTIONAL RESPONSIBILITIES (selection):

- 2022-present: President of Outreach and Transfer, Hamburg Research Cluster of Excellence "Quantum Universe", including executive committee membership.
- 2022-present: DESY High Energy Physics Department Outreach and Press Liaison.
- 2018-2021: Director of undergraduate studies for the VUB BSc & MSc Physics and Astronomy.
- 2015-2018: Member of executive committee VUB faculty of Science and Bioengineering.
- 2015-2018: Coordinator of the VUB Faculty of Science and Bioengineering VUB fellows programme, providing fellowships for prominent members of the public to strengthen the bond between the VUB and society/industry.
- 2014-2018: President of the PR and Outreach Council, VUB Faculty of Science
- 2014-2018: Secretary of Examination/Admissions Council, VUB Master of Physics and Astrophysics.
- 2014-2018: Secretary of Examination Council, VUB Bachelor of Physics and Astrophysics

COMMISSIONS OF TRUST (selection):

- 2024-2028: Elected member of the Komitee für Elementarteilchenphysik (KET), the representative body of German particle physicists.
- Chairperson of *ATLAS-Canada* Standing Review Committee, Natural Sciences and Engineering Research Council of Canada (NSERC), Canada.
- Member of scientific steering committee of Institute for Particle Physics Phenomenology (IPPP) Durham, a leading international centre for research in particle physics phenomenology.
- Member CLIC detector&physics Advisory Board, CERN.
- 2018-2022: Member committee Diversity Prize committee Dutch Physics Society (NNV)
- 2017-19: Vice-Chairperson of WT2 (fundamental physics) funding review panel of FWO, the National Science Funding Council, Flanders, Belgium.
- Member/chairperson of physics or all-sciences interdisciplinary peer review panels in last 5 years, for the ERC and in Canada, Poland, Portugal, Belgium, the Netherlands, Sweden and Norway.
- Member of habilitation/professor committees/juries in Germany, Austria, Belgium, and France.
- Member of over 50 PhD juries, in Belgium, Germany, the United Kingdom, the Netherlands, Sweden, Norway, France, Italy and Switzerland

ORGANISATION OF SCIENTIFIC EVENTS (selection):

- 2020-present member scientific advisory committee for Fermilab “LPC topic of the week” seminars.
- Member local organizing committee EPS-HEP 2019 in Belgium (Gent), 800+ participants.
- Member local organising committee International CMS Collaboration Week in Brussels (Belgium, 2011, 350 participants).
- Established contributions to the CMS data analysis school (introduction school for new CMS members) including co-designer of the original top physics exercise.
- Member of Scientific Advisory Committee for ALPS (Austria) and Rencontres de Vietnam.
- Member of the scientific organizing committees of leading conferences in the field of experimental particle physics such as ICHEP2018 (the main High Energy Physics) and ALPS (Austria).
- Organiser of over 20 scientific workshops at DESY, CERN, Fermilab, etc.
- Organiser of the invited experimental-particle physics seminars in Brussels (2012-2017, VUB+ULB).

SCIENCE COMMUNICATION AND VALORISATION (selection)

Experience in science communication in an executive role. Besides that:

- Over 70 presentations to the general public in Dutch, German and English
- 10+ jury memberships in various science competitions.
- Over 40 contact moments in international media: newspapers, New Scientist (NL and UK versions), WIRED, and online magazines (such as Gizmodo, Nature News), radio, mostly in Belgium, USA, UK, and Netherlands.
- Representative of CMS collaboration in the International Particle Physics Outreach Group (IPPOG)
- Strong focus on science communication using social media, for example currently 11k+ followers on twitter, reaching 150000s/month, and YouTube videos with over 100k views.
- 2010-present: yearly speaker at the London International Youth Science Forum, one of the world's oldest high school student conferences, hosting about 500 students from 65 countries worldwide.
- Previously: coordinator and initiator of the Belgian contribution to the CERN Teacher Programme. Organiser of the IPPOG CMS masterclasses (2 per year, one in Dutch, one in English) in Belgium (Brussels) Organiser of regular IIHE career workshops for particle physics doctoral students and postdocs, highlighting opportunities in industry for particle physicists.

SELECTED RESEARCH FUNDING AND MANAGEMENT (highlights, present funding in order M€/year, some via shared grants):

- Present: Helmholtz Distinguished Professorship at DESY, 2021-until retirement, about 900 k€/year.
- Present: Part of the Quantum Universe cluster of the University of Hamburg and DESY (~1 PhD per year= 66k€, expected to expand next funding round).
- Present: co-PI of one OCPC (China-Germany bilateral) postdoc fellowship at DESY (~100k€)
- Bilateral grant between FWO and Swiss National Science Foundation, establishing first ever Belgian contribution to future collider studies (& one of the first small grants in Europe), 2021-2025, 350k€
- FWO Odysseus II (Belgian faculty starter grant in competition over all of academia), 2011-2018, 870k€ .
- Co-promotor and work node coordinator of the *Be.h Excellence of Science* network, funding for Belgian federal national collaboration between French- and Dutch-language universities, focusing on CMS and LHC phenomenology (2018-2022) with ULB, UA, UGent, UCLouvain (719k€ for VUB).
- Co-promotor of Hercules project for the *CMS Phase-2 upgrade*, total Flemish. contribution 5M€ to build CMS Detector upgrade in Flanders (detector due 2025).
- Co-promotor of FWO project '*Precise top quark physics at the LHC in the search for Dark Matter particles*' at the VUB (2017-2020), 440k€.
- Co-promotor for HEP@VUB Strategic Research Program '*Zwaartepunt hoge-energiefysica*' at the VUB (2018-2022 and 2012-2017), 260k€/year.
- Co-promotor of FWO Big Science grant "*Het CMS experiment te CERN*", with UA and UGent, 2.4M€ for VUB (2012-2018, 2019-2024).
- Co-promotor of BELSPO Inter-University Attraction Poles grant '*Fundamental Interactions*,' with ULB, UA, UGent, KUL, UCL, UMONS and ULIEGE. Coordinator of WP3 Beyond the Standard Model, in program IAP V/27 and IAP VI/11 2012-2017.
- Promotor of four FWO postdoctoral fellowship grants, including one Marie-Curie grant and two candidates high on the reserve list who were awarded overflow grants by VUB.
- Secured additional funding by structural collaboration of shared PhDs with University of Bristol, UK.

INSTRUMENTATION EXPERIENCE:

- Currently involved with the R&D and construction of the Scintillating tile Endcap of the CMS High Granularity Calorimeter. Members of my team are involved with quality assurance of the readout boards, quality assurance and construction of the Silicon photomultipliers and their scintillator tiles, and preparation of low-level reconstruction and calibration software.
- Commissioning and online calibration of the CMS pixel detector, including automatization of charge insertion tests and resulting in leadership of CMS software calibration group for the pixel detector during the first LHC data taking /muon calibration runs in 2007-2009, including first journal papers of CMS detector.
- ATLAS SCT endcap module testing in 2005 as an intermediate postdoc before starting at Imperial College. Responsibilities included electronics/data acquisition testing and module visual inspections.
- Dzero 10% test, cosmic ray data taking and commissioning of 10% of the Dzero silicon strip detector in 2000, including full commissioning of the data acquisition chain.
- LHCb detector performance studies 1999-2000, on ageing of drift tube gas/chamber design combinations including radiation tests and test beams.
- CERN Summer Student Topic: development of gantry robots in for use of silicon detector assembly, gluing, and bonding, for the CMS experiment, in group of G. Rolandi (Scuola Normale Superiore & CERN).

DIDACTIC ACADEMIC ACTIVITIES:

- 2017-present: Yearly lectures on physics in the top quark sector for University of Oxford doctoral school.
- 2021-present: *Proseminar particle physics* (University of Hamburg Bachelor Physics & Astronomy): course to familiarize second/third year bachelor students with particle physics (3 ETCS)
- Until 2021: Director of education "opleidingsvoorzitter" of the bachelor and master physics programs of the Vrije Universiteit Brussel.
- Until 2021: *Simulation of modern physics and detectors* (VUB Master Physics&Astronomy, 10% of course load in final year): Designed new course at Vrije Universiteit Brussel, focusing besides practical computational physics on acquiring necessary analysis software skills (ROOT, pyROOT, matplotlib python) for (astro) particle physics students.
- Until 2021: *Experimental physics* (VUB Bachelor Physics & Astronomy 10% of course load in first year): First year physics laboratory at the Vrije Universiteit Brussel. This course is part of the core physics curriculum and intends to teach basic experimentation skills. During my responsibility I reorganised this lab to use modern active learning techniques, including peer evaluation, blended learning, including use of modern media (such as youtube) and inverted classrooms. This was achieved in close collaboration with the remedial and education science departments of the VUB and involved successful requirement of tertiary funding to achieve these changes also technically and with personnel.
- Until 2021: *Detection techniques in nuclear physics for medical engineers* (Master Medical Engineering VUB, 5% of final year course): Advanced MSc electives course that augments the medical engineering curriculum with basic subatomic physics detection techniques in the context of the underlying principles of medical imaging.
- Until 2021: *External Mobility A* (Master Physics&Astronomy, VUB, 6 ETCS): In this mandatory advanced physics and astronomy course, students have high flexibility to take up a physics topic outside the Vrije Universiteit Brussel (typically an internship at a research lab or in industry). I am responsible for quality and content of the internship and for evaluation of the written and oral reporting.
- *Advanced physics lecturing*: Regular speaker at doctoral schools in Europe and beyond, highlights:
 - Nordic Particle Physics Meeting and Doctoral School
 - The CERN-Fermilab summer school (aimed at advanced doctoral students and early career postdocs)
 - The German-Dutch-Belgian doctoral school for Experimental Particle Physics
 - Particle physics schools in Egypt and Pakistan in the context of ITCP

Regarding PUBLICATIONS:

By convention, **articles published by particle physics experiments list all collaboration members in strict alphabetical order**. This policy reflects the substantial efforts in detector construction and maintenance, data acquisition, data reconstruction and calibration that all collaborators contribute to and which is a prerequisite to any data analysis. This is particularly relevant for those who have committed a substantial fraction of their time to construction, installation and commissioning of detectors.

As such, scientific leadership, which is awarded after selection on merits and excellence within the collaboration, as are conference presentations, and seminar invitations add a reliable additional measure of scientific productivity in the hep-ex field than merely citations alone. The journal publications in the bibliographies at the end of the CVs in this document are a subsets of the full publication records in the case of members of experimental collaborations, and consist of publications to which the authors have made a major contribution. Also note that the papers from large collaborations such as the CMS experiment are almost exclusively published in high impact factor journals (in the first quartile, Q1) with impact factors around 5, whereas Nature Physics (IF: 20) and Science (IF: 30) should be considered as rather unconventional publication channels in the hep-ex field, with more PR than scientific impact value. These lists can be compared with the total publication output of big experiments such as CMS, that publish on average about 100 papers per year. There are about 3000 physicist in CMS and my personal output is significantly higher than normal in the collaboration.

A list I consider more relevant than my 1280+ citeable publications (with on average about 110 citations per paper), and also showing the very high impact in this field world- wide, follows below. As most of these papers have 2000+ authors, I focus in the list only on papers I have actually made a contribution to (and indicate the contribution in parentheses). Using **a list containing only articles to which I have made a substantial and provable contribution**, my Hirsh index would be around 50.

As the founding convener of the CMS Beyond-Two-Generations group I am also at the basis of an highly impactful programme that has up to now produced 59 published or submitted papers in the context of searches for new physics theories using top quarks, I have listed these in a separate list, and in that same list include any journal papers where I was involved with coordination in an editorial role as the chair/member of the CMS Supersymmetry group publication committee as these represent a substantial contribution and time commitment. Similar arguments should be made for the overview papers for the FCC-ee, as I was involved as author or editor of the top physics chapters. I also am one of the regular chairs of the efforts on the very intensive internal peer review (of 6 to 12 months) inside the CMS collaboration.

Looking at my individual impact, I have provable contributions to in the order of 7% of all journal papers in the CMS collaboration. Due to this, I regularly get nominated for leading roles, including the internationally important role Physics Communication Officer for the CMS experiment. The selection procedure during and after nomination in the CMS collaboration is unfortunately not the most transparent, but already being nominated ranks me in the top of most visible physicists in the entire field (world-wide), which is also confirmed by my advisory roles in conference organizing committees, advisory and peer-review panels, etc.

Publications with a well-defined authorship role (indicated in parentheses)

1. Tagging more quark jet flavours at FCC-ee at 91 GeV with a transformer-based neural network, F. Blekman et. al., *Eur.Phys.J.C* 85 (2025) 165, arXiv:2406.08590 (author, PhD theses of E. Ploerer and K. Gautam)
2. Future Circular Collider Feasibility Study Report: Volume 1, Physics, Experiments, Detectors, M. Benedikt et.al, FCC Collaboration, CERN-FCC-PHYS-2025-0002, arXiv:2505.00272 (author, PhD theses of E. Ploerer and K. Gautam)
3. ECFA Higgs, electroweak, and top Factory Study, ECFA, CERN Yellow Rep.Monogr. 5 (2025), arXiv:2506.15390 (author, PhD thesis of K. Gautam)
4. Crowd-sourced particle physics stories from DESY-CMS, F. Blekman et.al., F. Blekman et.al., *PoS ICHEP2024* (2025) 1149, arXiv:2410.04967 (author)
5. Measurement of light-by-light scattering and the Breit-Wheeler process, and search for axion-like particles in ultraperipheral PbPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV, CMS Collaboration, *JHEP* 08 (2025) 006, arXiv:2412.15413 (supervisor of J. Niedziela)
6. Dark sector searches with the CMS experiment, CMS Collaboration, *Phys.Rept.* 1115 (2025) 448-569, arXiv:2405.13778 (co-author, supervisor of J. Alimena)
7. Enriching the physics program of the CMS experiment via data scouting and data parking, CMS Collaboration, *Phys.Rept.* 1115 (2025) 678-772, arXiv:2403.16134 (author, PhD thesis of A.R. Sahasransu)
8. Top Secrets: long-lived ALPs in top production, L. Rygaard et. al., *JHEP* 10 (2023) 138, arXiv:2306.08686 (author, PhD thesis of L. Rygaard)
9. Evidence for four-top quark production in proton-proton collisions at $\sqrt{s} = 13$ TeV, CMS Collaboration, *Phys.Lett.B* 844 (2023) 138076, arXiv:2303.03864 (author, PhD thesis of N. Stylianou and V. Wachirapusitanand)
10. Four-top quark physics at the LHC, F. Blekman et.al., *Universe* 8 (2022) 638, arXiv:2208.04085 (author)
11. Soft displaced leptons at the LHC, F. Blekman et.al., F. Blekman et.al., *JHEP* 20 (2020) 112, arXiv:2007.03708 (author, thesis of A.R. Sahasransu)
12. Application of pivoting adversarial networks in search for four top quark production in CMS, V. Wachirapusitanand et.al., *J.Phys.Conf.Ser.* 1380 (2019) 1, 012069 (co-author, PhD thesis of V. Wachirapusitanand)
13. Report from Working Group 1 : Standard Model Physics at the HL-LHC and HE-LHC, ATLAS and CMS Collaborations, CERN Yellow Rep. Monogr. 7 (2019) 1, arXiv:1902.04070, (convener, author)
14. FCC-ee: The Lepton Collider : Future Circular Collider Conceptual Design Report Volume 2, FCC Collaboration *Eur. Phys. J. ST* 228 (2019) no.2, 261, (convener, author)
15. FCC-ee: Your Questions Answered, A. Blondel et al, arXiv:1906.02693 (2019) (author)
16. Search for the production of four top quarks in the single-lepton and opposite-sign dilepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV, CMS Collaboration, *JHEP* 1911, 082 (2019) arXiv:1906.02805 (author, MSc thesis of V. Wachirapusitanand)
17. J. Alimena et al. (LHC LLP working group), Searching for Long-Lived Particles beyond the Standard Model at the Large Hadron Collider, arXiv:1903.04497 (proof reader, author)
18. Expected sensitivities for four top quark production at HL-LHC and HE-LHC, CMS Collaboration, *Physics Analysis Summary FTR-18-031* (author), included in Report on the

physics at the HL-LHC and perspectives for the HE-LHC, ATLAS and CMS Collaborations, arXiv:1902.10229

19. Measurements of differential cross sections of top quark pair production as a function of kinematic event variables in proton-proton collisions at $s = 13$ TeV, CMS Collaboration, JHEP 1806, 002 (2018), arXiv:1803.03991 (author, thesis topic of Dr. D. Burns)
20. Search for natural and split supersymmetry in proton-proton collisions at $s = 13$ TeV in final states with jets and missing transverse momentum, CMS Collaboration, JHEP 1805, 025 (2018), arXiv:1802.02110 (author, thesis topic of Dr. D. Smith)
21. Search for standard model production of four top quarks in proton-proton collisions at $\sqrt{s} = 13$ TeV, CMS Collaboration, Phys. Lett. B772 (2017) 336-358, arXiv:1702.06164 (author)
22. A search for new phenomena in pp collisions at $\sqrt{s} = 13$ TeV in final states with missing transverse momentum and at least one jet using the α_T variable, CMS Collaboration, Eur.Phys.J. C77 (2017) no.5, 294., arXiv:1611.00338 (author, thesis topic of Dr. D. Smith)
23. Identification of b-quark jets with the CMS experiment, CMS Collaboration, Nov 2012, JINST 8 (2013) P04013, arXiv:1211.4462 (editor, initiated strong VUB contribution in b-tagging resulting in three CMS b-tag group VUB convenerships)
24. Search for the production of an excited bottom quark decaying to tW in proton-proton collisions at $\sqrt{s}=8$ TeV, CMS Collaboration, 2015, JHEP 1601 (2016) 166, arXiv:1509.08141 (author)
25. Search for Displaced Supersymmetry in events with an electron and a muon with large impact parameters, CMS Collaboration, Sep 16, 2014, Phys.Rev.Lett. 114 (2015) no.6, 061801, arXiv:1409.4789 (author, thesis of Dr. Q. Python)
26. Observation of the associated production of a single top quark and a W boson in pp collisions at $\sqrt{s} = 8$ TeV, CMS Collaboration, Jan 13, 2014, Phys.Rev.Lett. 112 (2014) no.23, 231802, arXiv:1401.2942 (author, also M.Sc. project in my group)
27. Measurement of the $t\bar{t}$ Production Cross Section in pp Collisions at 7 TeV in Lepton + Jets Events Using b-quark Jet Identification, CMS Collaboration, Aug 2011, Phys.Rev. D84 (2011) 092004, arXiv:1108.3773 (author)
28. Search for Standard Model Production of Four Top Quarks in the Lepton + Jets Channel in pp Collisions at $\sqrt{s} = 8$ TeV, CMS Collaboration, Sep 25, 2014, JHEP 1411 (2014) 154, arXiv:1409.7339 (author, thesis of Dr. L. Beck)
29. Probing top-philic sgluons with LHC Run I data, L. Beck, F.Blekman, D.Dobur et.al., Jan 29, 2015, Phys.Lett. B746 (2015) 48-52, arXiv:1501.07580 [hep-ph] (author)
30. Evidence for associated production of a single top quark and W boson in pp collisions at $\sqrt{s} = 7$ TeV, CMS Collaboration, Phys.Rev.Lett. 110 (2013) 022003, arXiv:1209.3489 (author, M.Sc. thesis of Dr. I. Van Parijs)
31. Missing transverse energy performance of the CMS detector, CMS Collaboration, Jun 2011., JINST 6 (2011) P09001, arXiv:1106.5048 (author EtMiss significance algorithm)
32. Commissioning and Performance of the CMS Pixel Tracker with Cosmic Ray Muons, CMS Collaboration, Nov 2009, JINST 5 (2010) T03007, arXiv:0911.5434 (author, pixel software convener during installation and commissioning)
33. CMS technical design report, volume II: Physics performance, CMS Collaboration, 200, J.Phys. G34 (2007) no.6, 995-1579, CERN-LHCC-2006-021, CMS-TDR-008-2, DOI: 10.1088/0954-3899/34/6/S01 (author, tau identification and misidentification sections)

34. The D0 Silicon Microstrip Tracker, D0 Collaboration, May 2010, Nucl.Instrum.Meth. A634 (2011) 8-46, arXiv:1005.0801 [physics.ins-det] (author, commissioning and DAQ)
35. The Upgraded D0 detector, D0 Collaboration, Jul 2005, Nucl.Instrum.Meth. A565 (2006) 463-537, physics/0507191 (author, commissioning and DAQ)
36. Measurement of the $p\bar{p}$ to $t\bar{t}$ production cross section at $\sqrt{s}=1.96$ TeV in the fully hadronic decay channel, D0 Collaboration, 2006, Phys.Rev. D76 (2007) 072007, hep-ex/0612040 (author, Ph.D. thesis work)

Publications with a clear contribution through experimental coordination

37. Searches for physics beyond the standard model with the M_{T2} variable in hadronic final states with and without disappearing tracks in proton-proton collisions at $\sqrt{s} = 13$ TeV, CMS Collaboration, Submitted to Eur. Phys. J. C, arXiv:1909.03460 (chairperson SUSY publication committee)
38. Search for supersymmetry using Higgs boson to diphoton decays at $\sqrt{s} = 13$ TeV, CMS Collaboration, Submitted to J. High Energy Phys, arXiv:1908.08500 (chairperson SUSY publication committee)
39. Search for supersymmetry in proton-proton collisions at 13 TeV in final states with jets and missing transverse momentum, CMS Collaboration, Submitted to J. High Energy Phys, arXiv:1908.04722 (chairperson SUSY publication committee)
40. Search for supersymmetry with a compressed mass spectrum in the vector boson fusion topology with 1-lepton and 0-lepton final states in proton-proton $\sqrt{s} = 13$ TeV, CMS Collaboration, Submitted to J. High Energy Phys, arXiv:1905.13059 (chairperson SUSY publication committee)
41. Combined search for supersymmetry with photons in proton-proton collisions $\sqrt{s} = 13$ TeV, CMS Collaboration, Submitted to Phys. Lett. B., arXiv:1907.00857 (chairperson SUSY publication committee)
42. Search for supersymmetry with a compressed mass spectrum in the vector boson fusion topology with 1-lepton and 0-lepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV, CMS Collaboration, JHEP 1908 (2019) 150, arXiv:1905.13059 (chairperson SUSY publication committee)
43. Search for supersymmetry in final states with photons and missing transverse momentum in proton-proton collisions at 13 TeV, CMS Collaboration, JHEP 1906 (2019) 143, arXiv:1903.07070 (chairperson SUSY publication committee)
44. Search for supersymmetry in events with a photon, jets, b-jets, and missing transverse momentum in proton-proton collisions at 13 TeV, CMS Collaboration, Eur.Phys.J. C79 (2019) 5, 444, arXiv:1901.06726 (chairperson SUSY publication committee)
45. Search for the pair production of light top squarks in the $e^{\pm}\mu^{\mp}$ final state in proton-proton collisions at $\sqrt{s} = 13$ TeV, CMS Collaboration, JHEP 03 (2019) 101, arXiv:1901.01288, (chairperson SUSY publication committee)
46. Inclusive search for supersymmetry in pp collisions at $\sqrt{s} = 13$ TeV using razor variables and boosted object identification in zero and one lepton final states, CMS Collaboration, JHEP 03 (2019) 031, arXiv:1812.06302 (chairperson SUSY publication committee)
47. Search for supersymmetry in events with a photon, a lepton, and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV, CMS Collaboration, JHEP 01 (2019) 154, arXiv:1812.04066 (chairperson SUSY publication committee)

48. Search for resonant production of second-generation sleptons with same-sign dimuon events in proton-proton collisions at $\sqrt{s}=13$ TeV, CMS Collaboration, EPJC 79 (2019) 305, arXiv:1811.09760 (chairperson SUSY publication committee)
49. Searches for pair production of charginos and top squarks in final states with two oppositely charged leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV, CMS Collaboration, JHEP 11 (2018) 079, arXiv:1807.07799 (chairperson SUSY publication committee)
50. Search for supersymmetry in events with a τ lepton pair and missing transverse momentum in proton-proton collisions at $\sqrt{s}=13$ TeV, CMS Collaboration, JHEP 11(2018) 151, arXiv:1807.02048 (chairperson SUSY publication committee)
51. Search for supersymmetric partners of electrons and muons in proton-proton collisions at $\sqrt{s} = 13$ TeV, CMS Collaboration, Phys. Lett. B 790, 140 (2019), arXiv:1806.05264 (chairperson SUSY publication committee)
52. Constraints on models of scalar and vector leptoquarks decaying to a quark and a neutrino at $\sqrt{s}=13$ TeV, CMS Collaboration, Phys. Rev. D 98, no. 3, 032005 (2018), arXiv:1805.10228 (chairperson SUSY publication committee)
53. M. Benedikt et. al., (FCC design study), FCC-ee: The Lepton Collider: Future Circular Collider Conceptual Design Report Volume 2, [*Eur. Phys. J. Spec. Top.* 228 \(2019\) 261-623](#) (convener top physics group)
54. Mangano, M et al., (FCC design study) Future Circular Collider, Vol. 1, Physics Opportunities. [*Eur. Phys. J. C* 79 \(2019\) 474](#) (convener top physics group)
55. Physics Behind Precision - Azzi, P. et al. arXiv:1703.01626 (convener top physics group)
56. Search for top squarks decaying via four-body or chargino-mediated modes in single-lepton final states in proton-proton collisions at $\sqrt{s}=13$ TeV, Collaboration, JHEP 1809, 065 (2018), arXiv:1805.05784 (chairperson SUSY publication committee)
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