

University of Bridgeport researcher brings emphasis on STEM

By: [Jennifer Bissell](#) Posted date: January 10, 2013 In: [Education](#), [Fairfield](#), [Featured](#), [Technology](#) | comment : [0](#)



University of Bridgeport's Tarek Sobh.

Ask Tarek Sobh about his 60-page resume and he'll say it's sufficient, but not nearly complete.

A University of Bridgeport professor, Sobh's list of accomplishments is extensive.

He's the university's School of Engineering dean, vice president of graduate studies and research, a professor of engineering and computer science, as well as the founder of UB's high-tech business incubator and robotics laboratory.

Sobh has authored or co-authored more than 200 publications and participated in more than 40 funded research contracts.

At a time when experts say the U.S. isn't producing enough students educated in the sciences, technology, engineering and mathematics — areas encompassed under the term STEM — to support the drive for innovation, Sobh remains committed to making a difference in students' STEM education, one research project at a time.

"When you look at STEM education — by any economic indicator — it's what matters, especially in this day and age," Sobh said. "The ones who are STEM educated are going to be the ones who make a huge difference. Being involved and helping them make a difference is what's exciting for me."

Sobh, originally from Egypt, came to the U.S. for graduate school in 1988, and didn't intend to stay permanently. After graduating with a doctorate in computer and information sciences from the University of Pennsylvania, however, he took a teaching position in Utah before starting his career at UB.

Soon after he started teaching and building up UB's now-famous robotics lab, he and his family decided to settle in.

"I never imagined I would be at UB 15 or 16 years later," Sobh said. "It's a feat that I'm still here. But it's the excitement of seeing it grow — the university and programs — that keeps me here."

Since Sobh started at UB, the annual amount spent on funded research and in-kind contributions in equipment and software has increased tenfold from roughly \$1 million to \$10 million, he said. The number of faculty members has also increased. Down the line, Sobh said he'd like to see the program grow even more.

"My passion is research — doing projects and work on new entities and systems that make life better," Sobh said. "Everything we do (at UB) is related to that in one way or another. Being in a university that is focused on professional development and graduate programming makes my role and my life enjoyable."

Sobh is currently working on many noteworthy research projects.

One is a project centered on developing unmanned aircraft. Currently, Sobh's team is developing its miniature model that is able to fly 250 miles per hour and includes sensors and methods for communicating with operators on the ground.

Additionally, Sobh is working with a team on creating an autonomous group of small robotic devices that would be able to work together to accomplish a task, such as painting a room. Compared to one large robot, or person, painting a room, a group of smaller devices could do the work at a fraction of the time and cost, he said.

A third project involves developing facial recognition software, which is being commissioned by an unidentified company through UB's business incubator and funded by the state government.

Eventually the group plans to sell the software to entities such as airports, daycares, schools and repair shops.

All of the projects focus on practical uses, which could later stimulate the economy, Sobh said.

"STEM focuses on what is needed (for) the growth of the economy," he said. "Finance, technology, science, math and engineering build growth and strength for the years to come."

But above all, Sobh said what motivates him is his students and coming to work in a diverse environment.

"This is an amazing place," he said. "It's a very diversified place economically and nationally. It's kind of fascinating. Working both with students, local and international, from all walks of life, and getting to see them after a few months of working together on an exciting project—it's an amazing feeling."

"Science and technology has always been counted as one of very few fields in the education world where background and nationality really don't matter," he added. "It's a unique sense of accomplishment — to watch a student grow into a researcher. It's worth it, actually."