Introduction to Volume 16, Issue 1

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This issue of the Journal of Computational Science Education highlights contributions from the Best Practices in High Performance Computing Training and Education (BPHTE) workshop at SC24. The BPHTE 2024 program demonstrates significant growth in computational science education, expanding both its scope and scale. The selected papers showcase a wide range of advancements in high-performance computing (HPC) education, workforce development, and training methodologies for researchers, educators, and students.

The featured articles in this issue include:

(1) **Barrios et al.** discuss strategies for integrating diverse stakeholders into HPC ecosystems through transdisciplinary collaboration and curriculum development.

(2) **Mehringer et al.** present updates on the HPC-ED project, a community-driven CyberTraining catalog designed to improve resource discovery and sharing.

(3) **Filinger et al.** present a new approach to structuring learning pathways for HPC education, capturing training needs and progression.

(4) **Purwanto et al.** describe T3-CIDERS, a train-the-trainer program focused on cybersecurity research and HPC-based cyberinfrastructure training.

(5) **Suleman et al.** analyze the usability of HPC services at the University of Cincinnati, emphasizing accessibility and workforce development.

(6) **García Mesa and Speyer** explore institutional strategies for supporting large language models (LLMs) in research and education.

(7) **Reid et al.** provide updates on HPC Carpentry and its formalization as an official Carpentries lesson program.

(8) **Wang and Ponce** introduce a modular, hands-on approach to teaching computer networking through captive portal technologies.

(9) **Johnston et al.** document the evolution of a student-led HPC Special Interest Group (SIG) and its impact on training and Student Cluster Competition success.

(10) **Finch et al.** describe a computational skills training program for undergraduate researchers in molecular engineering, focusing on Python, HPC, and machine learning.

(11) **Tsoukalas** presents an automated batch scheduler feedback system for HPC users, providing real-time job monitoring and performance optimization.

These contributions reflect the dynamic and evolving landscape of HPC education, addressing both technical skill development and the broader challenges of training and engagement within the HPC community.

We encourage you to submit your work to the Journal of Computational Science Education. Computational science education continues to play a critical role in equipping students and professionals with the skills needed to tackle complex scientific and engineering problems. Whether you are developing new instructional materials, evaluating educational initiatives, or exploring innovative teaching methodologies, your contributions can help advance the field. We also encourage submissions from students describing their experience and results implementing computational science solutions. Student submissions should include reflections from the student and mentor on how those problems could be replicated for student training.

Additionally, if you have expertise in computational science education, consider volunteering as a reviewer to support our peer review process. Together, we can strengthen the HPC education community and foster new opportunities for learning and discovery.

Sincerely, Dave Joiner