

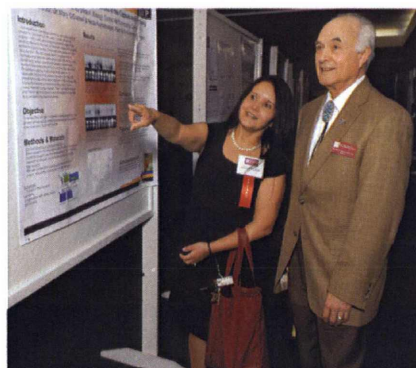
Horizons

Expanding Horizons in Science, Technology, Engineering, and Mathematics
Sponsored by the National Science Foundation

Expanding Horizons: Making a World of Difference as Students Discover 'Moments that Matter'

Approximately 427 New Mexico AMP community college and university students, staff, faculty, and administrators, along with representatives from the New York City, Minnesota, and Florida LSAMPS, and from Chihuahua, Mexico, attended the 2009 New Mexico AMP Student Research Conference at New Mexico State University (NMSU) on October 3rd. In addition, high school juniors, seniors, and advisors from the New Mexico Math, Engineering, Science Achievement, Inc. (New Mexico MESA) program attended the event.

Dr. Laura Crossey presented the keynote address. Dr. Crossey serves as the University of New Mexico (UNM) New Mexico AMP Institutional Coordinator and Director of the Bridge to the Doctorate Program. Dr. Crossey discussed her research and her work on the 'Trail of Time' at the Grand Canyon. In her talk entitled "Making a World of Difference," Dr. Crossey encouraged students to take advantage of opportunities in the state and at their insitutions. A thread running throughout her address was the importance of mentorship and the "teachable moments" that present themselves. She encouraged faculty to find "moments that matter" to students and called students to take advantage of those moments that will propel



New Mexico AMP Director Ricardo Jacquez and New Mexico State Representative Debbie Rodella view the posters before the Conference

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From the Director

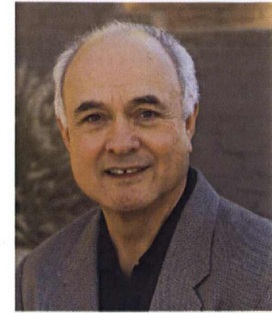
It's hard to believe another year has gone by! This has been a successful year for New Mexico AMP, one that has kept us actively engaged with the planning, development, and delivery of challenging yet exciting opportunities for New Mexico's STEM students. With a renewed focus on ensuring that our statewide alliance is collaborating to the fullest extent, we have been intentional with our efforts to promote shared values, provide opportunities for development, promote self-efficacy, and monitor the sustained effort in a way that invites input in decision-making and builds on the experience and expertise of partners in our alliance. Our statewide alliance continues to impact the participation of New Mexico's students in undergraduate research, graduate school, and beyond. The New Mexico AMP Student Research Conference in October, 2009 was a great way to collaborate on partnership efforts. Plans are currently underway for summer and fall opportunities for our students statewide, including the New Mexico AMP Student Research Conference to be held in October, 2010. You'll find information about the conference on this page and an overview of the 2009 conference on pages 1 and 5.

One of the highlights of this year was the SCCORE program in summer of 2009, which brought nine students to the NMSU campus from four community colleges in the state.

Another highlight was the IC meeting that was held on March 1, 2010 via video conferencing at five locations in the state. The meeting provided a venue for the New Mexico AMP Institutional Coordinators (ICs) and staff members to collectively discuss alliance challenges and opportunities, and importantly, to creatively explore practical methods of meeting challenges and advancing opportunities. The Bridge to the Doctorate Program continues to impact STEM students, with the seventh cohort at NMSU progressing in their graduate studies on their way to the Ph.D. (See page 4 of this issue where SCCORE, the IC meeting, and the Bridge to the Doctorate program are discussed.)

There is also a continued effort to broaden our international focus, and on page 4, you can read about our collaboration with the University Autonoma de Chihuahua (UACH), including a significant meeting and participation of UACH students and faculty at the conference.

We are proud of the accomplishments of our partners, including the recent naming of Dr. Nader Vadiee as Carnegie New Mexico Professor of the Year. Dr. Vadiee, who helps with the institutional coordination at Southwestern Indian Polytechnic Institute (SIPI), was selected from more than 300 top professors in the nation. We also congratulate Dr. David Torres, one of our newest IC's, who was recently promoted to Director of



Ricardo B. Jacquez, Ph.D. P.E., Director of New Mexico AMP

the Department of Mathematics at Northern New Mexico College (NNMC). Kudos also go to Dr. Vince Lombrana, NMSU-Alamogordo IC, and Marlene Chavez-Toivanen, NMSU-Grants IC, who were both named 2010 NMSU Roush Award recipients in January, 2010. Also, we congratulate Dr. Ajit Hira, on his successful endeavor to gain the NSF Computer and Information Sciences and Engineering (CISE) grant, "Parallel Computing to Promote Research and Education Opportunities," which benefits students at NNMC.

With my recent appointment to Dean of Engineering, I am even more committed to this program and its efforts. With the collective leadership of our partners, we will continue to impact students in New Mexico!

**Mark Your Calendar Now. . .
for the 2010 New Mexico
AMP Student Research
Conference on
October 1, 2009!!**
Visit the conference website at
www.nmsu.edu/~nmamp/conference
Note: Pre-and post-conference work-
shops for community college students
on September 30 and October 2.

Alliance University Leadership

In this Issue of Horizons, we will highlight the leadership of universities in New Mexico, starting with the appointment of Dr. Barbara Couture at New Mexico State University.



Recently named the 25th president of NMSU, Dr. Barbara Couture served as Sr. Vice Chancellor for Academic Affairs and Professor

of English at the University of Nebraska-Lincoln (UNL). Dr. Couture earned Bachelor's and Master's degrees, as well as a doctoral degree of arts in English language and literature from the University of Michigan. In her last position, Dr. Couture is credited with initiating efforts to reform general education, resulting in national recognition by the Association of American Colleges and Universities. Importantly, she led efforts to engage UNL in international partnerships, and as principal investigator on a National Science Foundation (NSF) ADVANCE grant, she spearheaded efforts to increase the recruitment of retention of a high quality diverse faculty. Nationally, Dr. Couture chairs the Executive Committee for the Council on Academic Affairs for the Association of Public and Land-grant universities.

Dr. David J. Schmidly has been president of The University of New Mexico

(UNM) since October, 2007. Dr. Schmidly earned the Bachelor's and Master's degrees from Texas Tech and the the Ph.D. in Zoology from the University of Illinois. President Schmidly served in the role of President of Oklahoma State University (OSU) and President of Texas Tech University, after having served as Vice President for Research, Graduate Studies, and Technology Transfer, and as Dean of the Graduate School. During his tenure, UNM has seen major growth in the incoming freshman class and significant accomplishments in the recruitment of National Merit and National Hispanic Scholars.

Dr. Daniel H. Lopez is the longest serving president at the New Mexico Institute of Mining and Technology (New Mexico Tech) in Socorro, NM. Dr. Lopez earned his Ph.D, Master's and Bachelor's degrees from the University of New Mexico, all in political science. Dr. Lopez previously held several key positions in state government and education. Dr. Lopez has overseen significant growth at New Mexico Tech since his appointment, including research projects, student population, and overall budget.

Dr. Steven Gamble is the ninth president of Eastern New Mexico University (ENMU). Dr. Gamble was appointed to the position of president in 2001, after serving as president of Southern Arkansas University. Dr. Gamble earned

his his three degrees from Texas Tech, including Bachelor's and Master's degrees in History, and a Ph.D. in American History, with a minor in American Literature.

Dr. John E. Counts is the fourteenth president to serve at Western New Mexico University (WNMU). He came to WNMU in 1992 and served as Professor of Management and Director of the Division of Business, Math, and Computer Science until 1993 when he was named president. Dr. Counts holds a Bachelor of Science degree from West Point, and earned two Master of Science degrees from the Georgia Institute of Technology. He earned the Ph.D. in Business Administration at the University of Texas-Austin. With a distinguished career in the U.S. Army, Dr. Counts brought to WNMU considerable experience in management, research and development, and higher education administration.

Dr. James Fries was named President of New Mexico Highlands University (NMHU) in 2007, bringing more than 24 years of higher education administration experience. Dr. Fries received the B.S. in Chemical Education from the University of South Dakota, and the M.S. and Ph.D in Physical Chemistry from the University of Iowa.

We appreciate our partnership with each of these fine leaders.

People, Places, and Things

Ricardo Jacquez, founding Director of New Mexico AMP, has been named Dean of Engineering at New Mexico State University (NMSU). One of the most significant reasons for his selection, according to Interim Provost Jay Jordan, is his ability of providing collaborative leadership for teams made up of individuals with widely differing backgrounds and philosophies and his skill of facilitating achievement of collectively set goals. Recognized locally as an NMSU Regents Professor and nationally with the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring (PAESMEM), Dr. Jacquez has an outstanding record of teaching, research, and service. He has served as NMSU Interim Associate Provost since August, 2009. Importantly, he has been Principal Investigator for grants totaling well over 25 million dollars, with the majority of these efforts focused on the mentoring and professional development of community college and university students.

NMSSU consolidated internationalization initiatives, culminating with the establishment of a Memorandum of Understanding (MoU) with Universidad Autonoma de

Chihuahua (UACH) in fall 2008, which made possible a joint doctoral degree in Civil Engineering. To develop and strengthen international collaborations in engineering education, a meeting was held on October 1, 2009 at NMSU. Attending were representatives from New Mexico AMP, the College of Engineering, the Provost's Office, and approximately 20 other faculty and administrators from NMSU, the University of Texas at El Paso (UTEP), UACH, and the Universidad Autonoma de Ciudad Juarez (UACJ). The meeting focused on developing international collaborations in engineering education and internationalization of its education programs. Importantly, New Mexico AMP hosted its annual Student Research Conference on the next day and UACH faculty attended, and thirteen UACH students presented posters.

An Institutional Coordinators (IC) Meeting was held by video conference on March 1 at several locations statewide. Eleven IC's and New Mexico AMP staff participated. After a review of alliance activities and a discussion of business, site groups worked together to consider means for strengthening campus teams/networks and developing inter-institutional partnerships. Teams reported out on the most efficient ways to disseminate information, create opportunities, and connect with other organizations and events.



2009 SCCORE Program Participants

The fifth annual summer Community College Opportunity for Research Experience (SCCORE) program was held at New Mexico State University in July, 2009, awarding scholarships to nine community college students from Central New Mexico CC, NMSU-Doña Ana CC, Luna CC, and NMSU-Alamogordo CC. The program is designed to help students explore academic and career opportunities, provide a faculty-mentored research experience, and assist students in transfer.



Bridge to the Doctorate Cohort 7

The Bridge to the Doctorate program's seventh cohort is at NMSU, coordinated by Dr. Imelda Olague. Majors include mathematics, industrial engineering, electrical engineering, chemistry, molecular biology, agricultural biology, agricultural science, environmental science, wildlife science, biology, and geology. The cohort will attend the Joint Annual Meeting (JAM) in Washington, DC in June, 2010.

Expanding Horizons: 2010 Student Research Conference

Continued from page 1

their success. At the conference luncheon, the Honorable Debbie Rodella, New Mexico State Representative, shared her own academic journey in New Mexico, focusing her message on the opportunities available to students in science, technology, engineering, and mathematics (STEM) in the state. She highlighted the dedication of William R. Lovelace II, a native New Mexican who was a pioneer in aerospace medicine. Representative Rodella highlighted the many achievements that are making New Mexico's future in space travel look promising, including the creation of Spaceport America. She encouraged students to consider New Mexico's job market and summed up the purpose of her talk with the words of Thomas Edison: "Opportunity is missed by most people because it is dressed in overalls and looks like work," a warning that cautions against complacency and laziness and encourages innovation and spirited discovery.

Student research presentations took place throughout the day, with 19 oral and 40 poster presentations. Sixteen (16) oral presentations and all the poster presentations competed for awards.

Students viewed posters and met with NMSU faculty members during the University-Research Council (URC) Poster Presentations. Dr. Dale Alex-



Above: Representative Debbie Rodella encourages innovation and spirited discovery, focusing on opportunities in STEM



Above: Dr. Laura Crossey, UNM Professor of Earth and Planetary Science, delivers the Keynote Address



Above: Tequila y Ron from the Universidad Autonoma de Chihuahua provides entertainment



Above: Dr. Dale Alexander, Professor Emeritus at NMSU, presents a fun demonstration on the properties of gases



Above: Participants enjoy networking with other students and faculty.



Above: Community college students participate in workshops before and after the conference



At Left: Ricardo Jacquez congratulates NMSU student Bethany Davis on the First Place Award in the Poster Presentation Division



At Right: April Tafoya from UNM accepts the First Place Award in the Oral Presentation Division

ander, Professor Emeritus of Chemistry at NMSU, presented a seminar that demonstrated the chemical and physical properties of gases. Twenty-seven (27) community college students

from partner institutions attended pre- and post-conference workshops to help them make the most of the conference experience.

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