

PIRE: A Global Living Laboratory for Cyberinfrastructure Application Enablement

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I. Motivation - Goals - Challenges

Motivation

– Engage top computer science students, especially underrepresented minorities, in a unique and large-scale international partnership through an innovative research model.

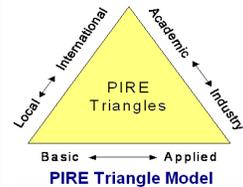
Goals

- Increase participation of students in computing research and expand their global perspective.
- Increase the number of students entering computing graduate programs.
- Increase the number of minority Ph.D.'s entering the professoriate.

Challenges

- Motivating students who have never lived away from their families.
- Finding enough number of students to participate in this program.
- Unexpected complexities of living abroad and differences in cultures.

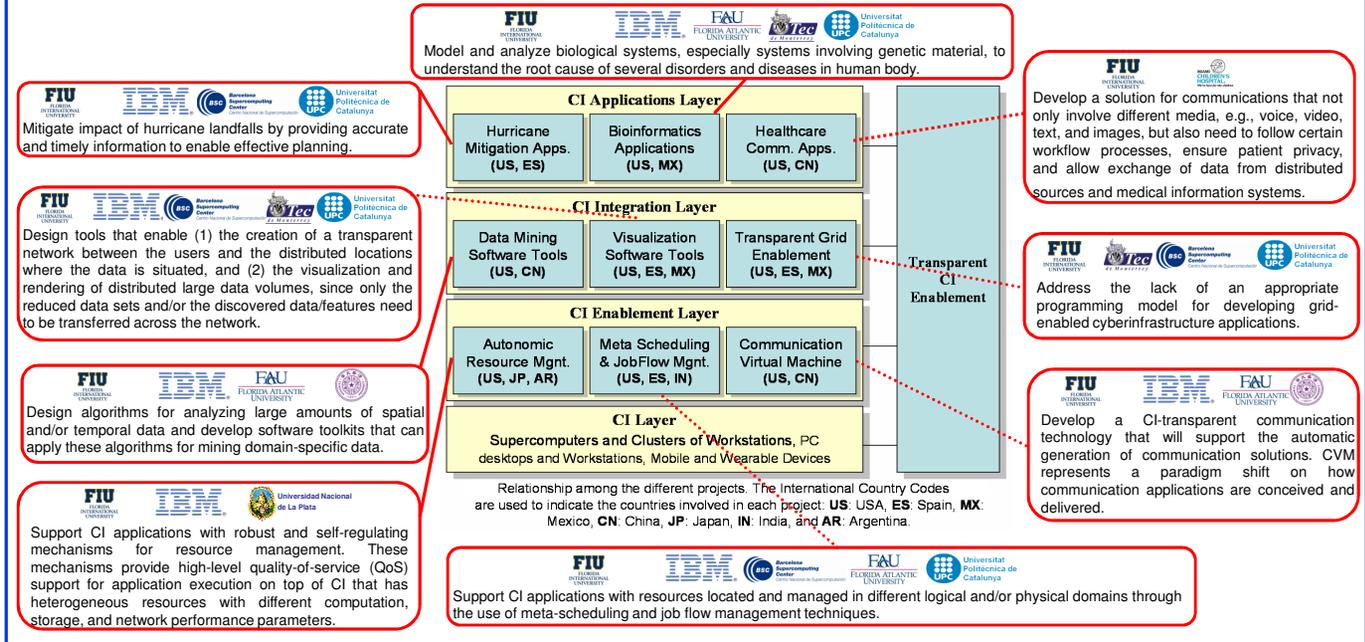
II. Student-Centric Model



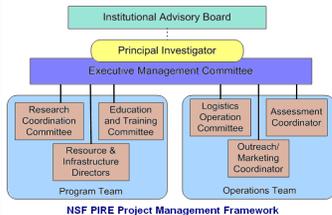
PIRE Triangles ensure that each participant will receive multiple perspectives in each of three different aspects of collaboration as they work

1. with local and international researchers
2. in academic and industrial research labs
3. on basic and applied research projects.

III. Research Projects



IV. Project Management



Executive Management Committee (EMC) - Oversees all aspects of the PIRE project, leads research and educational activities and is responsible for the execution of the collaborative teams and the overall program outcomes.

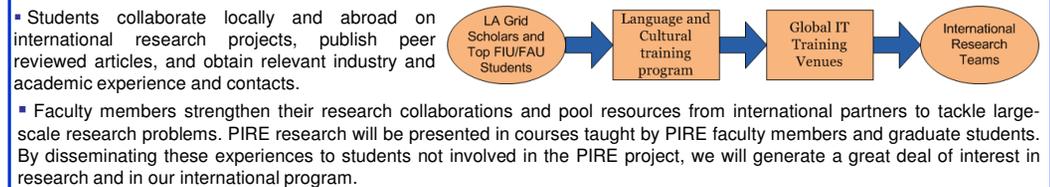
Research Coordination Committee - Drives the PIRE research agenda, identifies obstacles, potential research directions, and new approaches with researchers from international sites.

Education and Training Committee - Oversee the career development of PIRE faculty and students, making certain that the PIRE initiatives to engage participants with international collaborative research experiences work smoothly.

Resource and Infrastructure Directors - Is responsible for coordination and operations of the computing resources associated with PIRE CI, including the collaborative tools, website, and distance learning/conferencing.

Operations Team - Coordinates the logistics of student training and travel, the assessment of the project, and the dissemination of PIRE results. These coordination activities will be reviewed by the EMC so that they are aligned to fully support the research agenda and career development activities.

V. Student and Faculty Engagement



VI. Evaluation – Success Criteria

- ✓ Quality of implementation of each of the PIRE activities, as well as the overall quality of the program.
- ✓ Impact of the activities on the attitudes, beliefs, and behavioral intentions of undergraduate and graduate students about pursuing research career opportunities in computing.
- ✓ Impact of the program on the number of students who seek and maintain academic jobs.
- ✓ PIRE experiences of some students, shared through our dissemination mechanisms impact on computing students not directly involved in PIRE in terms of their attitudes toward research, international collaboration, and careers in computing.
- ✓ Long-term impact PIRE experiences have on participants' careers.