



PURDUE UNIVERISTY

MENTORING UNDERGRADUATES THROUGH COMPETITION

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STUDENT CLUSTER COMPETITION PARTICIPATION

- Purdue has taken a team to 10 events in the past 9 years.
- SCC at SC 07, 08, 09, 10, 11, 12, 14
- SCC at ISC 13, 15
- ASC 14
- SC14 and ISC15 teams were blended teams with Universidad EAFIT



STUDENTS

- 37 Students have participated from Purdue
- 8 students working in HPC centers at national labs and universities.
- Many students have participated multiple years
- Two teams were dual-institution teams with Universidad EAFIT from Colombia



INSTITUTIONAL SUPPORT

- Our teams are run and supported out of the Research Computing department of central IT at Purdue (ITaP)
- Hardware and funding typically provided by our departments HPC Vendor partners
 - Currently HP (thank you!)
- We are also supported academically out of Earth, Atmospheric and Planetary Sciences by Professor Baldiwn who is a fairly heavy user of our compute resources in Research Computing



INSTITUTIONAL RETURN ON INVESTMENT

- Hiring for HPC staff positions can be difficult in the middle of Indiana.
- 21 Students over the last 9 years have worked as Student System Administrators in Purdue's Research Computing Department.
- 5 team alumni have come to work Purdue's Research Computing Department as full time staff.
- Spread HPC knowledge across Purdue



IMPACT TO CURRICULUM

- Created new elements of curriculum for the Student Cluster Competition preparation that turned into other courses
- Created a “box of parts” to “WRF simulation” class
- Atmospheric Science professor used modules to integrate running WRF into some of the core curriculum for Atmospheric Science.
- Used modules and some general ideas to create specific research classes.



COMPETITION ASSESSMENT

WHAT WE LIKE

- Experiential learning
- Multi-disciplinary
- The HPC Community around the competition
- Students solving problems and learning



COMPETITION ASSESSMENT

WHAT CAN BE IMPROVED

- Better feedback on applications and judging
- More conference engagement and networking!
- More academic style activities
 - Posters
 - Presentations in a public forum
 - Papers

