

## PD Dr. Andreas B. Meyer

April 2024

<b>Degrees</b>	Physics Diploma, Hamburg U.	11/94
	Ph.D., Hamburg U.	09/97
	Habilitation and Privat-Dozent, Hamburg U.	since 10/05
<b>Positions</b>	PostDoc, Lawrence Berkeley Laboratory	01/98–12/99
	Research Assistant (C1), Hamburg University	01/00–06/05
	Senior Staff, DESY	since 07/05
	Interim Professor, KIT	04/16–09/17
<b>Grants</b>	Feodor-Lynen Fellowship, A.v.Humboldt-Foundation	01/98–12/99
	Scientific Associate, CERN	11/07–01/09
	Scientific Associate, CERN	08/14–07/15
	Scientific Associate, CERN	09/20–08/21

## Coordination and Leadership

DESY CMS group deputy team leader	since 02/23
CMS Publication Committee, deputy chair	09/21–08/24
ECFA Future Higgs Factory WG1 subgroup on precision, convener	since 05/22
CMS PPD, Physics Performance and Dataset, coordinator (L1)	09/19–08/21
'Physics at HL-LHC and HE-LHC' workshop, Yellow Report editor	06/17–12/19
CMS Upgrade Physics Study Group, convener (L3) for SM physics	01/19–08/19
CMS BRIL Institution and Resource Boards	since 09/16
CMS Career Committee, member	09/12–08/17
Advisory Committee of CERN Users (ACCU), German delegate	01/12–12/15
CMS TOP/BPH Publication Committee	05/16–09/21
CMS TOP PAG convener (L2)	01/14–12/15
CMS TOP cross sections subgroup convener (L3)	01/12–12/13
CMS Data Quality Monitoring (online and offline) coordination (L2)	03/07–08/10
DESY CMS Physics Analysis coordinator	03/10–01/18
H1 Spokesperson Election Committee chair	2015, 2019, 2022
H1 Physics Board Member	since 2012
H1 Heavy Flavour analysis group convener	05/03–05/07
H1 Physics Analysis Software development coordinator	12/00–09/03
BaBar L1-Trigger Electronics and Commissioning coordinator	01/98–12/99
Journal Referee for EPJC, JHEP and PRJ	

## Selected Publications

- Main author, CMS, “Inclusive and differential measurement of top quark cross sections in association with a Z boson”, CMS-TOP-23-004, to be published in JHEP.
- Co-author, ECFA Higgs factory WG, “Focus topics for the ECFA study on Higgs / Top / EW factories”, arXiv:2401.07564
- Editor, CMS, “Development of the CMS detector for the CERN LHC Run 3”, PRF-21-001, arXiv:2309.05466, accepted by JINST.
- Initiator and a main author, CMS, “First measurement of the top quark pair production cross section in pp collisions at  $\sqrt{s} = 13.6$  TeV”, TOP-22-012, JHEP 08 (2023) 204.
- Main author, CMS, “Luminosity determination using Z boson production at the CMS experiment”, CMS-LUM-21-001, arXiv:2309.01008, accepted by EPJC.
- Main author, CMS, “Precision luminosity measurement in pp collisions at  $\sqrt{s} = 13$  TeV in 2015 and 2016 at CMS”, CMS-LUM-17-003, EPJC 81 (2021) 9.
- Main author, CMS, “Running of the top quark mass from pp collisions at  $\sqrt{s} = 13$  TeV”, TOP-19-007, PLB 803 (2020) 135263.
- Main author, CMS, “Measurement of top quark pair production in association with a Z boson in pp collisions at  $\sqrt{s} = 13$  TeV”, TOP-18-009, JHEP 03 (2020) 056.
- Editor, HL-LHC workshop “Report on the Physics at the HL-LHC and Perspectives for the HE-LHC” eds. A. Dainese, M. Mangano, A.B. Meyer, A. Nisati, G. Salam and M. Vesterinen, 1418pp. CERN Yellow Report, CYRM-2019-007.
- ARC chair, CMS, “Constraints on anomalous HVV couplings from the production of Higgs bosons decaying to  $\tau$  lepton pairs”, HIG-17-034, PRD 100, 112002 (2019).
- Main author, CMS, “Measurement of the  $t\bar{t}$  cross section, the top quark mass, and the strong coupling constant”, TOP-17-001, EPJC 79 (2019) no.5, 368.
- ARC chair, CMS, “Measurement of the single top quark production cross sections in the  $t$  channel in pp collisions at  $\sqrt{s} = 13$  TeV”, TOP-17-011, PLB 800 (2019) 135042.
- Main author, CMS, “Search for  $t\bar{t}H$  production in the  $H \rightarrow b\bar{b}$  decay channel with leptonic  $t\bar{t}$  decays in pp collisions at  $\sqrt{s} = 13$  TeV”, HIG-17-026, JHEP 1903 (2019) 026.
- Main author, CMS, “Observation of  $t\bar{t}H$  production”, HIG-17-035, PRL 120, (2018) 231801.
- ARC chair, CMS, “Observation of top quark production in proton-nucleus collisions”, HIN-17-002, PRL 119 (2017) 242001.
- Main author, CMS, “Measurement of the  $t\bar{t}$  production cross section in the  $e\mu$  channel in pp collisions at  $\sqrt{s} = 7$  and 8 TeV”, CMS Collaboration, TOP-13-004, JHEP 08 (2016) 029.
- Initiator, CMS, “Measurement of the top quark pair production cross section in pp collisions at  $\sqrt{s} = 13$  TeV with the CMS detector”, TOP-15-003, PRL 116 (2016) 052002.
- Main author, CMS, “Evidence for the 125 GeV Higgs boson decaying to a pair of  $\tau$  leptons”, HIG-13-004, JHEP 1405 (2014) 104.
- Main author, CMS, “Measurement of differential top-quark pair production cross sections in  $pp$  collisions at  $\sqrt{s}=7$  TeV”, TOP-11-013, EPJC 73 (2013) 2339.
- Main author, CMS, “Measurement of the X(3872) production cross section via decays to  $J/\psi\pi\pi$  in pp collisions at  $\sqrt{s} = 7$  TeV”, BPH-11-011, JHEP 1304 (2013) 154.
- Main author, CMS, “Search for neutral Higgs bosons decaying to  $\tau$  pairs in  $pp$  collisions at  $\sqrt{s}=7$  TeV”, HIG-12-007, PLB 713 (2012) 68.