

LS CO-AMP COMMENTARY

LS CO-AMP Awarded Phase II

Congratulations to the Colorado AMP on another 5-year award from the National Science Foundation (NSF). LS CO-AMP has started its second phase (Phase II) beginning last October (2001) and will continue for another 5 years of partnership and progress. LS CO-AMP is one of 29 AMP programs located across the country. The LS CO-AMP alliance welcomes Colorado School of Mines and Pueblo Community College into the state-wide consortium.

SPRING 2002



Left to right: Donna Begay, Jeremy Hamilton, Brenda Sakizzie

Colorado School of Mines Joins Consortium

Judi Diaz-Bonacquisti, Director, MEP

Working under the direction of the Minority Engineering Program, Colorado School of Mines has joined Phase II of the LS-COAMP Consortium. Established in 1989 to recruit, retain and graduate African Americans, Asian Americans, Native Americans and Hispanics, MEP has helped undergraduate minority student enrollment grow from 8% to more than 13% today. Since 1992, the minority persistence rates have increased from 44% to 60%. Of the 437 undergraduate degrees awarded between August 2000 and June 2001, 13.73% went to minority students.

The mission of the Minority Engineering Program at Colorado School of Mines is to graduate ethnic minorities in the areas of math, science and engineering. Because this focus directly aligns with COAMP, joining the consortium for Phase II was a no-brainer. MEP expects to use the COAMP funds to supplement pre-college outreach efforts, summer bridge programs, scholarships and various retention initiatives.

Pueblo Community College's New CO-AMP Venture

Carol Montoya, Director, Learning Center

In November 2001, Pueblo Community College initiated a new LS CO-AMP program that will emphasize working with pre-engineering students. The PCC program has partnered with the newly formed PCC Society of Mexican American Engineers and Scientists (MAES) to assist its members in completing their Associate of Science degrees and transferring to an engineering baccalaureate program. PCC sees this partnership as being a great aid to our students, and the College hopes to be sharing with the LS CO-AMP community our successes over the next year.

Carol Montoya, Director of the Learning Center at PCC, is heading the LS CO-AMP program at PCC. In addition to her successes with the Learning Center, Ms. Montoya has extensive experience in working with TRIO and Carl Perkins grants, and she will be a valued addition to the CO-AMP team. Welcome aboard, Carol!

Fort Lewis College CO-AMP Students Place at AISES National *Ty Smith – Project Coordinator*

Fort Lewis College students Donna Begay, Jeremy Hamilton, and Brenda Sakizzie competed at the 27th Annual AISES research poster competition held November 16-18, 2001 at Albuquerque, New Mexico and placed in the top three awards.

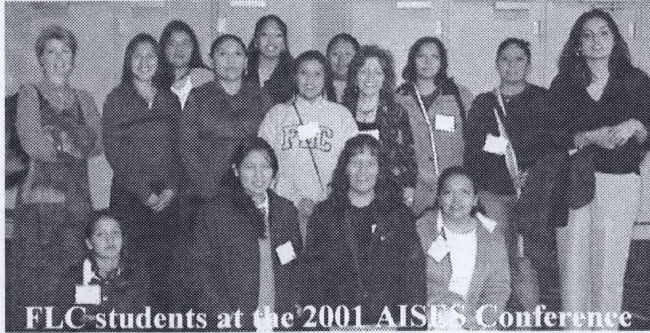
Begay's presentation on "Mycorrhiza In Western Wheatgrass" earned her 2nd place honors. Hamilton placed 3rd with his research on "Validation of the Hydraulic-Open Channel Flow Model". Sakizzie also shared 3rd place honors with her presentation on "Resistance of *Drosophila Melanogaster* to Methoprene and Fenoxycarb Juvenile Hormone Analog Insecticides".

Sakizzie spent last summer conducting research at Colorado State University in the Department of Biology

See FLC Students Place/Page 2

Fort Lewis College CO-AMP Phase II Well Underway

Julie Anderson, Admin. Asst., FLC CO-AMP



FLC students at the 2001 AISES Conference

FLC CO-AMP recently hosted 12 students from Bernalillo High School, Bernalillo, New Mexico, for Shadow Day. The students were paired with a CO-AMP/AISES college student, who shared a common academic interest, for half a day and participated in a hands-on Robotic/Engineering workshop. The FLC Admission Office also gave the attendees an opportunity to ask questions about attending college. The students also stayed for the

FLC AISES Regional Conference the next day.

CO-AMP students also attended various workshops/conferences. The most recent event was FLC AISES Regional Conference, held February 14, 2002. The conference attracted over 200 Native

American participants from the Four Corners area. FLC faculty, AISES members, and CO-AMP members organized workshops and motivational activities. This conference provides a forum for recruitment and retention of Native American students into the Science, Math, Engineering and Technology fields (SMET) at FLC.

The FLC AISES Chapter attended the 2001 National AISES Conference,

which was held in Albuquerque, New Mexico. The success of the FLC CO-AMP Undergraduate Research Program was evident as three students placed in the research competition. (Please see cover page for details) Seven students and six faculty will participate in this summer's 2002 research program. In October, 2001, three student researchers and one faculty member also attended the 2001 National Minority Research Symposium in Cancun, Mexico.

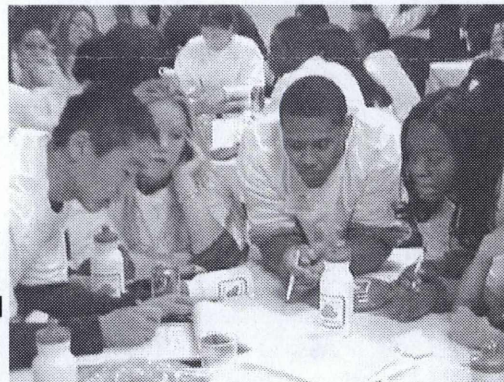
CO-AMP supported students continue to excel with their academics. Recently, 12 CO-AMP members were inducted into the Native American Honor Society. Industry recognizes this excellence as 5 CO-AMP members received internships or job opportunities from IBM.

Colorado State University 2002 Professional Development Workshop

*Bret Beal, Asst. Director,
CSU Career Center*

Combining fun, information and connections between students from the Colleges of Business, Engineering, Natural Sciences and the Department of Journalism and Technical Communication and employers, the 5th Annual Professional Development Workshop provided an engaging day of information sharing, creative communication and tips on how to successfully prepare for, transition into and chart a successful career path in the world of work.

"I expected the day to be high energy and it has been; I've enjoyed getting to know people and to gain different tools from the presentations and activities," lauds Jaclyn Matanabe, a senior. "It's helped me gain confidence and learn about the importance of networking and what to do in situations



Participants in the 2002 PDW at CSU

of uncertainty."

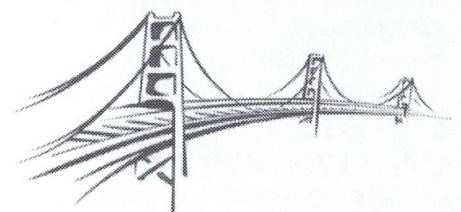
From an employer's perspective, the day provides a wonderful way to connect students in a low-pressure, casual and fun environment. This year's corporate sponsors were Accenture, Agilent, Chubb Group of Insurance Companies, Hewlett Packard, IBM, Sun Microsystems, State Farm Insurance, and Target.

FLC Students Place

(cont'd from front page)

with support from the Colorado PEAKS Alliance for Graduate Education and the Professoriate (AGEP) program. Begay and Hamilton performed their research at Fort Lewis College with their respective departments, Biology and Engineering.

A special thank-you to faculty: Dr. Philip E. Shuler (FLC), Dr. Don May (FLC), and Dr. Tom Wilson (CSU) for their support of these students and their research.



**"Somewhere, something incredible is waiting to be known."
-Carl Sagan**

SHPE Chapter Active at CU-Colorado Springs

Dr. Rangaswamy, Assoc. Dean, College of Engr. & Applied Science

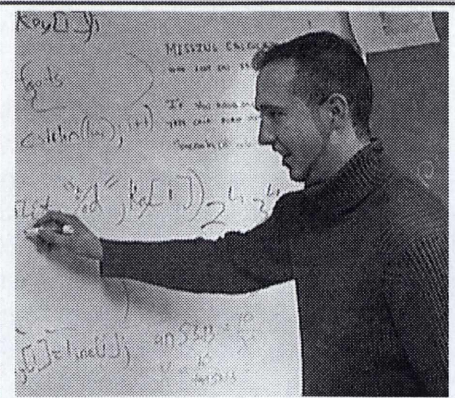
On February 7-9, students from the University of Colorado at Colorado Springs' Society of Hispanic Professional Engineers (SHPE) attended the National Technical Career Conference held in Minnesota. With over 3,000 national members attending, it was an experience that was truly inspiring and motivating for the students. The conference celebrates the rich history and continued achievements of the Hispanic community.

The guest speakers and workshops provide the attendees a sense of reality of the educational and racial challenges of being successful engineers. A highlight of the conference included a career fair that gave us the opportunity to network with over 120 engineering related companies and other student SHPE chapters from across the United States. "The National

Technical Career Conference was truly a positive and worthwhile experience!" said Rachel Gallegos, a SHPE member and electrical engineer at CU-Colorado Springs.

In addition, they have conducted outreach to 400 middle school children in Southern Colorado, helped sponsor activities for Hispanic Heritage Month and Diversity Week, and fundraised with other Hispanic organizations for the Colorado Springs Hispanic Dance.

For the rest of the semester, the chapter will coordinate activities for the University's upcoming Cinco de Mayo celebration, Diversity Week, and continue to perform community service at a local soup kitchen.



Daniel Perez, CU-B Graduate Student

Former Student Strengthens CO-AMP Activities at CU-Boulder

David Aragon, Director, MEP

Daniel Perez is a dedicated graduate student, working on his master's degree in computer science engineering, who is giving back to CO-AMP students and activities by revamping the summer bridge program at the University of Colorado at Boulder.

CO-AMP began funding the CU summer bridge program in 1996, the same year that Daniel participated in the program as a pre-freshman. The program provides entering minority freshman with a 5-week intensive academic "boot-camp" experience that prepares students to successfully "bridge-the-gap" from high school to college.

Daniel's program enhancements will better prepare participants for their freshman year by offering more classes that better match the students' various levels of ability. In addition, the program will foster an interdisciplinary experience for students in the sciences, mathematics, humanities, and engineering.

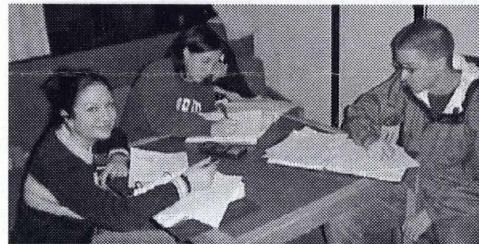
Daniel Perez's movement through the educational pipeline is inspiring new efforts to help current undergraduate students succeed in achieving their educational goals together. He offers a unique perspective having participated in the program himself. "I am really enjoying helping the younger students get off to a good start in college", says Daniel.

New Science Organization at Colorado State University

Ariene Nededog, Director of Retention, & Don Perea, College of Natural Sciences

The Students as Leaders in Science Organization (SLSO) originated AY00-01 with formal recognition as a student organization by the Colorado State University campus during the Fall 2001 semester. The purpose of the organization is to provide students with academic excellence and leadership opportunities to excel in the field of science. SLSO's goal is to mold science students into confident mentors and professionals. The group supports and encourages student participation in professional conferences, leadership skill development, assistantships with faculty and staff, academic year and summer internships, as well as nominations for awards and scholarship opportunities.

The students are working towards



SLSO Members at Colorado State

developing a sense of community between and amongst students and faculty in the science disciplines. For Spring 2002 the organization has held a Leadership Retreat, participated in the Professional Development Workshop, and is currently developing mentoring activities with science faculty. The next new venture will be the opening of a "study facility" for science students.

Interested students may attend the Students as Leaders in Science Organization meetings at Colorado State University on the second and fourth Wednesday of the month from 6 - 7 pm in the Statistics Building room 8.

COW n. *Computer on wheels.* A rolling cart with a computer and an overhead projector that can be wheeled to various classrooms for use in instruction.

Submitted to the Jargon Monitor-Chronicle of Higher Education by Patricio A. Rojas, Albuquerque Technical Vocational Institute.

Letter from the Director

Dr. Omnia El-Hakim



With the beginning of the Second Phase of LS CO-AMP and with the success that we have achieved over the last five years, we are facing some challenges regarding recruiting and retention of underrepresented students. Since the economy is turning around, and we have seen the lay offs of many skilled employees, we are expecting that most of them will be receptive to the idea of pursuing undergraduate and graduate degrees. It is advantageous for us to focus on the recruiting element during CO-AMP Phase II, to ensure enough students are graduating after five years. The challenge that we will face is to provide

supporting programs (without additional funding) to a larger number of underrepresented students and be able to retain them. The hiring freeze that we are experiencing in the State of Colorado will add to our challenge. We would like to retain the students and to provide the support programs; however, we cannot hire faculty or administrative staff to provide the help needed.

How are we going to deal with this challenge? Suggestions I have include:

- Continue collaborating with each other
- Invite the Advocacy Offices, the Women and Minority Program, the Center for Learning, Mathematics and Sciences, as well as other programs that provide similar activities. These programs can work together with you to benefit the students in learning more about how can we better serve and mentor them.
- Gather the resources at your school for more efficient implementation of the programs.
- Invite faculty to mentor the students and offer opportunities to the students in their laboratories.
- Offer opportunities for internships and summer research.

Let us know what ideas and suggestions you have to share concerning these challenges.

Upcoming 2002 Events

April 11-14: McNair Scholar Conference sponsored at Colorado State University.

April 12-13: Lockheed Martin and Gill Foundation Regional Conference (for women and minority engineering society officers from Colorado School of Mines, Colorado State University, and University of Colorado at Boulder).

April 19: Multicultural Engineering Program 16th Annual Awards Banquet University of Colorado at Boulder.

April 23-24: Undergraduate Research & Creativity Symposium at Colorado State University.

April 25: CO-AMP Steering Committee Meeting at University of Southern Colorado.

May 28-July 27: PEAKS Undergraduate Research Opportunity at CSU. See web site for application:

<http://lamar.colostate.edu/~agep>

June 17-28: FLC Middle School Summer Science Camp and Teacher Training Institute

July 2002: CU-Boulder Engineering Success Institute for High School Students. See web site for specific dates and application information:

<http://itll.colorado.edu/SuccessInstitute>

Summer 2002: Bridge to Science & Engineering Program (BSEP). CSU WMEP & CNS. Date and details to be announced.

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Knowledge to Go Places

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