

Achievement



ALEKSANDAR STEFANOVSKI

Inspiring Youth to Innovate

Aleksandar Stefanovski is trying to inspire youth in his native Macedonia to innovate and dream, but as he spreads the word about the program he has created, he is likely to inspire others as well.

"When I returned to Macedonia two years ago on a break, I noticed a sense of hopelessness among teenage kids due to the lack of jobs that will be available to them upon graduation," he recalls. Being a doctoral student in computer science, he decided to conduct a survey to see if they knew how to use computers, and to his surprise, he found that 90 percent of those he surveyed use computers. He began thinking about ways to inspire them to dream, and he came up with the idea of creating Roboteka, an educational program to give talented youth between ages 10 and 16 the chance to get hands-on experience with robotics and computer science, and to expose them to science literacy and formal research methods.

"Roboteka includes a summer camp, extra-curricular workshop, teacher conference, and competitions," Stefanovski explains. "The focus is on motivating and inspiring the youth to reach for their dreams, to be creative and artistically innovative, and to learn leadership and networking skills."

Stefanovski has worked hard to build the program. He began in February 2008 by

contacting foundations, the U.S. Agency for International Development (USAID) mission in Macedonia, the Macedonian Embassy in Washington, D.C., IEEE, and USFIRST, an organization that promotes students' interest in science and technology. He was able to set up a fundraising event at the Macedonian Embassy; he got a \$50,000 matching grant from USAID; and he is now trying to establish a regional Balkan robotics competition whose winners will be able to attend international competitions organized by USFIRST.

Stefanovski hopes to expand the program and is looking for help to do so. "As the program grows, we will work on expanding it internationally in other developing countries and make it more accessible to youth worldwide," Stefanovski says. "We are in need of GW's invaluable alumni help in spreading the word of Roboteka to their own countries. If you are interested in making a difference and in helping to create an international Roboteka summer camp network, please contact me at astefano@gmail.com or visit www.roboteka.mk."

With a Purpose

Marcus Hendricks does not shy away from a challenge. In fact, he seems happy to have opportunities to test himself. Hendricks, a sophomore who recently declared his major in mechanical engineering with a medical preparation option, keeps a full roster of activities, works several hours each week on campus, and volunteers. And he keeps this schedule despite the demands of his engineering classes.



MARCUS HENDRICKS

Hendricks is a member of the National Society of Black Engineers, the GW Canterbury Club (a Bible study), the GW chapters of both the Japanese Karate Association Club and the Close-Range Combat Group (a self-defense training group), and he works as a student assistant manager at the Smith Center. Until recently, he was in the Navy Reserve Officer Training Corps (ROTC), where he was a member of the Reveille choral group, the aviation club, the drill team, and a volunteer at several junior ROTC field meets. He also volunteers as an acolyte for Sunday worship services at St. Mary's Episcopal Church, across the street from campus.

Each of these activities has some purpose for Hendricks. When asked whether he has favorites among his activities, Hendricks replies, "Bible study is most important to me because it gives me the most direction for what I want to do in life. My job at the Smith Center gives me spending money, and I get to work with varsity athletes and sometimes do homework. Karate and the combat group are important because they allow me to defend myself or someone else."

Hendricks has an unusually mature understanding of the purpose and challenges of his time in ROTC. He remarks, "I definitely enjoyed being in ROTC. What I learned the most was that there are some things that you have to change in yourself in order to be a better leader. The process of finding out your own personal flaws in character is not an easy road; it involves a lot of self-reflection."

Although he spends a good deal of time on his extra-curricular activities, Hendricks makes a point to dedicate himself primarily to his studies. Here, too, he has a purpose in mind. "I've always had a profound interest in the sciences, especially space science," he explains. "I wanted to apply that. I wasn't always good at math and I still struggle with it, but I want to be able to go to work every day and enjoy what I do. I want a career in medicine and space exploration, and an engineering background will help me be able to do that. I would love my job and still be able to serve my country."

Nguyen Receives NSF Fellowship

Linh Nguyen grew up in Vietnam and moved to the U.S. in 2000. Although she already had an undergraduate degree from a university in Vietnam, she enrolled at George Mason University to get a bachelor's degree in civil engineering from an American university. Because of her command of the subject, she was able to work as a consultant at Edwards and Kelcey, a local engineering firm, while she worked on her degree. After finishing, she worked for a year as a structural engineer for the Federal Highway Administration, and then decided to enroll in graduate studies in GW's Department of Civil and Environmental Engineering.

She began in a master's program at SEAS, and was later admitted into the civil engineering doctoral program, where she works with her dissertation advisor, Professor Pedro Silva. She decided to apply for a National Science Foundation Graduate Research Fellowship award, and was delighted to learn last spring that she was among the seven percent of applicants across the U.S. who were selected to receive one of these prestigious fellowships. Says Nguyen, "More than 13,000 people applied last year and 970 received an award. I was so excited to receive the fellowship. At that time, I almost thought that I would give up and go back to work, because the economy was not so good and I have obligations. But the fellowship helped me, because I can stay in school and not have to worry so much."

Nguyen's fellowship supports her research project, which is part of a larger project that consists of a six-university research team led by the University of Nevada-Reno. Using the state-of-the-art shake table at GW's Virginia

Campus, she and Silva study the complex loading that can occur in bridge structures during near-field earthquakes. Nguyen explains, "My part is to look into the response of the reinforced concrete bridge under seismic load. Basically, we investigate how the bridge responds and evaluate the structure that is designed according to the proposed new design code. As a designer before, I know that we need to evaluate any proposed new code before we can implement it into new design standards. Part of my research is to evaluate the structure of our design according to the proposed new code requirements."

Nguyen's research has received a good deal of attention. She has presented papers at both American Concrete Institute and Transportation Research Board conferences, and one of her papers will soon be published. She is understandably proud of her work, but also shares credit, saying, "Professor Silva and Professor Roddis have helped me tremendously. They've given me the chance to go to different conferences, and Professor Silva encourages me all the time. Without their help I wouldn't be able to go this far."

Study Abroad Ambassador

Matt Knouse knows something about learning to adjust to new situations. A senior with a double major in computer science and French, Knouse has already lived overseas twice as a study abroad student. His first study abroad experience was after high school, when he deferred his acceptance to GW and spent a year living in Maebashi, Japan. His second was his junior year at GW, which he spent studying in Aix-en-Provence, France.

As Knouse reflects back on how much he learned living abroad—as well as the fun and the struggles of trying to adjust to a new culture and language—he clearly could not be happier about having chosen to do so. He spoke no Japanese when he left for his year abroad there, and he laughs as he recalls the months before he was able to speak it. "Japanese is pretty difficult to learn, and I realized part way through the year that I was speaking neither Japanese nor English."



MATT KNOUSE

France was a different sort of experience for him because he had studied the language for eight years and had already lived abroad. "Because of my previous experience, I knew that I had to suspend living as an American, so I was ready to slip into French culture. I already knew that speaking another language successfully is about translating ideas, not words, so that was my focus. It made the difference between being able to express humor and getting a puzzled look in return," he says.

Knouse lived with a host family, made many French friends, and enjoyed the beauty of Aix-en-Provence, including living next to and hiking on a mountain that French impressionist Paul Cezanne painted. On top of this, he simply enjoyed the moments of realization that are part of studying abroad. "One of the best things about study abroad," he remarks, "is that you can watch another culture at work and begin to recreate their perspective. You learn how to enjoy their life routines and not get hung up on the differences."

With two study abroad experiences already under his belt, Knouse plans to lend his knowledge to efforts to increase SEAS students' participation in study abroad programs. Next fall, he will serve as the dean's fellow here at SEAS to help facilitate and organize more study abroad opportunities for SEAS students and to recruit students to the programs.

LINH NGUYEN

