

Photo by Theresa Dama-Douglas

Nurturing tomorrow's brightest scientists: a role for everyone

In a University of Nevada, Reno physics lab, Taylor Wilson is building a Farnsworth Fusor: a machine to generate neutrons and demonstrate nuclear fusion reactions at a very low rate. If successful, according to his own research, Wilson would be one of only 30 people in the world to have built one.

It is work that replicates that of university research scientists, but Wilson, 14, is a high-school student exploring the realm of science while preparing for science fairs and competitions.

"It's best to have this project in a lab, not in a garage," said Ron Phaneuf, professor of physics and part of a small team of University faculty and staff mentoring Wilson.

Phaneuf and others who have supported local science fair competitors over the years will soon experience the culmination of the science fair journey. Intel International Science and Engineering Fair, the world's largest pre-college science competition, is coming to the

William Brinsmead, University principal research and design technician; Tristan Rasmussen, Davidson Academy student; Ron Phaneuf, University professor of physics and Taylor Wilson, Davidson Academy student.

Reno-Sparks Convention Center May 10-16.

It will feature more than 1,600 finalists, winners of science fairs from more than 50 countries who will compete for nearly \$4 million in scholarships and prizes. Among them will be winners of Nevada's affiliated science fairs in Elko, Las Vegas and Reno. Based on past events, it is estimated 20 percent of the finalists will already have patents or patents pending on their work.

Community support will be critical. About 500 volunteers, 150 language interpreters and 1,000 judges from all fields of science and engineering will be needed.

"The first time I attended and judged the international competition, I was truly awed," said Dick Simmonds, emeritus physiology faculty and co-chair of the ISEF Judging Committee. "With the quality of these young men and women, it was intellectually stimulating and professionally very exciting."

Wilson is a student at the Davidson Academy—one of the first, college-based, public schools for profoundly gifted students in the

nation—located at the University. Yet the world of science competitions is by no means limited to gifted students, and physics lab faculty and staff have helped many students from area schools over the years.

"The satisfaction of being a teacher is seeing students get excited," said Phaneuf. "It is always inspiring to see young people who get so enthused."

"I was in the science-kid category growing up, and the system didn't always know how to deal with you. This is changing today," said William Brinsmead, a principal research and design technician for the University's physics department and another of Wilson's mentors. "We need to nurture these students."

"Even with the amount of time and trouble that goes into this, if we get one Einstein out of this, it's worth it," said Brinsmead.

For more information about Intel International Science and Engineering Fair, visit www.isefnevada.com.

—Jane Tors '82

Space Grant Consortium funds collaborative minor in 'serious' games

Students from art, journalism and computer science and engineering will participate in a collaborative minor in "serious games" that has drawn support from the Nevada NASA Space Grant Consortium.

University professors from the three fields will use \$20,000 from a consortium grant for an innovative, learn-by-doing program that uses games to help students create projects that present complicated topics in an engaging way.

"We learn by playing," said Sushil Louis, professor of computer science and engineering. "Just like pilots learn by 'playing' on flight simulators, we can design fun games that teach complex skills."

Project collaborator Larry Dailey agrees.

"Who said this isn't rocket science?" said Dailey, Reynolds School of Journalism professor and chair of media technology. "Interactive computer games can be much

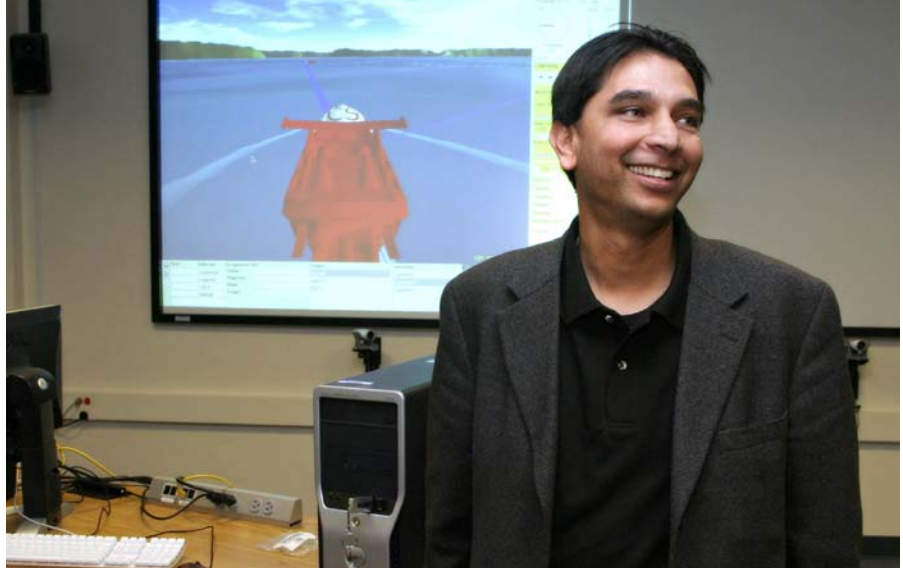


Photo by Jean Dixon

Computer science and engineering professor Sushil Louis has helped his department net more than \$2 million in grants from the U.S. Navy.

more than entertainment."

A wealth of academic literature points to the power of interdisciplinary collaboration and learn-by-doing educational experiences.

The new games minor provides an ideal setting for this type of education because, by definition, most games incorporate art, communicate complex concepts and require technically skilled implementation.

"I am really excited about this new minor—from the perspective of our digital media program—this truly fits the bill of working to create interdisciplinary, collaborative opportunities," said Joseph DeLappe, professor of art.

"One can think of computer gaming as being about where silent films were in the 1920s—we are truly laying the groundwork here for what could be a very important step toward the University becoming a significant player in the evolution of this nascent medium," DeLappe said.

The department of computer science and engineering will receive \$10,000. Another \$10,000 has been awarded to the Reynolds School and the Center for Advanced Media Studies.

A \$10,000 grant for the art department is under consideration.

The Nevada NASA Space Grant Consortium's mission supports Nevada university students, faculty and research in science, technology, engineering and mathematic fields, said Leone Thierman, program coordinator.

One of the key factors in deciding to fund this project was the collaboration between the three fields.

"They're creating interdisciplinary applications, involving students from different backgrounds and collaborating on a project that could have implications for space science," Thierman said.

—Zanny Marsh

TEACH grants to help fill fields with fewest teachers

The University has received approval to participate in the federal grant program TEACH, Teacher Education Assistance for College and Higher Education, which helps deliver teachers to high-need fields such as bilingual education and English language acquisition, foreign languages, mathematics, reading specialization, science and special education.

Congress created the program in 2007 through the College Cost Reduction and Access Act, granting up to \$4,000 annually to education students who agree to serve

at least four years as full-time teachers in subjects where the need is most dire. Eligible students may also teach at public or private elementary or secondary schools serving low-income students.

"The goal of a TEACH grant is to help improve subject areas with the least amount of teachers," said Sandi Guidry, interim director of the University's Student Financial Aid and Scholarships office.

University students will receive the first TEACH grants this spring.

"We're targeting third- and fourth-year and graduate students for this first year's funding," Guidry said. "We're working with the College of Education to identify

upper-division students who are interested and eligible."

To qualify, an applicant must meet certain academic standards as well as complete the Free Application for Federal Student Aid (FAFSA). Applicants may be undergraduate or graduate students, those enrolled in a post-baccalaureate teacher credential program or current teachers.

"The student who comes into college and says they're going to be a high school math teacher, and they just know it, this is a great program for them," Guidry said.

For more information, visit www.finaid.unr.edu or www.FederalStudentAid.ed.gov.

—Natalie Savidge '04



Scheels offers a look at Wolf Pack athletics history

Fans of Wolf Pack athletics have enjoyed the many exhibits and displays of Nevada championship teams and top players at the campus' Legacy Hall since 1999. Now there is a new place to experience the more-than-a-century-deep stock of Wolf Pack lore, and it is attracting attention at the Scheels store just off Interstate 80 in Sparks.

"We refer to it as a Wolf Pack museum," said Justin Nelson, a marketing officer who temporarily left Scheels headquarters in Fargo, N.D., to design the 24-foot long, four-foot deep display case at the sports store's main entrance. "I knew that I wanted to dedicate a good

portion of the museum to Marion Motley. He is Nevada's all-time greatest athlete."

Motley, a pro football Hall of Famer and track and football player for Nevada teams from 1940-42, was one of four African-American players to permanently break pro football's racial barrier in 1946.

In addition to the tribute to Motley, the permanent exhibit includes about 50 photographs, including images Athletic Media Services director Rhonda Lundin believed were out of sight for decades, a Wolf Pack cow bell, a game-worn leather football helmet and a blue and white plaid jacket worn by an unidentified Nevada women's basketball coach.

"We put in pictures from women's athletics from the 1920s and '30s," Lundin said, noting that one image includes a photograph of the 1899 Nevada women's basketball team, which gained one of the athletic program's first varsity victories—a triumph over Stanford.



Nevada Athletics Director Cary Groth visits the Scheels store at the Legends at Sparks Marina.

Nelson said his hope is that the display continues to grow at Scheels, which opened Sept. 27.

"We hope that when milestones are hit at the University of Nevada, say if the Wolf Pack won a WAC championship and they wanted to display the trophy in the case for the first month, we would be happy to show it off," he said.

While working on the project, Lundin located and identified pictures of 140 of the 142 individuals inducted into the Nevada Athletic Hall of Fame since 1973.

"It was a process to go through everything, but it was fun," she said.

—Pat McDonnell

Maragakis named dean of College of Engineering

Manos Maragakis, an internationally respected professor and researcher in civil engineering who has served as interim dean for the College of Engineering at the University of Nevada, Reno since July, has been named dean of the college.

Maragakis joined the University in 1984 and had previously served for 14 years as chairperson of the Department of Civil and Environmental Engineering.

"Manos has a strong record of teaching, research and service," Provost Marc Johnson said. "His leadership performance as interim dean has convinced me that he has the ability and passion to lead the college through this difficult budgetary time and position it for growth in the near future."

Maragakis succeeds Ted Batchman, who announced in fall 2007 he was stepping down following 13 years as dean.

—John Trent '85/'87, '00M.A.



Photo by Jean Dixon



Photo by Jean Dixon

Solar panels generating electricity at Joe Crowley Student Union

Nevada students wanted the new Joe Crowley Student Union to be as “green” as possible, featuring the use of natural light, recycled materials and energy-efficient technologies. The latest green addition to the four-story building, which opened in November 2007, is its photovoltaic energy system—112 power-generating solar panels placed on the roof above the top-level ballrooms.

“The panels were up and running in October and will generate about \$7,200 of energy each year,” said John Sagebiel, the University’s environmental affairs manager. “They help offset the cost of the power for the ASUN Bookstore, which provides funds for ASUN programs and projects.”

The University paid approximately \$50,000 for the panels, thanks to contributions from project partners Black Rock Solar and NV Energy. University Facilities Services employees installed the panels. The campus’ return on investment will likely increase annually, as energy costs increase.

“These types of photovoltaic panels were invented by Bell Labs back in 1954,” Sagebiel said. “Some of the original prototypes are actually still working and are on display back in their museum.”

He expects the panels to produce power for the student union for at least 35 to 40 years. If they last 35 years—and the cost of power remains constant—the panels will provide more than \$250,000 in energy.

Interestingly, “The Joe” isn’t the only University building using solar power. Sagebiel said that solar panels in the Nye residence hall, opened in 1967, have been helping to heat that building’s water for more than 25 years.

“It’s not just about cost savings,” he says. “It’s also about doing the right thing. Use of solar energy whenever possible demonstrates this campus’ continued commitment to sustainable practices.”

The University has been offered a generous \$15,000 challenge grant from a Reno/Tahoe-area family, who wishes to remain anonymous, committed to environmental stewardship and educational endeavors. Two \$1,000 gifts have already been received toward our goal. The deadline for the match is June 30.

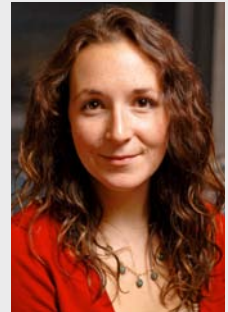
If you would like to support the solar panel project at Nevada, please contact Lynda Buhlig, director of corporate and foundation relations at (775) 682-6013 or lbuhlig@unr.edu.

—Claudene Wharton ’86, ’99M.A.

Faces on the Quad

JENNIFER LUNA

The Nevada senior was distinguished as one of the country’s best collegiate journalists in November when she won ninth place in the feature-writing category of the Hearst Journalism Awards Program. Her more-than-2,000-word story, “Hope flies,” was one of 138 submitted by students in 78 journalism schools around the country. *The Reno News & Review* also published the feature in a June 2008 issue. Luna, who is studying Spanish in addition to journalism, traveled abroad to Chile through the campus’ University Studies Abroad Consortium in spring 2007. She will graduate in December 2009, and plans to find a career that will allow her to do the two things she loves most: writing and traveling.



COLIN LORETZ

The former president of both the campus’ American Marketing Association and Business Student Council, Loretz, a marketing major, defines “college involvement.” He plans to graduate in May 2009, while working as project manager for Twelve Horses Web Design and Development and as a member of the board of



advisers for Nevada Interactive Media. In addition, Loretz is the creator of Reno Collective, a collaborative work environment for creative and tech-savvy people in downtown Reno, and says he is the “rich Internet application student evangelist” for Adobe computer products. His post-University plans include getting a master’s degree in intelligent web technologies in London, as well as cycling as often as possible.

Earthquake simulation lab shakes its way to more international attention

The internationally acclaimed earthquake simulation laboratory at the University of Nevada, Reno received worldwide media attention this past winter when researchers shook a 110-foot long, 200-ton bridge to test innovative construction materials.

National Public Radio ran the story nationwide, complete with sounds of the three, enormous 50-ton capacity shake tables rocking 16,000 pounds of steel and 60 cubic yards of concrete. Publications in New Zealand, Great Britain and around the United States reported on the successful experiment.

“There is no other facility in the country as big and with the equipment we have to conduct these types of tests,” said Professor M. “Saiid” Saiidi, lead researcher, bridge engineering expert and associate director of the University’s Bridge Research and Information Center. The Large-Scale Structures Laboratory has the capability of simulating or replicating any earthquake seen in the field using data

from the University’s Seismological Laboratory.

The Structures Lab, a cavernous building with hoists, shakers and hydraulics, opened in 1992 with funds in part from the National Science Foundation. Officials from public agencies and private industry use the lab to test products and designs, and its popularity has forced some projects to be turned away, said Professor Ian Buckle, the lab director.

“We have a backlog, a waiting list and a long line of projects,” said Manos Maragakis, the newly named dean of the College of Engineering. “We have an expansion project in the works that would add 23,000 square feet. We will have more access for industry projects, more students and more research.



Photo by Jean Dixon

Doctoral students Carlos Cruz, left, and Chunli Wei take photos and measurements after an earthquake simulation test Dec. 11 of a 110-foot model bridge in the Large-Scale Structures Lab on campus.

“We’re already doing high-profile projects around the world. We’re more well-known in Japan than we are in Reno. The expansion will make us even more competitive and surpass other facilities.”

—Mike Wolterbeek ’02

Juvenile and Family Court celebrates 40 years on campus

The National Council of Juvenile and Family Court Judges, which has played a key role in serving the needs of those who improve justice for children and their families, recently celebrated its fourth decade on the University of Nevada, Reno campus. Council officials hosted a dinner Jan. 27 at the Silver Legacy Resort and Casino, saluting the contributions of the University and the community.

“Reno has been a wonderful location for us,” said Mary Mentaberry, the council’s executive director since October 2004. “It’s been a great place to bring judges, even though we conduct training all over the country.”

Mentaberry estimated the council provides

training and technical assistance to about 25,000 professionals annually throughout the country, including research on juvenile detention, foster care, adoption and family violence. The council began operations through the work of a group of judges in 1937, moving to Reno from Chicago in 1969.

“We evaluate practice in the courtroom and help professionals in the juvenile and family court systems conduct strategic planning,” the 1970 Nevada graduate and onetime student worker at the NCJFCJ said. “Judges have actually left their seats during an educational setting and called their courts to talk about what they have learned.”

Emeritus University President Joe Crowley was a Dinner Committee co-chair at the Janu-



Photo by Bret Hoffman

Mary Mentaberry ’70

ary event. Current University President Milton Glick also received recognition for his contributions to the council’s success on campus.

The University has maintained the council’s headquarters in the Continuing Education Building on North Virginia Street since 1990, when the organization moved from a Judicial College Building office.

“We have collaborated since the 1990s with the University’s Grant Sawyer Center for Justice Studies and the National Judicial College to educate judges participating in the master’s and doctorate in judicial studies programs,” Mentaberry said. “We have hired four Ph.D.s from the Grant Sawyer Center, and have three working for us now. We’ve had numerous University grads on staff.”

Proceeds from the dinner will support projects addressing court handling of child abuse and neglect, juvenile delinquency, domestic violence and family law issues.

—Patrick McDonnell



John Larsen '72 (accounting) is the chief executive officer of the Port of Subs chain.

Photo courtesy Port of Subs

University-Port of Subs partnership receives national award

As students line up for freshly made sandwiches at the Joe Crowley Student Union, they are participating in an award-winning, public-private partnership.

The innovative venture between the University of Nevada, Reno's College of Business and the Port of Subs Corporation is earning revenue for the college while serving as a learning lab for business students. The program, developed by the college's Nevada Small Business Development Center, recently received the top honor in the "Excellence in Partnership

Development" category at the summit of the University Economic Development Association, a national organization creating links between colleges and economic development partners.

"Students in two courses, one a traditional classroom course and the other a hands-on internship course, use the Port of Subs business venture to learn business management skills," said Sam Males, the center's state director.

Bret Simmons, assistant professor of managerial sciences, and James Sundali, associate professor of managerial sciences, collaborate to teach the classes. The internship students share their hands-on experiences with the classroom students who, in turn, offer solutions to challenges the interns may be facing.

"It's worked very well," Males said. "The students have come up with creative ways to

enhance the operation, particularly in reducing the time it takes to process your order."

When the restaurant opened in January 2008, it had the highest opening-week sales of any of the 158 Port of Subs franchise locations. Monthly sales are now more than double the projection before the restaurant opened.

John Larsen '72 (accounting), chief executive officer of the Reno-based chain, has served on the NSBDC advisory board since 1987.

"We couldn't have done this without John's generosity and his passion for trying to make University students better prepared for the business world," Males said. "The honor we received at the summit wouldn't have been possible without John's commitment to this project and the University."

"The Port of Subs and University of Nevada, Reno partnership was a creative joint effort by both private enterprise and higher education, creating a footprint for other universities to follow," Larsen said.

—Claudene Wharton '86, '99M.A.

DOE grant to help University turn research into reality

Commercializing innovative technologies to stimulate economic growth and diversification in Nevada can be a complicated process. The campus' Technology Transfer Office, which serves the University of Nevada, Reno and the Desert Research Institute, has a new tool to help bridge the gap between research and reality.

The office recently received a \$738,000 Department of Energy grant to help it deliver early-stage technology into the marketplace and create income from that research for the two institutions.

"With this grant our office will have more resources, such as additional staff and a collaboration with the College of Business, to better evaluate the commercial potential of these technologies at both the University and DRI," said Dick Bjur, Technology Transfer Office director. The sister institutions have technological expertise in medicine, agriculture, mining, the physical and environmental

sciences, and engineering.

"We will more effectively seek out business partners for commercializing dozens of our patented and patent-pending inventions through licensing agreements," Bjur said.

One such agreement is a partnership with Optim, a Nevada-based geophysical software and data services company. Its specialty is evaluating building sites for earthquake potential and finding the most economical drilling sites for geothermal power production.

University alums Bill Honjas '93M.S. (geophysics) and Satish Pullammanappallil '94Ph.D. (geophysics) founded Optim in 1997. They started the company based on technology they studied and invented as graduate students, creating software now used in the geotechnical and energy industry worldwide.

In 2002, Optim developed an additional, earthquake-hazard mitigation product using technology invented by University geophysics and Nevada Seismological Laboratory professor John Louie, who was Honjas' and Pullammanappallil's graduate committee chairman. The University receives an annual royalty in

return for Optim licensing Louie's technology.

Louie's former students, adjunct research assistant professors at the University, hire Nevada students as Optim employees.

"The role of the University, and in particular the Technology Transfer Office, cannot be understated in the founding and success of Optim and its resulting contributions toward economic diversification, high-level employment and revenues generated in Nevada," Honjas said. "The Seismological Laboratory provided us with the environment, academic freedom and faculty to pursue our studies in computational geophysics."

"Optim worked to produce a commercial software product and create the market for Louie's technology," Bjur said. "They have been very successful in advancing and commercializing it; the University shares in that success. Partnerships with private industry, such as this, not only benefit the University and DRI, they create jobs in Nevada and encourage economic growth and diversity in the community."

—Mike Wolterbeek '02