Computing Publications with Major Personal Contributions

Oliver Gutsche

March 1, 2024

- K.H.M. Kwok et al., Application of performance portability solutions for GPUs and many-core CPUs to track reconstruction kernels, in: 26th International Conference on Computing in High Energy & Nuclear Physics, 2024. http://arxiv.org/abs/2401.14221, arXiv:2401.14221 [physics.acc-ph]
- O. Gutsche et al., The U.S. CMS HL-LHC R&D Strategic Plan, in: 26th International Conference on Computing in High Energy & Nuclear Physics, 2023. http://arxiv.org/abs/2312.00772, arXiv:2312.00772 [hep-ex]
- N. Smith et al., A Ceph S3 Object Data Store for HEP, in: 26th International Conference on Computing in High Energy & Nuclear Physics, 2023. http://arxiv.org/abs/2311.16321, arXiv:2311.16321 [physics.data-an]
- A. Apresyan et al., **Detector R&D needs for the next generation** e^+e^- **collider**, (2023). http://arxiv.org/abs/2306. 13567, arXiv:2306.13567 [hep-ex]
- M. Atif et al., Evaluating Portable Parallelization Strategies for Heterogeneous Architectures in High Energy Physics, (2023). http://arxiv.org/abs/2306.15869, arXiv:2306.15869 [hep-ex]
- B. Bockelman et al., IRIS-HEP Strategic Plan for the Next Phase of Software Upgrades for HL-LHC Physics, (2023). http://arxiv.org/abs/2302.01317, arXiv:2302.01317 [hep-ex]
- V.D. Elvira et al., The Future of High Energy Physics Software and Computing, in: Snowmass 2021, 2022. http://arxiv.org/abs/2210.05822, arXiv:2210.05822 [hep-ex]
- G. Cerati et al., Snowmass Computational Frontier: Topical Group Report on Experimental Algorithm Parallelization, (2022). http://arxiv.org/abs/2209.07356, arXiv:2209.07356 [hep-ex]
- M. Bhattacharya et al., **Portability: A Necessary Approach for Future Scientific Software**, in: **Snowmass 2021**, 2022. http://arxiv.org/abs/2203.09945, arXiv:2203.09945 [physics.comp-ph]
- J. Amundson et al., Response to NITRD, NCO, NSF Request for Information on "Update to the 2016 National Artificial Intelligence Research and Development Strategic Plan", (2019). http://arxiv.org/abs/1911.05796, arXiv:1911.05796 [astro-ph.IM]
- Z. Ahmed et al., New Technologies for Discovery, in: CPAD Instrumentation Frontier Workshop 2018: New Technologies for Discovery IV, 2019. http://arxiv.org/abs/1908.00194, arXiv:1908.00194 [physics.ins-det]
- M. Bellis et al., **HEP Software Foundation Community White Paper Working Group Visualization**, (2018). http://arxiv.org/abs/1811.10309, arXiv:1811.10309 [physics.comp-ph]
- D. Berzano et al., HEP Software Foundation Community White Paper Working Group Data Organization, Management and Access (DOMA), (2018). http://arxiv.org/abs/1812.00761, arXiv:1812.00761 [physics.comp-ph]
- L. Bauerdick et al., HEP Software Foundation Community White Paper Working Group Data Analysis and Interpretation, (2018). http://arxiv.org/abs/1804.03983, arXiv:1804.03983 [physics.comp-ph]
- S. Habib et al., ASCR/HEP Exascale Requirements Review Report, (2016). http://arxiv.org/abs/1603.09303, arXiv:1603.09303 [physics.comp-ph]
- T. LeCompte et al., High Energy Physics Forum for Computational Excellence: Working Group Reports (I. Applications Software II. Software Libraries and Tools III. Systems), (2015). http://arxiv.org/abs/1510.08545, arXiv:1510.08545 [physics.comp-ph]
- N. Smith et al., **Coffea: Columnar Object Framework For Effective Analysis**, *EPJ Web Conf.* 245 (2020) 06012, doi:10.1051/epjconf/202024506012, arXiv:2008.12712 [cs.DC]
- O. Gutsche et al., Striped Data Analysis Framework, EPJ Web Conf. 245 (2020) 06042, doi:10.1051/epjconf/202024506042

March 1, 2024 1 of 3

- M. Cremonesi et al., Using Big Data Technologies for HEP Analysis, EPJ Web Conf. 214 (2019) 06030, doi:10.1051/epjconf/201921406030, arXiv:1901.07143 [cs.DC]
- J. Albrecht et al., **A Roadmap for HEP Software and Computing R&D for the 2020s**, *Comput. Softw. Big Sci.* 3 (2019) 7, doi:10.1007/s41781-018-0018-8, arXiv:1712.06982 [physics.comp-ph]
- D. Hufnagel et al., **HPC resource integration into CMS Computing via HEPCloud**, *EPJ Web Conf.* 214 (2019) 03031, doi:10.1051/epjconf/201921403031
- D. Lange et al., CMS Computing Resources: Meeting the Demands of the High-Luminosity LHC Physics Program, EPJ Web Conf. 214 (2019) 03055, doi:10.1051/epjconf/201921403055
- J. Chang et al., **Striped Data Server for Scalable Parallel Data Analysis**, *J. Phys. Conf. Ser.* 1085 (2018) 042035, doi:10.1088/1742-6596/1085/4/042035
- O. Gutsche et al., CMS Analysis and Data Reduction with Apache Spark, J. Phys. Conf. Ser. 1085 (2018) 042030, doi:10.1088/1742-6596/1085/4/042030, arXiv:1711.00375 [cs.DC]
- L. Bauerdick et al., Experience in using commercial clouds in CMS, $J.\ Phys.\ Conf.\ Ser.\ 898\ (2017)\ 052019, \\ doi:10.1088/1742-6596/898/5/052019$
- O. Gutsche, Dark Matter and Super Symmetry: Exploring and Explaining the Universe with Simulations at the LHC, in: Winter Simulation Conference: Simulating Complex Service Systems, 2017: pp. 4–13, doi:10.1109/WSC.2016.7822075
- O. Gutsche et al., **Big Data in HEP: A comprehensive use case study**, *J. Phys. Conf. Ser.* 898 (2017) 072012, doi:10.1088/1742-6596/898/7/072012, arXiv:1703.04171 [cs.DC]
- B. Holzman et al., **HEPCloud**, a New Paradigm for HEP Facilities: CMS Amazon Web Services Investigation, Comput. Softw. Big Sci. 1 (2017) 1, doi:10.1007/s41781-017-0001-9, arXiv:1710.00100 [cs.DC]
- A. Apyan et al., **Pooling the resources of the CMS Tier-1 sites**, *J. Phys. Conf. Ser.* 664 (2015) 042056, doi:10.1088/1742-6596/664/4/042056
- J. Balcas et al., Using the GlideinWMS System as a Common Resource Provisioning Layer in CMS, *J. Phys. Conf. Ser.* 664 (2015) 062031, doi:10.1088/1742-6596/664/6/062031
- J. Balcas et al., Pushing HTCondor and glideinWMS to 200K+ Jobs in a Global Pool for CMS before Run 2, J. Phys. Conf. Ser. 664 (2015) 062030, doi:10.1088/1742-6596/664/6/062030
- G. Garzoglio et al., Diversity in Computing Technologies and Strategies for Dynamic Resource Allocation, J. Phys. Conf. Ser. 664 (2015) 012001, doi:10.1088/1742-6596/664/1/012001
- C. Group et al., Fermilab Computing at the Intensity Frontier, J. Phys. Conf. Ser. 664 (2015) 032012, doi:10.1088/1742-6596/664/3/032012
- S. Belforte et al., Evolution of the Pilot Infrastructure of CMS: Towards a Single GlideinWMS Pool, J. Phys. Conf. Ser. 513 (2014) 032041, doi:10.1088/1742-6596/513/3/032041
- S. Campana et al., Deployment of a WLCG network monitoring infrastructure based on the perfSONAR-PS technology, J. Phys. Conf. Ser. 513 (2014) 062008, doi:10.1088/1742-6596/513/6/062008
- J. Adelman et al., CMS Computing Operations During Run 1, J. Phys. Conf. Ser. 513 (2014) 032040, doi:10.1088/1742-6596/513/3/032040
- P. Kreuzer et al., **Opportunistic Resource Usage in CMS**, *J. Phys. Conf. Ser.* 513 (2014) 062028, doi:10.1088/1742-6596/513/6/062028
- I. Dzhunov et al., **Towards a Centralized Grid Speedometer**, *J. Phys. Conf. Ser.* 513 (2014) 032028, doi:10.1088/1742-6596/513/3/032028
- I. Sfiligoi et al., CMS experience of running glideinWMS in High Availability mode, J. Phys. Conf. Ser. 513 (2014) 032086, doi:10.1088/1742-6596/513/3/032086
- T. Chwalek et al., **No File Left Behind Monitoring Transfer Latencies in PhEDEx**, *J. Phys. Conf. Ser.* 396 (2012) 032089, doi:10.1088/1742-6596/396/3/032089
- E. Fajardo et al., A New Era for Central Processing and Production in CMS, J. Phys. Conf. Ser. 396 (2012) 042018, doi:10.1088/1742-6596/396/4/042018

March 1, 2024 2 of 3

- R. Kaselis et al., CMS Data Transfer Operations After the First Years of LHC Collisions, *J. Phys. Conf. Ser.* 396 (2012) 042033, doi:10.1088/1742-6596/396/4/042033
- J. Molina-Perez et al., Monitoring Techniques and Alarm Procedures for CMS Services and Sites in WLCG, J. Phys. Conf. Ser. 396 (2012) 042041, doi:10.1088/1742-6596/396/4/042041
- J. Adelman-McCarthy et al., CMS distributed computing workflow experience, J. Phys. Conf. Ser. 331 (2011) 072019, doi:10.1088/1742-6596/331/7/072019
- M. Albert et al., Experience Building and Operating the CMS Tier-1 Computing Centres, J. Phys. Conf. Ser. 219 (2010) 072035, doi:10.1088/1742-6596/219/7/072035
- D. Bradley et al., Use of glide-ins in CMS for production and analysis, J. Phys. Conf. Ser. 219 (2010) 072013, doi:10.1088/1742-6596/219/7/072013
- O. Gutsche, Validation of Software Releases for CMS, J. Phys. Conf. Ser. 219 (2010) 042040, doi:10.1088/1742-6596/219/4/042040
- W. Adam et al., Stand-alone Cosmic Muon Reconstruction Before Installation of the CMS Silicon Strip Tracker, JINST. 4 (2009) P05004, doi:10.1088/1748-0221/4/05/P05004, arXiv:0902.1860 [physics.ins-det]
- D. Evans et al., Large scale job management and experience in recent data challenges within the LHC CMS experiment, PoS. ACAT08 (2008) 032, doi:10.22323/1.070.0032
- O. Gutsche et al., WLCG scale testing during CMS data challenges, J. Phys. Conf. Ser. 119 (2008) 062033, doi:10.1088/1742-6596/119/6/062033
- D. Spiga et al., CRAB: The CMS distributed analysis tool development and design, Nucl. Phys. B Proc. Suppl. 177-178 (2008) 267–268, doi:10.1016/j.nuclphysbps.2007.11.124
- D. Spiga et al., **The CMS Remote Analysis Builder (CRAB)**, Lect. Notes Comput. Sci. 4873 (2007) 580–586, doi:10.1007/978-3-540-77220-0_52
- F. Farina et al., Status and evolution of CRAB, PoS. ACAT (2007) 020, doi:10.22323/1.050.0020
- O. Kind et al., A ROOT based client server event display for the ZEUS experiment, eConf. C0303241 (2003) MOLT002. http://arxiv.org/abs/hep-ex/0305095, arXiv:hep-ex/0305095 [hep-ex]
 - Full List of Physics Publications with Major Personal Contributions can be found here.
 - Full List of Publications from all Collaborations and Experiments can be found here.

March 1, 2024 3 of 3