

# Physics Publications with Major Personal Contributions

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- 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 heavy Higgs bosons decaying to a top quark pair in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *JHEP*. 04 (2020) 171, doi:[10.1007/JHEP04\(2020\)171](https://doi.org/10.1007/JHEP04(2020)171), arXiv:[1908.01115](https://arxiv.org/abs/1908.01115) [hep-ex]
- A.M. Sirunyan et al., **Observation of the Production of Three Massive Gauge Bosons at  $\sqrt{s} = 13$  TeV**, *Phys. Rev. Lett.* 125 (2020) 151802, doi:[10.1103/PhysRevLett.125.151802](https://doi.org/10.1103/PhysRevLett.125.151802), arXiv:[2006.11191](https://arxiv.org/abs/2006.11191) [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  $\sqrt{s} = 13$  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 the production of  $W^{\pm}W^{\pm}W^{\mp}$  events at  $\sqrt{s} = 13$  TeV**, *Phys. Rev. D*. 100 (2019) 012004, doi:[10.1103/PhysRevD.100.012004](https://doi.org/10.1103/PhysRevD.100.012004), arXiv:[1905.04246](https://arxiv.org/abs/1905.04246) [hep-ex]
- A.M. Sirunyan et al., **Search for new phenomena in final states with two opposite-charge, same-flavor leptons, jets, and missing transverse momentum in pp collisions at  $\sqrt{s} = 13$  TeV**, *JHEP*. 03 (2018) 076, doi:[10.1007/s13130-018-7845-2](https://doi.org/10.1007/s13130-018-7845-2), arXiv:[1709.08908](https://arxiv.org/abs/1709.08908) [hep-ex]
- A.M. Sirunyan et al., **Search for standard model production of four top quarks with same-sign and multilepton final states in protonproton collisions at  $\sqrt{s} = 13$  TeV**, *Eur. Phys. J. C*. 78 (2018) 140, doi:[10.1140/epjc/s10052-018-5607-5](https://doi.org/10.1140/epjc/s10052-018-5607-5), arXiv:[1710.10614](https://arxiv.org/abs/1710.10614) [hep-ex]
- A.M. Sirunyan et al., **Search for dark matter in events with energetic, hadronically decaying top quarks and missing transverse momentum at  $\sqrt{s} = 13$  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]
- A.M. Sirunyan et al., **Combined search for electroweak production of charginos and neutralinos in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *JHEP*. 03 (2018) 160, doi:[10.1007/JHEP03\(2018\)160](https://doi.org/10.1007/JHEP03(2018)160), arXiv:[1801.03957](https://arxiv.org/abs/1801.03957) [hep-ex]
- A.M. Sirunyan et al., **Searches for pair production of third-generation squarks in  $\sqrt{s} = 13$  TeV pp collisions**, *Eur. Phys. J. C*. 77 (2017) 327, doi:[10.1140/epjc/s10052-017-4853-2](https://doi.org/10.1140/epjc/s10052-017-4853-2), arXiv:[1612.03877](https://arxiv.org/abs/1612.03877) [hep-ex]
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- A.M. Sirunyan et al., **Search for electroweak production of charginos and neutralinos in WH events in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *JHEP*. 11 (2017) 029, doi:[10.1007/JHEP11\(2017\)029](https://doi.org/10.1007/JHEP11(2017)029), arXiv:[1706.09933](https://arxiv.org/abs/1706.09933) [hep-ex]
- A.M. Sirunyan et al., **Search for new phenomena with the  $M_{T2}$  variable in the all-hadronic final state produced in protonproton collisions at  $\sqrt{s} = 13$  TeV**, *Eur. Phys. J. C*. 77 (2017) 710, doi:[10.1140/epjc/s10052-017-5267-x](https://doi.org/10.1140/epjc/s10052-017-5267-x), arXiv:[1705.04650](https://arxiv.org/abs/1705.04650) [hep-ex]
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- V. Khachatryan et al., **Measurement of the  $W^+W^-$  cross section in pp collisions at  $\sqrt{s} = 8$  TeV and limits on anomalous gauge couplings**, *Eur. Phys. J. C*. 76 (2016) 401, doi:[10.1140/epjc/s10052-016-4219-1](https://doi.org/10.1140/epjc/s10052-016-4219-1), arXiv:[1507.03268](https://arxiv.org/abs/1507.03268) [hep-ex]
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- V. Khachatryan et al., **Search for new physics in same-sign dilepton events in protonproton collisions at  $\sqrt{s} = 13$  TeV**, *Eur. Phys. J. C*. 76 (2016) 439, doi:[10.1140/epjc/s10052-016-4261-z](https://doi.org/10.1140/epjc/s10052-016-4261-z), arXiv:[1605.03171](https://arxiv.org/abs/1605.03171) [hep-ex]
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