SMART scholarship key to AFRL researcher’s career path, DOD program now accepting applications

By Whitney Wetsig, Air Force Research Laboratory / Published September 25, 2018

SMART scholarship recipient Kevin Schmidt is a research engineering psychologist, an avid mountain climber and a Ph.D. student. He conducts research for AFRL’s 711th Human Performance Wing, applies his knowledge to improve warfighter capabilities and leads real-world adventures in science. The Science, Mathematics and Research for Transformation (SMART) Scholarship is a DOD-wide service program that covers tuition for students pursuing technical degrees in STEM disciplines at colleges across the country. The SMART Scholarship program is currently accepting applications online. Candidates must be U.S citizens who are at least 18 years old and able to obtain a security clearance. The submission deadline is Dec. 1, 2018 at 5 p.m. (U.S. Air Force photo/Whitney Wetsig)

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WRIGHT-PATTERSON AIR FORCE BASE, Ohio – Kevin Schmidt is a research engineering psychologist, an avid mountain climber and a Ph.D. student. He conducts research for the Air Force Research Laboratory’s 711th Human Performance Wing, applies his knowledge to improve warfighter capabilities and leads real-world adventures in science.

How does he accomplish all of these professional and academic feats? Schmidt created his own unique path based on his passion for science along with hard work, perseverance and support from the Department of Defense (DOD).

Schmidt’s journey began when he graduated with a bachelor’s degree from Wright State University and started working as a defense contractor. His government colleague praised his abilities and encouraged him to further his education by applying for the SMART Scholarship. The benefits intrigued Schmidt, and he applied immediately.
“It seemed a little too good to be true,” he said. “Someone is going to pay for me to go to school, give me a better stipend than I would find anywhere else and then give me a job afterwards.”

The Science, Mathematics and Research for Transformation (SMART) Scholarship is a DOD-wide service program that covers tuition for students pursuing technical degrees in STEM disciplines at colleges across the country.

While specific amounts depend on prior educational background, the award covers full tuition, pays for textbooks and provides an allowance for health insurance. SMART scholars also benefit from summer internships and post-graduation career opportunities.

The SMART Scholarship program is currently accepting applications online. Candidates must be U.S. citizens who are at least 18 years old and able to obtain a security clearance. The submission deadline is Dec. 1, 2018 at 5pm.

The scholarship is open to all academic levels from college freshman through Ph.D. Those applying for undergraduate awards must be enrolled in a U.S. college or university and have at least a 3.0 GPA.

The program’s goal is to increase the number of civilian scientists and engineers working at DOD facilities and build the next generation of leaders.

Schmidt asserts, “it’s a win-win for everyone.”

The scholarships span a specific period (from 1.5 to five years) based on anticipated degree completion and service agreement dates. Participating services include the Army, Navy, Air Force and DOD.

After receiving the SMART Scholarship, Schmidt spent two years at George Mason University, an Air Force Center of Excellence. After graduating with a master’s degree in psychology, he joined AFRL’s 711 HPW as a civilian and worked there for the next four years.

During this time, he solidified his interest in the science field, and realized he would need a Ph.D. to advance through this career path. He thought of the SMART scholarship and decided to apply for a second time.

Along with 342 others in 2017, Schmidt received the SMART Scholarship, this time as a retention student. He recently completed his first year in the doctoral program at Northwestern University, where he is also a member of the school’s research unit.

In return, Schmidt agrees to work for the DOD (AFRL) after he completes the Ph.D. program for the same number of years he was in school.

“I have this award for another four years, said Schmidt. "Then I’ll come back to AFRL where I hope to apply the skills I’ve learned to help with Air Force problems.”

“The SMART Scholarship has been one of the best things that happened to me,” he revealed. Schmidt is studying for a Ph.D, in cognitive neuroscience and is focusing his research on the effects of low oxygen on the brain and the mind.

He explains that the 711 HPW and the Northwestern University Air Force Center of Excellence together are designing studies that use brain scanners to monitor participants as oxygen levels are adjusted. The goal of this research is to build a strong model that predicts when failures might occur.

This type of research is relevant since oxygen systems are a critical part of Air Force operations.

“There’s a very clear application of this work to find mitigation strategies,” he reveals. The Air Force can develop procedures in case oxygen systems go down.

Schmidt explains that understanding and advanced planning are key to prevent mishaps from occurring in the first place or to bring Airmen back from a decremented state. Cognitive tests can be useful should pilots experience oxygen failure in the cockpit.

This research area also has commercial applications outside of the military sphere in sports and exercise. Various studies focus on optimizing oxygen levels for training purposes and enhanced performance.

Schmidt combined his personal hobby of mountain climbing with his professional interest in research. In 2016, he climbed the highest peak in Africa, Mount Kilimanjaro, and planted an AFRL flag. In 2017, he climbed Mount Aconcagua in South America with a research team to study new ways to prepare warfighters for deployments in high altitude environments.
Schmidt and his team investigated preparatory techniques, formally known as acclimatization processes. Various products/technologies intend to give climbers the best possible chance to reach the highest mountains in the world.

AFRL’s Southern Office of Aerospace Research and Development at the U.S. Embassy in South America expressed interest in funding some of our future work, he said. “We might partner with South American labs, so we are starting to build the next phase of that effort,” he revealed.

Schmidt says that AFRL is the best place to work for those just beginning their career.

“They really empower you early,” he said.

“Leadership at AFRL does a great job of allowing you to apply what you’ve learned outside of the DOD to military problems. They give you the flexibility to carry forward your ideas,” he said.

For more information, visit https://www.smartscholarship.org