Computing Publications with Major Personal Contributions

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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

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

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]

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- Full List of Publications from all Collaborations and Experiments can be found here.