Introduction to Volume 15, Issue 1

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Volume 15, Issue 1 of the Journal of Computational Science Education offers a comprehensive overview of current trends and innovations in High-Performance Computing (HPC) and cybersecurity education. This issue emphasizes the importance of innovative educational strategies, the shift toward online and hybrid learning models, the role of community building in creating inclusive educational environments, the necessity of aligning educational content with practical application, and the critical need for sustainability and evolution in educational programs. Through these themes, the issue reflects a broader commitment to developing a diverse, skilled workforce capable of navigating the challenges and opportunities of these rapidly evolving fields, underscoring the significance of adaptability, inclusivity, and real-world relevance in shaping the future of HPC and cybersecurity education.

This issue includes articles from the tenth annual Best Practices in High Performance Computing Training and Education meeting at SC23, one article from the ninth annual BPHTE meeting, and a submitted student paper.

Purwanto et al. describe the DeepSecure training program to bolster cybersecurity. Multiple authors discuss efforts to manage hardware and architecture access for resource-constrained learners, including Johnston et al.'s description of using OpenHPC based virtual systems, Raoofy et al.'s paper on the BEAST Lab course on modern architecture and accelerators, and Seegerer and Nakahara's paper on approaches to teaching quantum computing.

Other papers focus on the challenge of scaling the delivery of training resources to a wide audience, including Vivas et al.'s paper on HPC Education in Colombia's summer schools, Reid et al.'s presentation of the HPC Carpentry program, Mehringer et al.'s description of the HPC Ed pilot project to share and federate repositories of training objects, and Crosby et al. detail a Cross-Institutional Research Engagement Network to train facilitators to expand the outreach of research programs at the University of Tennessee Knoxville and Arizona State University. Filinger and Cohen describe results from the "Understanding the Skills and Pathways Behind Research Software Training" BoF at ISC'23. Lastly, multiple papers focus on examples of student projects and training programs, including a student paper by Yazdani et al. on using neural networks for materials science, Adeniji et al.'s paper on multiple projects using Unity for Virtual Reality-based science visualization, Bautista and Sukhija's paper on a new Data Science certificate program at the National Energy Research Scientific Computing Center, and Leung et al. describe the HPC Bootcamp program with the Department of Energy.

We thank all of our contributors, editors, reviewers, and readers and look forward to hearing more from you in future issues!

Sincerely,
Dave Joiner