Educational Outreach Initiative,
IEEE Technical Consortium on High Performance Computing

Akshaye Dhawan
akshaye.dhawan@gmail.com
https://www.linkedin.com/in/akshayedhawan/
About me

- Former Associate Professor of Computer Science, Ursinus College, PA (2009-2017)
- Involved with several education initiatives with TCPP and TCHPC including EduPar, EduHPC and the TCPP Early Adopters Program and TCPP Curriculum Initiative
- Senior Software Engineer and Technical Trainer, Bloomberg LP (2017-present)
- Lead a team that develops curriculum and delivers training to engineers at Bloomberg
Educational Outreach Initiative

• TCHPC created the initiative in 2018
• https://tc.computer.org/tchpc/home-page/education-outreach/
• Mission: Coordinate activities, information and best practices around HPC education and outreach across its member technical committees and the broader community.
Proposed Activities

• Coordinate student activities across conferences (e.g., Ph.D., forums and student mentoring); develop a repository of related material and best practices.

• Develop a web portal integrating resources and activities in the area of HPC education at both the undergraduate and graduate level.

• Create a list of HPC resources available for educational use to support faculty teaching classes that need these resources.

• Serve as a bridge between undergraduate programs and industry and labs seeking to host HPC REU students and interns.
Initial Areas of Focus

• How can we help the graduate student and faculty community in HPC?

• *Last year:* At SC’18 we funded ~20 travel awards and organized a BOF Career Panel with speakers from industry, higher ed and research labs
Upcoming activities

• SC’19
  – Funding travel awards for graduate students attending the Doctoral Showcase
  – BOF with a Career Panel in collaboration with employers who have a booth at the conference. Will also include a tutorial by one of our industry partners (Amazon or Nvidia).

• Bring the career panel and workshop program to HiPC’19 and IPDPS’20.
Best Practices

• Many conferences now have a doctoral symposium/Ph.D. Forum
• Partner with organizers at SC, HiPC and IPDPS to produce a document of best practices, sources of funding for travel awards, suggested timeline and more information that can be used as a resource by other organizers
IPDPS’20

• In addition to the graduate student activities we are planning on organizing an Early Career Faculty Workshop at IPDPS’20
• Partner with the NSF and TCPP
Educational resources

• Our member TC, IEEE TCPP has been very active in the field of curriculum design

• NSF/IEEE TCPP Curriculum Initiative on Parallel and Distributed Computing

• Organize workshops: EduPar (IPDPS), EduHPC (SC), EuroEduPar(Euro-Par)

• Travel support is available for faculty presenting papers/posters at these workshops
Educational Resources

• **CDER** cluster
• Compute Nodes and GPU’s
• Instructors can request for accounts for their classes. Purpose is to support instructors teaching coursework on Parallel and Distributed Computing
Courseware

- Community submitted courseware and assignments for parallel and distributed computing can be found [here](#).
Collaboration with SIG HPC Education

• We have a lot of common ground in our mission and objectives
• We probably also have common challenges!
• Can we cross-program and cross-advertise our events to have a bigger impact?
• Challenge: Our focus conferences differ somewhat but SC can be a good starting point
Focus for 2020

• Connect undergrad and grad students to internships, full time positions and REU’s
• Develop and advertise resources that benefit faculty teaching courses in HPC
Conclusion

• Shared upcoming activities – attend our BOF at SC
• Please utilize the cluster and curriculum resources
• Share ideas for how we can work together to serve the community
Questions? Discussion.