Nevada Mathematics Project impacts thousands of students

by NICOLE SHEARER ’03

Teruni Lamberg, University of Nevada, Reno associate professor of elementary mathematics education, spends her summers traveling across the Silver State and has logged 20,766 miles in the three years since she launched the Nevada Mathematics Project. Her desire to make a difference not only motivates her extensive travel, but also fuels her passion to continue propelling math education forward.

Since 2014, Lamberg and her team have developed and implemented a research-based, comprehensive professional development program that focuses on supporting teachers in applying the Nevada Academic Content Standards based on the Common Core and the Next Generation Science Standards. The Nevada Mathematics Project supports teachers to improve their teaching of STEM subjects to enhance student learning.

“Our goal with this project isn’t just to offer high-quality professional development for teachers,” Lamberg said. “It’s to impact kids. In over three years, we’ve calculated that more than 12,600 children in Nevada have benefited from this program.”

Lamberg and her team work to improve STEM education on a statewide level. Funded by the U.S. Department of Education and the Nevada Department of Education, the project incorporates the University of Nevada, Reno, University of Nevada, Las Vegas; Northeastern Nevada Regional Professional Development Program; Western Regional Professional Development Program; Nevada Department of Education and every school district in Nevada, as well as some charter and private schools.

The Nevada Mathematics Project has received national and international attention. Top researchers from Northwestern University, University of Wisconsin-Madison, Central Connecticut State University, Arizona State University, Appalachian State University and various mathematical reviews are collaborating with Lamberg and her team to train teachers and conduct research.
Nevada launches new classical and jazz station, adds new app
by JANE TORS ’82

The Truckee Meadows now has a full-time radio station dedicated to classical music and jazz. Listener-supported KNCJ at 89.5 FM – a sister-station to KUNR at 88.7 FM – serves Reno and Sparks with 24-hour classical music on weekdays and jazz on weekend evenings. KUNR is the NPR-member station broadcasting from the campus of the University of Nevada, Reno since 1963.

“After months of anticipation, KNCJ is now a reality. It’s a refreshing new spot on the dial,” KUNR General Manager David Stipech ’85 (journalism) said.

“As audience and funding grow over time, we’d like to add more content that highlights the talents of our local and University community,” Stipech said.

KNCJ’s coverage area is primarily in the Reno-Sparks valley, yet listeners report they can receive the signal while traveling up to several miles out of the area. KNCJ also streams online at KNJN.org.

Thanks to the contributions of individuals and generous grants from the E.L. Cord Foundation, the Robert Z. Hawkins Foundation and the Roxie and Azad Joseph Foundation, KUNR secured startup costs for equipment and engineering for the new station.

KNCJ programming includes:

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<td>“From the Top”,showcasing top young classical musicians 7 p.m.</td>
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<td>“Saturday Night Jazz,” Reno Public</td>
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<td>politan Opera” live from New York</td>
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<td>Radio’s local jazz show, 6 to 10 p.m.</td>
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<td>Sunday</td>
<td>“Sunday Baroque” 9 a.m. to noon</td>
<td>Classical music (daytime)</td>
<td>“From the Top”,showcasing top young classical musicians 7 p.m.</td>
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A diamond in the rough: The Bonanza Cut
by MIKE WOLTERBEK ’02

Like a diamond in the rough, a small cut of beef that meat cutters typically throw in with ground meat is now being looked at as a high-end delicacy by researchers in the College of Agriculture, Biotechnology and Natural Resources.

Assistant Professor of Meat Science Amilton de Mello is redeveloping the Bonanza Cut, a small, quarter-moon-shaped slice of beef that has a taste and tenderness outclassing any other cut except filet mignon. It is a petite slice of beef ideal for grilling and practically melts in your mouth.

“Chefs and restaurants will love this cut, it can be portioned for many sizes of servings,” de Mello said. “And for meat producers, it offers a higher price point and more profits by taking this cut in a new direction.”

De Mello started developing this new cut in 2014 while working for the beef industry. With support from JBS, a world leader in processing of beef products, he conducted research on the cut at the University beginning in 2015 and found it compared extremely well against other cuts of beef.

“Meat processors will like this specialty cut for a number of reasons, including the fact that it’s very easy to trim,” de Mello said. “The industry will also like it because instead of selling it for $1 a pound as lower quality meat, they can showcase it for what it is — a premium cut worth more like $5 a pound.”

The small cut yields two pieces per beef carcass that weigh about a half of a pound combined.

“This small volume makes this cut even more special based on its high quality and low availability,” he said. “Due to its eating characteristics and unique texture, the Bonanza Cut is a new alternative to replace traditional beef cuts in many different recipes.”

Consumers won’t find the Bonanza Cut in the meat department or restaurants yet. It will be up to the meat producers, such as JBS, which funded de Mello’s research, to make the cut available.

“The day we unveiled the Bonanza Cut, customers were requesting it from meat producers,” de Mello said. “Who knows? We may see it on the shelves sooner than we think.”
Anthropology professor earns prestigious Kavli Fellowship

by JOHN TRENT ’87

True to the multidisciplinary nature of her work, and true also to a humble personality that often would rather see others praised for their contributions first, Sarah Cowie sees her latest individual honor as a reflection of the help she’s received from colleagues and students, and from the trust she’s earned from the communities and stakeholders she views as partners.

Cowie, an assistant professor in the Department of Anthropology, learned earlier this month she has been selected as a Kavli Fellow by the National Academy of Sciences. She participated in the Academy’s fifteenth Japanese-American Kavli Frontiers of Science symposium in December in southern California.

The symposium series is the Academy’s premiere activity for distinguished young scientists. Kavli Fellows are selected by a National Academy of Science committee from among young researchers who have already made recognized contributions to science, including recipients of major national fellowships and awards. Since its inception in 1989, more than 175 Kavli Fellows have been elected to the National Academy of Sciences and 10 have been awarded Nobel Prizes.

For Cowie, this latest honor is a continuation of a string of important professional milestones and recognitions she has received in 2016. In February, Cowie was named one of the 105 recipients of the Presidential Early Career Award for Scientists and Engineers by President Barack Obama.

“This has certainly been the most exciting year of my career, but to receive individual recognitions for doing collaborative work is very humbling,” said Cowie, who has been at the University since 2011. “In some ways it feels not quite right, because I never would have been recognized without the important work and ideas many people shared with me.”

Cowie’s most recent research, which has focused on an archeological study of the historic site of Stewart Indian School in Carson City, Nev., provides a vivid illustration of how Cowie seeks out multidisciplinary approaches to make discoveries, and perhaps even more importantly, in developing productive relationships with key stakeholder groups.

Her work at the site of Stewart Indian School, a 110-acre area with some 50 buildings, has brought welcome resources, research and attention to the old government-supported boarding school which young Native American students from throughout the region and the country were forced to attend.

Johnson W. Makoba, an associate professor in the Sociology Department at the University of Nevada, Reno, was one of 59 African Diaspora scholars awarded a fellowship by the Carnegie African Diaspora Fellowship Program to travel to Kampala, Uganda to collaborate on curriculum co-development, research, graduate teaching, training and mentoring activities. He is shown here (front row, fourth from right) with Uganda Technology and Management University graduate students, senior administrators and academic staff.
Dragonfly Energy recently received a $2 million investment from Dynavolt Renewable Power Technology, a publicly traded Chinese company. A finalist in the 2014 Sontag Entrepreneurship Competition, Dragonfly Energy was founded by Denis Phares ’14 MBA, Sean Nichols ’10 (general studies), ’14 MBA, David Gong, Evan Humphreys and Justin Ferranto. It began as a research and development company, and now manufactures and markets a line of 12-volt, deep-cycle lithium-ion batteries. The investment is expected to accelerate expansion of their manufacturing capacity. The founding members will retain their ownership of the company after Dynavolt’s investment. Pictured are Denis Phares and Sean Nichols.

Slow snowmelt in the Sierras

by MIKE WOLTERBEEK ’02

Western communities are facing the effects of a warming climate with slower and earlier snowmelt, which reduces streamflows and possibly the amount of water reaching reservoirs used for drinking water and agriculture, according to a study initiated and co-authored by Adrian Harpold, an ecohydrologist in the College of Agriculture, Biotechnology and Natural Resources.

“As the climate warms, there is actually a slower snowmelt – both in timing and rates, which makes for a less efficient streamflow,” Harpold said. “I know it’s counterintuitive, but with a warming climate, snowmelt starts sooner in the season, and at a slower rate because the warming occurs earlier when days are shorter and we have less sunlight. What makes runoff less efficient is that slower snowmelt reduces the amount of moisture being pushed deep into the subsurface where it is less likely to evaporate.”

The paper was published in the peer-reviewed, American Geophysical Union publications Geophysical Research Letters.

“The phenomena is ubiquitous in the western U.S. The trends are consistent to all mountain ranges across the West,” Harpold said. “The Sierra is affected and, besides the Truckee River basin, northern California will feel an impact from the reduced and early streamflows. The snowpack in the Sierra is one massive reservoir that our communities, forests and river environments have come to rely on.”
Orvis School of Nursing reinstated

by KERRI GARCIA ’92

Patsy L. Ruchala has been named dean of the Orvis School of Nursing at the University of Nevada, Reno, following a decision by the Nevada System of Higher Education’s Board of Regents last September. Effective Oct. 1, 2016, the reorganization reinstated, after 24 years, the Orvis School of Nursing as an independent school lead by a dean.

Ruchala said the reinstatement is significant as it elevates the school and gives it “a seat at the table” alongside nursing deans at state schools throughout the nation.

“It increases our ability to recruit research-focused faculty and gives us our own voice in the community,” she said, adding that she expects additional positive impacts from friends and donors of the Orvis School of Nursing.

“The change also will allow us to further build and enhance our programs to meet the nursing needs of Nevada. And it gives us a national presence at a much higher level.”

The change comes as the Orvis School prepares for its 60th anniversary in 2017.

Sixteen in 2016 by HANNAH RICHARDSON, Class of 2017

Sixteen new programs were added to the more than 145 top-tier degrees across the University’s colleges and schools. New programs include the biomedical engineering major, the graduate certificate in cybersecurity and the NevadaTeach minor. The University of Nevada, Reno is proud to continue to add new majors, minors and certificates to its growing list of academic programs.

A few of the new programs include:

Bachelor of Science in Biomedical Engineering

“This is a major with a great job outlook that offers our students the opportunity to join a rewarding profession, intellectually and financially,” said M. Sami Fadali, professor and chair of the Electrical and Biomedical Engineering Department.

Bachelor of Science in Secondary Education, Business Education

“Teaching is based on the love of learning. The University is a leader in teacher education, and we do all we can to produce well-prepared, skillfully educated teachers who will make a difference in our communities. Graduates with this degree will be a part of the business world, as well as education,” said Diana Lovendino, advisor in the College of Education.

Graduate Certificate in Nuclear Packaging

The new nuclear packaging graduate certificate teaches students how to safely transport, transfer, dispose of and store nuclear and other radioactive materials for later use in electricity, medical treatments, food sterilization and other applications.

For a complete list of the new courses, visit Nevada Today > unr.edu/nevada-today or visit the University’s degrees and programs website > unr.edu/academics
California butterfly population in decline

by MIKE WOLTERBEK '02

In a study of California butterfly populations, Matthew Forister, an associate professor of biology in the College of Science, found butterfly species are in dramatic decline in the lowlands of Northern California – and at least one of the causes could be a group of common insecticides called neonicotinoids.

Neonicotinoids, used in agriculture in the region since the mid-1990s, and also in suburban and urban areas, are similar to nicotine and powerful because of their systemic uptake by plants.

“Our four study sites are in a region that has agriculture, open areas and a large urban center: the city of Sacramento. So the butterflies have to navigate a complex landscape while looking for nectar and host plant resources,” Forister said.

The butterfly fauna has exhibited a marked decline in recent years that previous studies have attributed in part to altered climatic conditions and changes in land use. In this study, a negative relationship between neonicotinoid use and annual variation in butterfly species observations was readily detectable. The study controlled for land use, summer temperature and other factors, and the effect appears to be more severe for smaller-bodied species with fewer generations per year.

The results raise the possibility that butterflies, potentially during their time as caterpillars, are encountering plants along the margins of agriculture that have been indirectly exposed to insecticides.

“It should be remembered that our results are observational, correlative and a crude spatial scale, thus we can only suggest what could be happening,” he said. “Although we cannot establish causation, we hope that these results will inspire future experimental research with butterflies to complement similar research with honey bees.”

Forister worked with colleagues from the University of California, Davis; British Columbia and Toronto on the project. The study was published in the Royal Society Publishing Company’s scientific journal Biology Letters.
Reopening of historic Lincoln Hall

by MIKE WOLTERBECK ’02

On Oct. 6, University, state and city officials celebrated the reopening of Lincoln Hall, one of the oldest buildings on the University of Nevada, Reno campus. Built in 1896, the historic Lincoln Hall underwent seismic retrofitting to repair and reinforce the brick structure. The restoration was done with great care and attention to detail, preserving historical features of the building while gaining space for faculty offices.

“We made a commitment to Lincoln’s preservation two years ago and put a plan into place,” University President Marc Johnson said. “It’s gratifying to see the plan come to fruition. The Lincoln Hall restoration has been remarkable—they’ve done such a wonderful job. You may not even notice the exterior upgrades.”

Its dormers and parapets that line the rooftop, arched entryway and ornamental rock corners are all part of the Eclectic style of architecture popular at the time, which combined several styles of earlier architecture to form a new look. The style also reflected the principles of Thomas Jefferson’s plan for the University of Virginia that resulted in the Reno campus’s first quadrangle, flanked by academic and administrative buildings and student starting when the campus moved from Elko in 1885.

“We take sincerely the commitment to preserve the historical nature of our campus,” President Johnson said. “With the Quad, Manzanita Lake and 13 buildings on the National Register of Historical Places, it’s a big responsibility for our institution, one that we take quite seriously.”
ARTOWN, a month-long celebration of the arts in Reno, including programs on campus. Call (775) 322-1538 or visit www.renosartown.com.

CHILD AND FAMILY RESEARCH CENTER DAY CAMP, for children ages 5-10. Call (775) 784-6762 or visit www.unr.edu/education/centers/cfc.

DAVIDSON THINK SUMMER INSTITUTE, for exceptionally gifted students age 13-16. Call (775) 852-3483 or visit www.davidsongifted.org.

DEAN’S FUTURE SCHOLARS, an academic outreach program to encourage low-income, diverse and first-generation students to attend college. Contact Mariluz Garcia, (775) 784-4237 or mcgarcia@washoeschools.net, or visit www.unr.edu/education/centers/dfs.

ENGINEERING SUMMER CAMPS, for students age 12-18. Call (775) 784-6925, email ebozsik@unr.edu or visit www.unr.edu/engineering.

FLEISCHMANN PLANETARIUM AND SCIENCE CENTER, programs and exhibits for all ages, call (775) 784-4812 or visit www.planetarium.unr.nevada.edu.

GIRLS MATH AND TECHNOLOGY CAMP, for girls entering grades 7 and 8. Visit www.unr.edu/girls-math-camp.

KIDS UNIVERSITY, an educational day camp for children entering grades 2-8. Call Extended Studies, (775) 784-4062 or visit http://kidu.unr.edu/.

MOVIES AT THE JOE, dates vary. Call the Joe Crowley Student Union, (775) 784-6505, or visit www.unr.edu/studentunion.

NEVADA BOYS STATE, a leadership and citizenship training program for qualified high school juniors. Call (888) 646-6594, email info@nevadaboysstate.org or visit www.nevadaboysstate.org.

OSHER LIFELONG LEARNING INSTITUTE (OLLI), educational experiences for adults 50 and over. Call (775) 784-8053, email olli@unr.edu or visit www.olli.unr.edu.

PACK PICNICS ON THE QUAD, free and family friendly, co-sponsored by the Nevada Alumni Association and Summer Session. Call (775) 784-4652 or visit www.summersession.unr.edu.

READING AND WRITING TUTORING at the E.L. Cord Foundation Center for Learning and Literacy for elementary students in first grade and up. Call (775) 784-4951 or visit www.unr.edu/cll/tutoring.

SMALLWOOD MULTIMEDIA BOOT CAMP, rigorous instruction by University faculty and staff using multimedia equipment and software in the Mathewson-IGT Knowledge Center @One Department for a select group of northern Nevada high school students entering their senior year. Following the camp, students will continue to have access to the Knowledge Center’s facilities and staff during their senior year of high school. Call Jacqueline Grant, (775) 682-5669 or jackieg@unr.edu, or visit http://media.unr.edu/knowledge_center/Smallwood.

UPWARD BOUND, a free college preparatory program for qualified students. Call (775) 784-4978 or visit www.unr.edu/upward-bound.

WOLF PACK SPORTS CAMPS, including football, baseball, basketball, golf, soccer, softball and volleyball camps; call (775) 784-4062 or visit www.unr.edu/sportscamps.

SUMMER CAMPS AT LAKE TAHOE

THE NEVADA 4-H CAMP is owned and operated by the University of Nevada Cooperative Extension. The camp sits on 32 shoreline acres on the south shore of Lake Tahoe and is available for rental year round. Contact the Nevada 4-H Camp at (775) 588-6943 or visit www.unce.unr.edu/4H/camp.

58TH ANNUAL LAKE TAHOE MUSIC CAMP, for musicians entering grades 8-12, dates available at www.unce.unr.edu/ltmc. Contact Chris Money at Extended Studies, (775) 784-4046 or cmoney@unr.edu.

NEVADA GIRLS STATE, leadership and citizenship training program for qualified high school seniors. Call (775) 224-0073 or nevadagirlsstate@gmail.com, or visit www.nevadagirlsstate.net.

4-H YOUTH EDUCATION AND LEADERSHIP CAMPS, various dates in July and August. Call the University of Nevada 4-H Program Office at (775) 784-6206 or visit www.unce.unr.edu/4H.