

All Nations Louis Stokes Alliance for Minority Participation

Newsletter Winter 2009

AISES 2009 Poster Results

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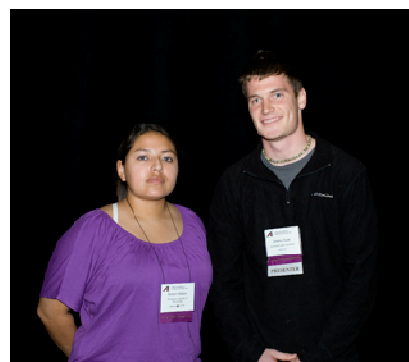


Above Left: Poster winners Lisa Kaponi 3rd place, Orlando Leone 1st place and Micah Wild 3rd place tie. Seanna Pieper-Jordan 2nd place did not present.

The American Indian Science and Engineering Society's (AISES) 30th Annual National Conference titled "The Difference is You", focused on the importance of environmental responsibility in Science Technology Engineering and Mathematics research, especially among Native communities. The All Nations Louis Stokes Alliance for Minority Participation (ANLSAMP) Program Sponsored Poster and Oral competitions. There was a great deal of interest among undergraduates including AMP Scholars, presenting work in Science Technology Engineering and Mathematics.

The poster and oral sessions took place on Friday, October 30th at the Portland Convention Center. There were forty-four poster and fourteen oral presenters approved to compete. All students participated as scheduled!

Undergraduates displayed an immense amount of dedication and poise as they presented years of research and findings. Judges were astonished by each student's professionalism and confidence demonstrated at the AISES National Conference.



Above Left: Robyn Wilson and Jeremy Rude await cash prizes.

Poster Winners:

- 1st Place-Orlando Leone
Florida International University
- 2nd Place-Seanna Piper-Jordan
Yale University
- 3rd Place (Tie)-Lisa Kaponi
University of Hawaii
- 3rd Place (Tie)-Micah Wild
New Mexico Tech

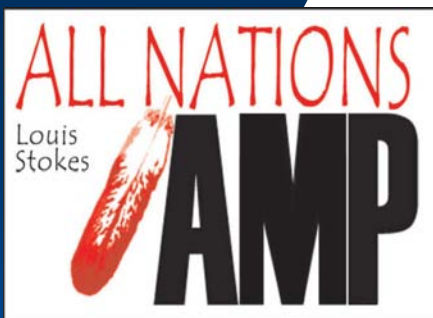
Oral presentations were very well thought-out. All fourteen students waited patiently to persuade the audience. Judges worked diligently to determine the top three placing oral presenters.

Oral Winners:

- 1st Place-Jeremy Rude
Humboldt University
- 2nd Place-Christy Bieber
University of Michigan-Ann Arbor
- 3rd Place-Robyn Wilson
Rochester Institute of Technology

The ANLSAMP Program would like to give special thanks to students and judges for a job well done! Also, we'd like to show our gratitude toward AISES staff for ensuring all essential needs for the competition were met.

Article by Misty Hirsch



2009 SKC Summer “Boot Camp”



Polly Dupuis (SKC Instructor) using the “Smart Board” to work through a mathematical problem. (Photo courtesy of Rayne Charette)

The goal of **Salish Kootenai College’s (SKC) Summer ANLSAMP Mathematics “Boot Camp”** was to strengthen AMP Scholars and potential AMP Scholar’s mathematical skills and boost their mathematical confidence. As a result, camp participants were expected to experience greater success in pre-college and college-level math courses which may lead directly to stronger math skills and greater participation in more advanced math classes and core STEM related subject matter. These goals directly related to AMP’s goals and programs of increasing the number of Native American students graduation with STEM degrees.

SKC identified four factors that affect student success in remedial and college-level mathematics courses that are within the power to control: inadequate preparation, inappropriate student placement, promotion without content understanding, and low self-confidence in mathematical abilities. To address these issues, the “Boot Camp” focused on three components: conceptual understanding using experimental mathematics, remediation with mastery learning, and mathematical student support. By improving conceptual understanding, and enhancing student experiential mathematical learning, SKC’s “Boot Camp” addressed the four identified factors. This in turn, strengthened student preparation and increased student success in college level math classes and STEM subjects that require a fundamental understanding of mathematical concepts.

Component 1: Conceptual Understanding Using Experimental Mathematics

Several Hands-on manipulative activities were developed and integrated into the “Boot Camp” to address participant’s lack of content understanding. These innovative activities were used to enhance mathematical concepts and help students discover for themselves algebraic algorithms, mathematical connections, and geometric representations. The activities helped students gain conceptual understandings, material retention, and offered them multiple methods to solve a problem. In addition, the activities generated a high level of student interest. Some of the activities developed are currently being used in the Developmental Math, College Algebra, and Math for Elementary Teacher courses.



(Photo by Rayne Charette)

Component 2: Remediation with Mastery Learning

Low self-confidence and inadequate preparation were addressed using WeB-Work, a free web-based homework delivery system. WeBWork provided students with immediate feedback as to the correctness of their answers and encouraged students to make multiple attempts until they achieved success.

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Willard Suppah (SKC Student) working with a scientific calculator to work through assignments in SKC “Boot Camp” Photo by Rayne Charette

WeBWork promoted “mastery” while most students attempted problems until all of the answers were correct and because the problems were individualized, they could not merely copy answers from another student. We found that students not only completed their homework, but also routinely worked until the problem was correct.

In contrast, math assignments prior to WeBWork were typically not completed in its entirety, students did not receive immediate feedback, nor did the student have the incentive to understand their errors. Students were inconvenienced by having to bring scratch paper and writing utensils to the computer workstation, so small whiteboard tablets and pens were purchased for use in the lab. WeBWork was viewed by students and instructors as a success. As a result, WeBWork has been integrated into several math courses at SKC including Basic Math, College Algebra, Statistics, and Pre-Calculus.

Component 3: Mathematical Support

The SKC “Boot Camp” was held four consecutive days prior to the start of fall quarter and consisted of four hours daily of Algebra or Calculus concept review. The camp consisted of two sessions, Pre-Algebra and Post-Algebra. Each session was led by an instructor and assisted by tutors from the Science, Engineering, and Math Lab (SEM) tutors.

The assistants were chosen from SEM Lab tutors who in turn helped AMP scholars and potential AMP Scholars develop important relationships that helped to foster mathematical success. Program participants made connections with staff and math tutors as well as current students. In addition, participants became acquainted with the tutorial services where they continued to develop their math skills after the “Boot Camp”. Of the fourteen student participants who are currently enrolled in a math class, eleven or 79% use the SEM tutor lab on a regular basis.

Program Evaluation

The Pre-Algebra session had fourteen participants, ten ANLSAMP or potential ANLSAMP Scholars and four social work students who were not sponsored by AMP. Eight of ten ANLSAMP sponsored students enrolled in statistics during fall quarter. Of the eight students enrolled in college algebra, six are currently passing. The remaining two have withdrawn from school entirely due to personal issues. The Calculus Session had fifteen AMP or potential AMP scholar participants, of which, five enrolled in Calculus during fall quarter. All five of these students are currently passing.



Meet an AMP Scholar—SKC Carleton Gritts



Photo courtesy of Carleton Gritts

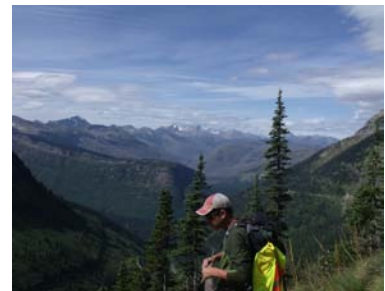


Photo courtesy of Carleton Gritts

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Salish Kootenai College's Carleton Gritts is in his senior year of his Bachelor Degree in Forestry. Carleton was born and raised in Spearfish, South Dakota. His people are of the Cherokee Nation. His family plays an important role in his education by encouraging him to stay focused.



Photo courtesy of Carleton Gritts

Carleton's moment of obligation to attend college came when his mother shared her dream of having all of her children achieve an education beyond high school. Carleton looks up to his mother because of her strength, determination and willingness to help others. She has always been in support of his choices. Carleton chose Salish Kootenai College to follow through with his dream to work in forestry. Another strong factor was his recognition of the beautiful surrounding landscape and the warm welcome he received from the people. He visited the Flathead Reservation as a child with his father and has since longed to return.

Carleton has an appreciation for the outdoors and has taken interest in Whitebark pine. He chose Forestry as his major in hopes to assist in making proper management decisions and create a sustainable harvest to protect forests for the future. In the future, he'd like to make a difference on reservation lands by contributing the skills he's gained from Salish Kootenai College and implement proper forest management decisions.

Carleton's greatest challenge has been balancing time between school and the outdoors. He's intrigued by the landscape in Northwest Montana. His greatest success has been building a personal foundation in preparation for graduation in 2010.

Carleton's researched and Documented the success rate of Whitebark pine plantings in Glacier National Park. Whitebark pine is a keystone species in alpine habitat whose numbers are declining due to blister rust and fire suppression. Carleton was asked to

give us a snapshot of where he sees himself in ten years. He explains, "*Salish Kootenai College has given me the building blocks to start my life after college. I want to use them to help tribes keep up with the ever-changing times while maintaining their cultural identity.*"

His greatest hope for tribal people is to have others view them as educated respected people full of culture who choose to make a difference in the world. Carleton's advice to Native Americans starting college: "*Show perseverance and don't be afraid to speak up. Our voices are the weapons of our generation.*"

When asked what he would do differently Carleton replied jokingly, "*Choose a tree species at a lower elevation!*" Whitebark pine are located above 6,000 feet in high elevation ecosystems. Glacier National Park is known for extreme terrain and Carleton has devoted his past three summers to working on internships in Glacier National Park.

When asked what the greatest thing he learned from his research, his reply was,

"If you're not doing something you're passionate about, then your heart and mind will be missing."

"I'd like to give a special thanks to SKC's Environmental Department and my advisors for playing a large role in my education and helping me stay on track with great advice."

-Carleton Gritts



Featured Liaison-Steven Martin
University of Idaho Moscow



(Photo courtesy of Steven Martin)

“(Greeting in his language)
 I am Steven Martin of the Muscogee Creek and Choctaw Nations in Oklahoma. I received my Bachelor of Arts Degree in Sociology from the University of Oklahoma and my Masters of Science in Counseling and Human Resource Development with a concentration of Student Personnel Administration from South Dakota State University. In Spring 2010, I will begin my Doctoral work in Education Leadership. I currently serve as the Director for the Native American Student Center at the University of Idaho in Moscow, ID. I have been specifically serving American Indian Students and communities in various capacities for the past ten years. Prior to my arrival in Idaho, I for the higher education system in South Dakota Conducting the research and practice of American Indian student recruitment, retention and development at the post-secondary level. My academic, professional, and life’s experiences have given me the understanding and compassion to fully serve and support our Native American students in their education and personal endeavors.

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Growing up in Oklahoma, I spent much time with my grandparents. My grandmother and grandfather were special; they both lived traditional lives and were willing to help others at any given moment. Whenever visitors would stop over, my grandmother would make them feel welcome. They did their best to teach me the Muscogee Creek language; I often had my notebook ready when they spoke making every effort to spell, pronounce and translate the best that I could. Some of my strongest memories were attending our church in Okemah, OK. The Springfield Methodist church was the heart of my cultural and family experiences. Every fourth Sunday, we would travel down the narrow dirt roads, across a couple of small brooks to worship for the entire day. Our tribal ways and language were very much alive in the sermon, songs, fellowship, and with our Elders.

When I was young, my ultimate dream was to play football for the Oklahoma Sooners. I would bet that many Oklahoma kids had this same dream. From a very young age, I have been a fan of football. I didn’t make it to the Sooners, but every Saturday during the fall, the Oklahoma Sooners receive my full never-ending support. Some of my other hobbies include basketball and golf. I started playing golf about 13 years ago, and I think that I peaked during the first few weeks because my game has yet to improve over those 13 years. My most important and satisfying hobby is beading. I have been beading for about 10 years, and although I am very modest about my work, I feel privileged that I am asked to do beadwork for others.

The All Nations Louis Stokes Alliance for Minority Participation (ANLSAMP) program is helping to create bridges between the Native American Student Center (NASC) and the University community, while creating a greater support for the UI Native American student population. As a research institution, the University of Idaho understands the significance of encouraging underrepresented minority populations to take a stronger interest in the math and science fields, hence giving support to help achieve the goals and objectives of ANLSAMP.

As a result of this bridge building, dialogue and planning has started to ensure the sustainability of the ANLSAMP program at the UI campus. Currently the UI College of Engineering administers a Special Project Grant through the NASA Idaho Space Grant Consortium (ISGC). The goal of the Special Project Grant is to encourage and facilitate the development and enhancement of STEM activities throughout Idaho, at all levels of education. Moreover, one of their top priorities is to become more connected with Tribal Colleges, and the College of Engineering understands that the ANLSAMP program can help establish this pipeline. The NASC currently administers an Idaho state funded math and science program Helping Orient Indian Students and Teachers (HOIST). One objective is to create a stronger interest among Native American high school students to get more involved in the STEM fields. All HOIST participants will be considered as potential ANLSAMP scholars. As we move forward with the ANLSAMP program, we will continue to work on achieving the objectives of this program and utilize our partnerships to retain students at the undergraduate level and encourage them to pursue their graduate degrees in the STEM fields.” I consider myself blessed and humbled to be in positions that have allowed me to help, teach and learn.

-Steven Martin



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Upcoming Stem Conference-Meeting

American Indian Higher Education Consortium (AIHEC)
 2010 National Student Conference
 March 21-23, 2010 Wild Horse Pass Hotel and Casino
 Chandler, AZ For Hotel Reservations, call: 1.800.946.445
 Visit www.aihec.org for more information on the conference



Liaison Meeting
 (Tentatively) March 20th, 2010

Association of Environmental Studies and Science (AESS)
Many Shades of Green reflects Growing Diversity of the Environmental Movement
 June 17-20, 2010 Lewis and Clark College
 Portland, OR; For conference information, visit http://www.lclark.edu/college/programs/environmental_studies/aess2010/index.php
 Contact Phil Camill pcamill@bowdoin.edu or Jim Proctor jproctor@lclark.edu for questions regarding the conference

Research & Funding Opportunities

Organization for Tropical Studies
 (OTS) has a great opportunity for AMP Scholars!
 Duke University Box 90633 Durham, NC 27708-0633
 Telephone: (919) 684-5774 Fax: (919) 684-5661
 Email: ots@duke.edu or for more information visit www.ots.duke.edu

Student to Academic Professoriate for American Indians (SAPAI)
 Aims to increase the rate of degrees completed by American Indians. A six week writing workshop will enhance degree completion by assisting students in writing their senior thesis. For more information visit <http://stepup.dbs.umt.edu>

Research Opportunities At Oak Ridge National Laboratories
 Summer Internships for teams of faculty and undergraduates. Become an integral part of a research team. Obtain hands on experience!
 Visit www.scied.science.Doe.gov

National Nuclear Security Administration Faculty
 The Department of Energy's National Nuclear Security Administration faculty and student teams program (FaST) offers Native American students appointments for the summer semester. Visit www.bnl.gov/education/programs/nnsaFast.asp

Social Networking

For those AMP Scholars interested in social networking, we welcome you to join the All Nations Louis Stokes Alliance for Minority Participation (ANLSAMP) Group on **Facebook!** ANLSAMP actively posts important deadlines, national STEM conferences, pertinent funding opportunities and some programmatic changes.

Social Networking is a significant tool found in the success stories of many professionals in Science Technology Engineering and Mathematics field. This gives you a chance to socialize outside of a conference environment. Please email your thoughts or ideas about ANLSAMP's Facebook Group to: Steve_Dupuis@skc.edu

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The All Nations AMP Newsletter is a quarterly publication designed to keep our partner institutions and others informed of ANLSAMP activities, previous project results and other relevant STEM activities. Send ideas, student success stories, research project findings or announcements for future newsletters to: steve_dupuis@skc.edu



The All Nations Louis Stokes Alliance for Minority Participation

(ANLSAMP) is funded by the National Science Foundation, with the goal of increasing the number of Native American students successfully completing degrees in Science, Technology, Engineering and Mathematics (STEM). This goal is accomplished through direct participant support and collaborations with partner institutions. ANLSAMP is designed to serve a geographically diverse alliance of 9 mainstream colleges and universities and 25 tribal colleges and universities located within 13 states.

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PROGRAM OVERVIEW

The All Nations LSAMP provides eligible students stipends to assist with educational costs and assists with student research opportunities. These benefits are limited to students enrolled in qualified STEM degree programs at our partner institutions. The ideal AMP Scholar must be enrolled in STEM discipline and seeks research opportunities with a mentor. Opportunities listed are contingent upon approval for funding by the National Science Foundation (NSF).



Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect on the views of the National Science Foundation (NSF). This material is based upon work supported by NSF under Grant No. HRD-0603199.

ANLSAMP Partner Institutions

- Blackfeet Community College
- Central Michigan University
- Chief Dull Knife College
- College of Menominee Nation
- Comanche Nation College
- Dine College
- Fond du Lac Tribal College
- Fort Belknap College
- Fort Berthold Community College
- Fort Peck Community College
- Haskell Indian Nations University
- Heritage University
- Keweenaw Bay Ojibwa Community College
- Lac Courte Oreilles Ojibwa Community College
- Little Big Horn College
- Little Priest Tribal College
- Montana State University-Bozeman
- Montana State University-Northern
- Navajo Technical College
- North Dakota State University
- Northwest Indian College
- Oglala Lakota College
- Rocky Mountain College
- Southwestern Indian Polytechnic Institute
- Saginaw Chippewa Tribal College
- Salish Kootenai College
- Sisseton Wahpeton College
- Sitting Bull College
- South Dakota School of Mines & Technology
- Stone Child College
- United Tribes Technical College
- University of Idaho-Moscow
- University of Montana-Missoula
- Western Washington University