Proposal Review 2 : 1829794

Agency Name:	National Science Foundation
Agency Tracking Number:	**1829794**
Organization:	
NSF Program:	CyberTraining - Training-based Workforce Development for Advanced Cyberinfrastructure
PI/PD:	Hickernell, Fred
Application Title:	CyberTraining: CIC: Cross-Disciplinary Education for Next-Generation Computational Scientists
Rating:	Good

Review

Summary

In the context of the five review elements, please
evaluate the strengths and weaknesses of the proposal with respect to intellectual merit.

Support is requested for an Illinois Institute of Technology initiative for providing CI education. This is an ambitious program given the highly varied levels of users targeted, from high scho doctoral students. The primary budgeting is for the 3 week summer course that will be broken down into groups of participants at varied education levels. 10-15 students will be funded ea at these three levels: high school. UG and grad. Promising students will be funded to attend conferences. Part of the budget is for summer salary to faculty that are developing undergrad grad courses. Weekly lunchtime discussions are also budgeted.

Strengths: Several aspects to this program are proposed including summer computational science courses, enhancement of undergraduate and graduate computational science courses at large-scale computation, software design principles, and industry-proposed projects.
Weakness: The CISC center has modest resources for this goal. It is not clear how the summer course content can be optimally distributed across the diverse levels of students. Content of undergrad and grad courses are proposed in multiple disciplines (math, physics, chemistry, CS) but specifics of the course content that will be updated is not clear.

In the context of the five review elements, please
evaluate the strengths and weaknesses of the proposal with respect to broader impacts.

Strengths: Outcomes extend beyond Illinois Tech students to underrepresented high school and community college students in greater Chicago. Courses developed will continue in the curriculum beyond the end of this project.

Weakness: Only a handful of students will be impacted by the summer course. Thus, it is necessary to demonstrate scalability to the broader national community. The codes, libraries and files can quickly go outdated with changes in software standards and hardware, so there is a challenge in long term sustainability. Description of how users can contribute to sustainability wiki) model will be useful.

Please evaluate the strengths and
weaknesses of the proposal with respect to any additional solicitation-specific review criteria, if
applicable

Summary Statement

The proposal addresses educational modules for a large diverse set of students (from high school to doctoral) but is quite ambitious for the scope of this proposal and available resources.