

Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Challenges and Opportunities in HEP Software and Computing¹

MARK NEUBAUER, University of Illinois at Urbana-Champaign, PETER ELMER, Princeton University, MICHAEL SOKOLOFF, University of Cincinnati — Realizing the physics goals of the planned or upgraded experiments in high-energy physics (HEP) over the next 10 years will require the HEP community to address a number of challenges in the area of software and computing. In order to identify and prioritize RD in scientific software and computing infrastructure, a broad community planning process has been undertaken within HEP. In this talk, we present some of the challenges and opportunities in computing and software for realizing the full scientific potential of HEP experiments over the next decades. We discuss the Community White Paper which provides a community roadmap for HEP software and computing RD for the 2020s – an activity organized under the umbrella of the HEP Software Foundation. Finally, we describe the conceptualization of a possible NSF HEP Scientific Software Innovation Institute within the US designed to address software and computing challenges for the high-luminosity running of the Large Hadron Collider.

¹Supported by National Science Foundation grants ACI-1558216, ACI-1558219, and ACI-1558233

Mark Neubauer
University of Illinois at Urbana-Champaign

Date submitted: 12 Jan 2018

Electronic form version 1.4