

Introduction to Volume 13 Issue 2

Steven I. Gordon
Editor
The Ohio State University
Columbus, OH
gordon.1@osu.edu

FOREWORD

In this issue, we combine submissions from the PEARC22 Third Workshop on Strategies for Enhancing HPC Education and Training, one paper from the SC22 Ninth Workshop on Best Practices for HPC Education and Training, and one additional paper. The next issue will feature the remaining articles from the workshop at SC22 and other papers.

Brashear et al. describe an informal, modular course aimed at students in economics with little or no previous programming experience. The modular course uses the R package “learnr” to present topics on programming in the R environment. The course was offered virtually over a two-week period. Student feedback should allow for improvements to the course in the future.

The paper by Feister and Blackwood summarizes the integration of HPC related topics and skills into the undergraduate curriculum at an Hispanic-Serving Institution. They implemented a framework that provides multiple opportunities for students to learn HPC modeling and simulation skills. Those include the integration of HPC related projects into existing courses, student participation in visualization and cluster competitions, participation in faculty research projects, and a capstone project.

Gordon, Lathrop, and Kramer provide a summary of the impacts of the Blue Waters Fellowship Program. They describe the program and the changes that were made to improve the outcomes for the fellows. They also suggest how lessons learned from the program could be implemented in other efforts aimed at strengthening the workforce engaged in computational research.

In their article, Knuth et al. present the structure of a multi-tiered support system that is part of the NSF supported ACCESS project. The first two tiers of support include access to easy-to-use tools and services and a self-help knowledge base. Tiers three and four provide short-term technical assistance to projects using student and staff expertise, respectively.

Kramer et al. describe the range of training and education efforts made as part of the Blue Waters project. The education efforts included the development of curriculum materials, the virtual school for computational science, and education allocations for classroom instruction. The project provided training through a series of petascale computing institutes, an international summer school, hackathons, and webinars. Students participated in an extensive internship program as well as the fellowship program described in a previous article in this issue. The article provides details on each activity, lessons learned, and the overall impacts on the community.

The last article by Young et al. describes the use of novel computer architectures used in several settings at Georgia Tech. They provide an overview of the architectures and the issues that needed to be addressed to integrate them for student use.

Finally, I would like to end with a personal note as this is the last issue of JOCSE where I will be acting as editor. I would like to thank the Shodor Education Foundation for the opportunity to start and nurture this journal. It has provided a critical outlet for faculty engaged in computational science education and students who have undertaken a wide range of research experiences. In particular, I would like to thank Dr. Robert Panoff for his support and Jennifer Houchins and Aaron Weeden for the technical assistance in compiling the journal issues. Dr. David Joiner from Kean University has agreed to take on the editor’s role and will continue to provide the leadership necessary to continue the journal.

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee. Copyright ©JOCSE, a supported publication of the Shodor Education Foundation Inc.

© 2022 Journal of Computational Science Education