A. PRIMARY PUBLISHED OR CREATIVE WORK

I. Original Peer-Reviewed Work or Listing of Creative Endeavors

a. Research Articles

IV. Refereed Conference Proceedings

B. OTHER WORK

I. Other Conference Proceedings

II. Abstracts

III. Popular Works

IV. Additional Products of Major Research

[1] B. D'Anzi, "Search for double Higgs events produced via a vector boson fusion mechanism in the decay channel $b\bar{b}4l$ with the CMS experiment at the LHC", Presented 26 Oct 2021 (2021), https://cds.cern.ch/record/2788946.

[1] M. I. Abdulhamid et al., "Azimuthal correlations of high transverse momentum jets at next-to-leading order in the parton branching method", Eur. Phys. J. C **82**, 36 (2022), doi:10.1140/epjc/s10052-022-09997-1, arXiv:2112.10465.

[1] "CMS Tracking performance in Early Run-3 data using the tag-and-probe technique", (2022), https://cds.cern.ch/record/2839918.

[1] F. Cuna et al., "Particle identification with the cluster counting technique for the IDEA drift chamber", PoS **ICHEP2022**, 335 (2022), doi:10.22323/1.414.0335.

[1] B. D'Anzi et al., "Signal to background discrimination for the production of double Higgs boson events via vector boson fusion mechanism in the decay channel with four charged leptons and two b-jets in the final state at the LHC experiment", in ACAT2021, Accepted by the Conference Editor (Sept. 2022), arXiv:2209.11649.

[1] C. Caputo et al., *Cluster counting algorithms for particle identification at future colliders [Poster]*, Presented at ACAT2022, Oct. 2022, doi:10.13140/RG.2.2.17515.62243.

[1] B. D'Anzi et al., *CMS tracking performance in Run 2 and early Run 3 data using the Tag-and-Probe technique [Poster]*, Presented at ACAT2022, Oct. 2022, doi:10.13140/RG.2.2.30937.39525.

[1] C. Caputo et al., "Particle identification with the cluster counting technique for the IDEA drift chamber", in 15th Pisa Meeting on Advanced Detectors: Frontier Detectors for Frontier Physics, Under Review (Nov. 2022), arXiv:2211.04220.

[1] G. Chiarello et al., "Implementation of the Cluster Counting and Timing technique on FPGA for the reduction of transferred data and stored information", Nucl. Instrum. Meth. A **1045**, 167542 (2023), doi:10.1016/j.nima.2022.167734.

[1] B. D'Anzi, *Signal/background discrimination for the VBF Higgs four lepton decay channel with the CMS experiment using Machine Learning classification techniques*, Last accessed 13th November 2022, April 2021, https://confluence.infn.it/pages/viewpage.action?pageId=53906361.

C. WORK IN PROGRESS