



Educational Outreach Initiative,  
IEEE Technical Consortium on High  
Performance Computing

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# 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.