

**Proposal Status** | MAIN ▶**Organization:** Los Rios Community College District**Proposal Detail:****Proposal Information**

Proposal Number: 0837796
Proposal Title: Partners In Computing - Demonstration Project
Received by NSF: 05/21/08
Principal Investigator: Sandra Feder
Performing Organization: Sacramento City College

This Proposal has been Electronically Signed by the Authorized Organizational Representative (AOR).

NSF Program Information

NSF Division: Division of Computer and Network Systems
NSF Program: Broadening Participation in Computing
Program Officer: Janice E. Cuny
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Proposal Status

Status As of Today Dated: **02/06/09**

This proposal has been declined by NSF.

Comments from the cognizant Program Officer:

The panel liked a number of things about this proposal. One of its strengths is the early focus on outreach and recruitment and encouraging student engagement. Another strength is the inclusion of outreach to families to increase student support networks. The panel liked the financial support for students. Additionally, they appreciated that the activities build on previously proven efforts by the Center for Science Excellence. The proposal has substantial commitment from various stakeholders, including ties to industry with the potential for internships and project sustainability. There is a strong evaluation plan, which should aid in the development and documentation of best practices.

The panel had some concerns though. There was concern that the dissemination plan only consisted of conferences and a website; neither were deemed particularly effective. The panel would have liked to see more for a project with such a broad scope. The limited use of middle schools, with only one listed, was also of concern as middle school intervention was noted as important in the proposal. The panel also wanted to see more on curriculum details. Finally, the funding is for a three year period, but the proposal indicates more than three years of work. Where is the additionally support coming from?

Additional comments: There is some concern that this project includes too many activities and may be unrealistic. Perhaps a greater focus or staged implementation would be appropriate. There was also concern about adding 9 hours of additional study time to students already full schedules. There were many proposed activities but there was not a clearly articulated focus and it was hard to determine what part of these activities were new; a clearer articulation of the value added by this proposal would be helpful.

Reviews

All of the reviews of your proposal that have been released to you by your NSF program officer can be viewed below. Please note that the Sponsored Project Office (or equivalent) at your organization is NOT given the capability to view your reviews.

Document:	Release Date:
Panel Summary #1	Oct 27 2008 8:39AM
Review #1	Oct 27 2008 8:37AM
Review #2	Oct 27 2008 8:36AM
Review #3	Oct 27 2008 8:36AM
Review #4	Oct 27 2008 8:33AM
Review #5	Oct 27 2008 8:33AM

Context Statement

NATIONAL SCIENCE FOUNDATION

Division of Computer and Network Systems
CISE Directorate

General Information for Applicants

Broadening Participation in Computing BPC Program 2008 Competition:
Demonstration Project Category

63 proposals were reviewed in CISE's BPC Demonstration Project competition; of these, 56 were unique projects (6 were collaborative proposals with multiple sites). The Demonstration Project review panels, which met in July 2008, consisted of experts on relevant topics, including K-12 formal and informal education, community colleges, educational support for minorities, social science and evaluation, computer science, computer science education, and each of the targeted underrepresented groups. There were 24 panelists. We will fund 8-10 of the projects.

The panel that reviewed this proposal based its evaluation on the intellectual merit of the proposed activity, its relevance to the BPC program objectives and goals, and its broader impacts. The recommendation of the panel was based on substantive comments from both individual reviews and a collective assessment of the proposal by the panel.

Copies of all completed reviews of the proposals are available in FastLane. In reading them, please keep in mind that the reviewers are addressing their comments primarily to NSF, not to the principal investigator. Although many reviewers do provide helpful information, they sometimes make remarks without giving detailed references or providing specific suggestions for improvement.

Decisions about particular proposals are often very difficult, and factors other than the reviewers' comments and ratings enter into the decision. The overall merit of the proposed research activities, the qualifications of the principal investigator(s), and the broader impact of the proposed activities are critical considerations. Maintaining appropriate balance among subfields, the availability of other funding, and the geographic distribution of work supported by the Foundation, as well as the total amount of funds available to the program, are also important decision factors.

Information about reconsideration of declined proposals is found in NSF's Grant Policy Manual, which should be available at your institution, usually at the office that formally submitted your proposal. It is also available on the web at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag081&org=NSF. You may also contact the Program Officer directly.

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**Proposal Status** | MAIN ▶**Organization:** Los Rios Community College District**Panel Summary #1****Proposal Number:** 0837796**Panel Summary:**

Panel Summary

This proposal addresses college affordability by supporting internships with industry and offering of stipends. A strength of this proposal is that it focuses on outreach and recruitment of students early and encourages student engagement through activities such as weekly faculty mentoring sessions. An evaluation plan is described with an external evaluator named in the proposal. There is a good dissemination plan involving a large number of community colleges in California and there is detail indicating that thought has been put into this area. The project team is well-qualified with a broad range of industry experience.

Intellectual Merit

The project will focus on recruitment and outreach to achieve the following increases: 1) females in computing; 2) minorities in computing; and 3) internships in computing jobs, while decreasing regional computer-related vacancies. The intellectual merit includes training and mentoring students to be future computing professionals; seminars at middle and high schools; workshops for regional partners; new pathways for underrepresented middle and high school students pursuing computing study and employment; professional development opportunities to facilitate student engagement and success; sharing laboratory modules and classroom instructional materials for replication; and creating websites to share output of the project. Research in the areas of computer science, STEM, retention, and minority enrollment is inclusive.

Broader Impact

The broader impact includes forging links with other STEM disciplines; collaborating with middle and high school teachers to identify students and serve as mentors; consulting with industrial and government colleagues; establishing collaborations with scientists from regional transfer institutions; hosting students, teachers and other professionals, particularly those from under-represented demographic groups; and consulting with the San Pablo California Center for Science Excellence and the California Community College Research and Planning Group on project development and dissemination activities.

This project is noteworthy in its broader impact in that it proposes increased recruitment and retention by educating parents and family of students about the importance of computer science. This includes use of traditional activities such as back-to-school potluck dinners, parent-night programs and sponsoring Saturday events where students and parents are brought to campus.

A weakness of this proposal is the limited use of middle schools, with only one middle school mentioned, when the importance of middle school intervention is noted in the proposal. In addition, the only plan to disseminate broadly is through conferences and a website. Also, funding is for a three year period. The proposal indicated work for more years. Is additional supported expected beyond the three years? The resumes of the PIs should have been in more of a professional format.

Panel Recommendation: Competitive

The summary was read by/to the panel and the panel concurred that the summary accurately reflects the panel discussion.

Panel Recommendation: Competitive[◀ Back to Proposal Status Detail](#)

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Proposal Status | MAIN ▶

Organization: Los Rios Community College District

Review #1

Proposal Number:	0837796
Performing Organization:	Sacramento City College
NSF Program:	Broadening Participation in Computing
Principal Investigator:	Feder, Sandra
Proposal Title:	Partners In Computing - Demonstration Project
Rating:	Excellent

REVIEW:

What is the intellectual merit of the proposed activity?

The Partners in Computing Project aims to enhance the number of underrepresented students that graduate with a BS in computer science and decrease the number of computer science job vacancies in the Sacramento area. An integrated approach will be taken to ensure seamless transition from high school to community college to senior college to the workforce via linking secondary and post-secondary institutions with industry.

This proposal addresses several key issues that affect the decisions of students from underrepresented to pursue a higher education. Economical burdens and lack of family support are two major aspects that increase attrition rates and decrease retention of students in community colleges. This proposal will offer financial support in terms of incentives and stipends for students pursuing computer science degrees. This support will encourage earning a degree as the only job. Secondly, the outreach proposed will extend to parents as well. Parental and familial support will strengthen the drive for students to complete their computer science degree. The proposal also offers mentoring to develop additional skills necessary to succeed in college.

What are the broader impacts of the proposed activity?

Information about this project will be disseminated via presentations at several regional meetings, with a high level of participation by community colleges. An interactive website will also be developed with information about the project and a message board that will allow the sharing of drafts to curriculum, collaboration, and feedback.

One of the proposed activities, take students to work day, should have a strong impact on computer science industry as well as students.

This project is unique in its broader impact in that it proposed to help educate parents and family of students about opportunities in and the importance of computer science.

Summary Statement

The responsibilities for each partner institution are clearly stated in several tables. Furthermore, the responsibilities are stated with respect to the output, objectives, outcome measurements, and timeline. The roles of the primary investigator, directors, and senior personnel are also listed in the narrative.

Overall, this project takes an integrated approach will be taken to ensure seamless transition from high school to community college to senior college to the workforce via linking secondary and post-secondary institutions with industry. The project addresses several key factors that contribute to high attrition rates and low retention, and integrates them to maximize impact on broadening participation of underrepresented groups in computer science.



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Organization: Los Rios Community College District

Review #2

Proposal Number:	0837796
Performing Organization:	Sacramento City College
NSF Program:	Broadening Participation in Computing
Principal Investigator:	Feder, Sandra
Proposal Title:	Partners In Computing - Demonstration Project
Rating:	Excellent

REVIEW:

What is the intellectual merit of the proposed activity?

Project Summary

This Partners in Computing (PIC) project of Sacramento City College and Sacramento State University is designed 1) to partner with business/industry and local middle and high schools to develop pipeline for future IT talent; 2) to recruit more women and underrepresented minority students into computer science; 3) to create a smooth transition from [middle to] high school to community college to a 4-year university; 4) to support CS students throughout so that they graduate with a BS degree; 5) to bridge the support services that currently exist to support academic study in computing for women and other underrepresented populations; and 6) to expand and/or tailor existing services to specific needs of women and other underrepresented populations. Through PIC, information will go to middle and high school students, parents, and guidance counselors; necessary resources will be provided to students to positively affect their retention. Goal is to increase the availability of female and race/ethnic minority computer scientists with BS degrees to meet workforce needs in the Sacramento region and develop and maintain alignment from middle school to college in the programs that support academic interests and pursuits of students in the computing fields.

Advancing Knowledge

The project design is based on findings from previous related research regarding reasons that impact the success of college students, effective responses to the issue of low minority student success in college.

Investigators

The core project team is well qualified and brings a range of meaningful experiences from years of employment outside of academia. Sally Feder, PI, was the first woman to earn a MS in CS from the University of Nevada, Reno. Before joining the professoriate, Feder worked as a software programmer, authored software manuals, been a systems analyst and project manager. She has been teaching computer programming and Web page development at SCC for eleven years. She was selected to be the CS representative to the Community-Colleges in China Project of the U.S.-China Education Foundation. Senior Personnel consists of Michael Dixon and Amy Zanakis. Dixon has worked as a systems analyst before joining the SCC faculty. Zannakis worked for 18 years as an Air Force civil servant as a technical support person for small computers and then a broadband network manager, before joining SCC faculty.

Creative/Original/Transformative Concepts

This project centers on mentoring that assists with adjustment to college; foster a greater sense of belonging and connectedness to the college (research indicates strong correlation to retention and success).

The project uses a back-to-basics approach that includes such activities as initiating in year 1 a back-to-school potluck dinner as a tradition; celebrating conferring of BS degrees and job attainment; speaking to parents on parents-night; sponsoring Saturday events where students and parents are bused to college.

Conceptualization and Organization

Some activities are modeled after those found to be successful by the San Pablo California Center for Science Excellence.

Access to Resources

Project includes a standing advisory committee to provide professional advice and to assist with planning and evaluation of project needs.

What are the broader impacts of the proposed activity?

Teaching/Training/Learning

This project includes parents as central figures in the design, with special outreach to families who have never been exposed to college. Stipends are paid to students so that they can better concentrate on studies without also having to work while in the program. Financial incentives are allocated on the condition that students will not work more than 10 hrs./week while in the program (many CSE-Contra Costa College students work 25 to 30 hours/week and can't carry a full course load each semester). "Earning a degree" is their only "job."

Underrepresented Groups

Over half of all K-12 students in the Sacramento region are nonwhite and 45.5% of 2004 graduates were students of color. SCC is composed of 56.7% non-white students and 37% are first-generation college students. Many of the feeder middle and high schools have similar demographics. Women in computer science at SCC and CSUS number less than 10% despite the fact that at least 50% of students K-12 and postsecondary level are female and more than half of SCC and CSUS graduates are female. Economic class is also taken into account as 67% of all students in the Sacramento Unified School District are eligible for Free/Reduced Lunch Program. Attention is also given to classroom/labs accessibility for handicapped students.

Infrastructure for Research and Education

The proposed project forges links with other STEM disciplines. All public sectors of California education are involved: Feeder middle and high schools, Sacramento City Unified School District, Sacramento City College and Sacramento State University. UC Davis is involved as part of the external evaluation. Industry in the greater Sacramento Region involved through advisory committee.

Dissemination

There is a relatively little sharing of resultant best practices beyond the conventional channels (e.g., conferences, website, message board).

Benefits to Society

Sacramento is ranked 16th on Popular Science's "top tech cities" list. The Department of Technology Services, located in Sacramento, is the center for all the State of California's information technology needs. Large numbers of the State's IT workforce will retire in the next several years so the State faces the unprecedented challenge of how to fill the vacancies produced by the retiring workforce. This project is meant to enhance CS while advancing individuals and society by promoting a diversified, expanded workforce. The intent is to create an exemplary, replicable model for other states and regions that face the same "aging workforce" issue.

A number of factors have been identified that impact student success, including financial reasons, personal issues, inability to connect to a college campus, not being involved/engaged in activities, and lack of academic preparation or family support. By taking an integrated approach to each of these factors, strong partnerships can more effectively respond to workforce needs by laying the foundation for a more promising start to reversing the trend of low computer science enrollments and to decreasing regional computer-related vacancies.

Summary Statement

A strength of this proposal is that it focuses on outreach and recruitment of students sooner and creates an environment that addresses college affordability, engagement success. Other strengths include attention to sustainability- business and industry willing to provide financial support to this project to train future employers and for internships in computing jobs. The college itself also offers opportunities for sustainability through curricular offerings. A weakness is that, though the importance and inclusion of middle schools is cited, only one middle school is indicated in the listing of participating schools. Nevertheless, this proposed project is Excellent.

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Proposal Status | MAIN ▶

Organization: Los Rios Community College District

Review #3

Proposal Number: 0837796
Performing Organization: Sacramento City College
NSF Program: Broadening Participation in Computing
Principal Investigator: Feder, Sandra
Proposal Title: Partners In Computing - Demonstration Project
Rating: Very Good

REVIEW:

What is the intellectual merit of the proposed activity?

The project will focus on recruitment and outreach to achieve the following increases: 1) females in computing; 2) minorities in computing; 3) number of internships in computing jobs, while decreasing regional computer-related vacancies. The intellectual merit includes training/mentoring students to be future computing professionals; seminars at middle and high schools; workshops for regional partners; new pathways for underrepresented middle and high school students pursuing computing study/employment; professional development opportunities to facilitate student engagement and success; sharing laboratory modules/classroom instructional materials for replication; creating websites to share outputs of project;

Research in the areas of computer science, STEM, retention, and minority enrollment is inclusive.

What are the broader impacts of the proposed activity?

The broader impact includes forging links with other STEM disciplines; collaborating with middle and high school teachers to identify students and serve as mentors; consulting with industrial and government colleagues; establishing collaborations with scientists from regional transfer institutions; hosting students, teachers and other professionals, particularly those from under-served demographic groups; consulting with the San Pablo California Center for Science Excellence and the California Community College Research and Planning Group on project development and dissemination activities.

Summary Statement

The project description is very good. A strength of this proposal is that it addresses college affordability by supporting relationships with business and industry (internships potential). There will be an evaluation with an external evaluator. There is a good dissemination plan involving a large number of community colleges in California and there is detail indicating that thought has been put into this area. However, the only plan to disseminate broadly is through the conferences and website.

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Organization: Los Rios Community College District

Review #4

Proposal Number: 0837796
Performing Organization: Sacramento City College
NSF Program: Broadening Participation in Computing
Principal Investigator: Feder, Sandra
Proposal Title: Partners In Computing - Demonstration Project
Rating: Good

REVIEW:

What is the intellectual merit of the proposed activity?

The intellectual merit of this proposal is a partnership with business, K-12 school districts, colleges and universities to develop the pipeline for future IT talent.

What are the broader impacts of the proposed activity?

The broader impact is to increase the availability of female and minority computer scientists with BS degrees to employers in the Sacramento region, to develop and to maintain alignment from middle school to colleges.

Summary Statement

This a good proposal, however it needs a lit bit more work for curriculum implementation.

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Organization: Los Rios Community College District

Review #5

Proposal Number: 0837796
Performing Organization: Sacramento City College
NSF Program: Broadening Participation in Computing
Principal Investigator: Feder, Sandra
Proposal Title: Partners In Computing - Demonstration Project
Rating: Very Good

REVIEW:

What is the intellectual merit of the proposed activity?

This ambitious project hopes to work with both women and underrepresented minorities from middle school, high school and undergraduate levels. Although the funding is for a three-year period the Partners In Computing project has plans for subsequent activities for an additional three years.

Activities include weekly faculty mentoring sessions which will require an additional 9 hrs/wk of study time by students. PIC will provide a stipend to students to discourage work outside of college.

The project builds upon previous efforts by the Center for Science Excellence which has been in existence for over 11 years and has successfully moved 600 students into STEM majors. There is a strong commitment from all the stakeholders who appear to have been meeting to address similar concerns prior to the development of this proposal. That network will be critical for program implementation.

Staff qualifications are fine although not particularly broad. The letters of support indicate substantial commitments from a variety of sources.

What are the broader impacts of the proposed activity?

PIC targets some 90 women, African Americans, Latinos and Native Americans (all present in the local demographics). The proposed activities are targeted to the region and will bring together support and educational programs from middle school through college, including the local community college, state government and business sector. This should serve to enhance infrastructure for the area.

Dissemination will also be very targeted to the region and will include addressing consortia, establishing a website and message board.

Summary Statement

Overall the management plan is good. The evaluation will be conducted by an independent outside evaluator with previous experience in assessing similar projects. Given the broad community support the odds for success appear reasonable.

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