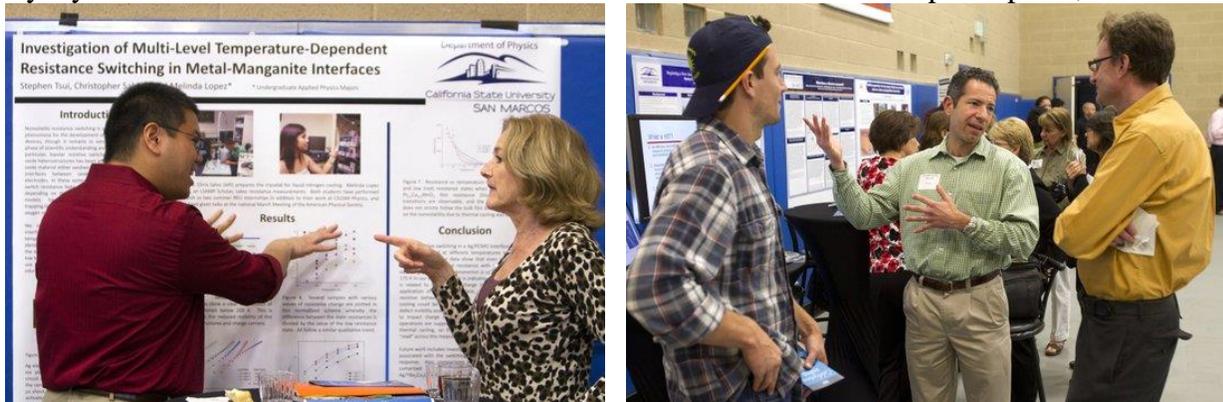


SAN MARCOS: From musical stocks, to Nintendo language lessons, academics show off their work

By By DEBORAH SULLIVAN BRENNAN dbrennan@nctimes.com 9 p.m. April 6, 2012



A video game that teaches an American Indian language and a musical piece based on Google stock prices were among the examples of faculty scholarship showcased Friday at Cal State San Marcos.

The third annual Celebration of Faculty Scholarship and Creative Activities featured nearly 50 exhibits, ranging from scientific and medical studies to a piano performance.

Three of the university's new deans presented their own research on elder care, molecular structure and leadership among university department chairs.

"Your collective expertise is astounding," university President Karen Haynes told the assembled professors. "I hope and trust we will continue to support it any way we can, despite what is happening in California."

With booths, posters, videos and multimedia displays, professors shared work that included traditional scholarship and some unconventional collaboration.

Joely Proudfit, a professor and director of the university's California Indian Culture and Sovereignty Center, displayed hand-held Nintendo gaming devices outfitted with cartridges designed to teach the Luiseno language.

Proudfit and her students created the program with a \$50,000 grant from the Luiseno tribe, using the voices of tribal elders and children to teach terms for colors, numbers, animals and other vocabulary.

"It's super easy to use," Proudfit said. "It's super interactive and fun."

Although the tribe has no fluent speakers left, she said, she hopes the program will revive the language.

"Our goal is to have everyone speaking fluently and casually," Proudfit said.

Catalin Ratiu, a professor of management and marketing, devised a novel use of technology by plotting the prices of Google stock through sound. Visual and performing arts instructors Ching-Ming Cheng and Felipe Aguinaldo then transformed the series of notes into a jazz piece.

Besides offering an interesting exercise in music composition, Ratiu said, the technique could provide business officials with a different way to analyze information.

"Right now, in work environments, people are interacting with data visually," Ratiu said. "We think there's a lot of potential for people to engage with data through other senses."

Psychology professor Kimberly D'Anna Hernandez studied the role of stress hormones in postpartum mothering behaviors in mice.

"I'm interested in the underlying neuromechanisms of maternal behavior," she said.

Her studies looked at the neuropeptide hypocretin, which modulates the way mother mice lick, groom and nurse their pups. At moderate doses, the peptide promoted nurturing, Hernandez said, but at high doses, it seemed to reduce mothering behavior, suggesting that an imbalance of the hormone could be linked to postpartum depression.

The findings could have implications for human mothering, and tie into other research Hernandez is conducting on why Mexican-American mothers who adapt to U.S. culture face increased risk of postpartum depression and low infant birth weight.

"Rates of postpartum depression in Mexican-American women are high, and they don't seek treatment," Hernandez said. "Part of what I want to do is to find out what is protective about Mexican culture."

James Jancovich, an assistant professor of microbiology, studies a class of viruses that affect fish, amphibians and reptiles, seeking to learn which genes assist in the reproduction of the viruses. The research, he said, could help protect fisheries from outbreaks and could shed light on the worldwide decline of amphibians.

"It's an important disease we don't know much about, and we're trying to understand how this disease works, how it can kill," he said. "We're trying to learn how we can prevent and perhaps treat some of these diseases."

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