UC SANTA BARBARA

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A Study in STEM Education

Education in science, technology, engineering and math (STEM) is a hot topic for educational reform. For many students, STEM can be the key to future job prospects. Individuals identified with learning disabilities, however, have largely been neglected in such reform efforts.

How various educational researchers and scholars might approach the issue is the subject of “Advancing Individual Differences Research on STEM Learning Opportunities: A National Conference.” Organized by three researchers at UC Santa Barbara’s Gevirtz School of Education, the conference being held Jan. 13-15 will bring together roughly 35 of the nation’s top experts from a variety of fields. This interdisciplinary research collaboration on a little-studied area of STEM education breaks new ground, said Diana Arya, co-organizer and an assistant professor in the Department of Education at UCSB.

“This is something that hasn’t happened before,” Arya observed. “This is something that is quite unique in that scholars who focus on these individual differences haven’t really come together on STEM-related issues, so there is absolutely nothing out there. The first step is looking and learning from one another how we study such issues, and then putting together a series of proceedings to inform a larger community about ways in which we need to research these issues.”

Funded by the American Educational Research Association, the conference acknowledges a dearth of research on STEM education for people with physical and cognitive disabilities. With the federal government calling for greater participation

by underrepresented groups — women, exceptional individuals, minorities — the conference is a first step in synthesizing a comprehensive approach to STEM education from disparate areas of research, said Michael Gottfried, an associate professor in UCSB's Department of Education.

"They're really two separate fields now," Gottfried explained. "There's a lot of research on kids with disabilities, and a lot of research on STEM. There's not a lot research on the intersection of both." Ultimately, he said, research will focus on "How can we make these experiences more accessible so that all kids have an equal chance at learning?"

The interdisciplinary nature of the conference, Arya said, makes UCSB the ideal host. The university's own STEM departments are known for their interdisciplinary emphasis and collaboration. That ability to move between fields of expertise will be crucial to the conference's success.

"Based on my own experiences at various universities, UCSB stands out as an institution that is amenable to STEM-related, interdisciplinary research," Arya explained. "As such, this interdisciplinary conference of researchers from special education, literacy, policy and STEM education is a perfect fit."

Michael Gerber, a professor in the Department of Education at UCSB, is the third organizer of the conference, the bulk of which will be held at the Goodland Hotel.

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.