

Physics Publications with Major Personal Contributions

Oliver Gutsche

September 1, 2025

A. Tumasyan et al., **A portrait of the Higgs boson by the CMS experiment ten years after the discovery.**, *Nature*. 607 (2022) 60–68, doi:[10.1038/s41586-022-04892-x](https://doi.org/10.1038/s41586-022-04892-x), arXiv:[2207.00043](https://arxiv.org/abs/2207.00043) [hep-ex]

A.M. Sirunyan et al., **Search for dark matter produced in association with a Higgs boson decaying to a pair of bottom quarks in protonproton collisions at $\sqrt{s} = 13\text{TeV}$** , *Eur. Phys. J. C*. 79 (2019) 280, doi:[10.1140/epjc/s10052-019-6730-7](https://doi.org/10.1140/epjc/s10052-019-6730-7), arXiv:[1811.06562](https://arxiv.org/abs/1811.06562) [hep-ex]

A.M. Sirunyan et al., **Search for dark matter in events with energetic, hadronically decaying top quarks and missing transverse momentum at $\sqrt{s} = 13\text{ TeV}$** , *JHEP*. 06 (2018) 027, doi:[10.1007/JHEP06\(2018\)027](https://doi.org/10.1007/JHEP06(2018)027), arXiv:[1801.08427](https://arxiv.org/abs/1801.08427) [hep-ex]

V. Khachatryan et al., **Measurements of $t\bar{t}$ spin correlations and top quark polarization using dilepton final states in pp collisions at $\sqrt{s} = 8\text{ TeV}$** , *Phys. Rev. D*. 93 (2016) 052007, doi:[10.1103/PhysRevD.93.052007](https://doi.org/10.1103/PhysRevD.93.052007), arXiv:[1601.01107](https://arxiv.org/abs/1601.01107) [hep-ex]

V. Khachatryan et al., **Measurements of $t\bar{t}$ charge asymmetry using dilepton final states in pp collisions at $\sqrt{s} = 8\text{ TeV}$** , *Phys. Lett. B*. 760 (2016) 365–386, doi:[10.1016/j.physletb.2016.07.006](https://doi.org/10.1016/j.physletb.2016.07.006), arXiv:[1603.06221](https://arxiv.org/abs/1603.06221) [hep-ex]

S. Chatrchyan et al., **Measurements of $t\bar{t}$ Spin Correlations and Top-Quark Polarization Using Dilepton Final States in pp Collisions at $\sqrt{s} = 7\text{ TeV}$** , *Phys. Rev. Lett.* 112 (2014) 182001, doi:[10.1103/PhysRevLett.112.182001](https://doi.org/10.1103/PhysRevLett.112.182001), arXiv:[1311.3924](https://arxiv.org/abs/1311.3924) [hep-ex]

S. Chatrchyan et al., **Measurements of the $t\bar{t}$ Charge Asymmetry Using the Dilepton Decay Channel in pp Collisions at $\sqrt{s} = 7\text{ TeV}$** , *JHEP*. 04 (2014) 191, doi:[10.1007/JHEP04\(2014\)191](https://doi.org/10.1007/JHEP04(2014)191), arXiv:[1402.3803](https://arxiv.org/abs/1402.3803) [hep-ex]

S. Chatrchyan et al., **Observation of a New Boson at a Mass of 125 GeV with the CMS Experiment at the LHC**, *Phys. Lett. B*. 716 (2012) 30–61, doi:[10.1016/j.physletb.2012.08.021](https://doi.org/10.1016/j.physletb.2012.08.021), arXiv:[1207.7235](https://arxiv.org/abs/1207.7235) [hep-ex]

-
- Full List of Physics Publications with Major Personal Contributions can be found [here](#).
 - Full List of Computing Publications with Major Personal Contributions can be found [here](#).
 - Full List of Publications from all Collaborations and Experiments can be found [here](#).