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## Two CCSU Students Win Prestigious Prize at International Student Research Competition on Computer Science Education

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Two CCSU Computer Science students brought home first prize in the undergraduate division of the international Student Research Competition, organized by the Association for Computing Machinery (ACM), in early March. Central seniors Tommy Carpenter of Plainville and Caleb MacDonald of Madison won the first-place cash prize of \$500 for their work on incorporating iris recognition as safety features on mobile devices.

The competition took place at the 41st ACM Technical Symposium on Computer Science Education (SIGCSE) on March 10-13, 2010, in Milwaukee, WI. SIGCSE is the largest international conference dedicated to computer science education. It is attended each year by well over 1000 faculty and students from around the world.

CCSU Professor of Computer Science Stanislav Kurkovsky, who acted as a faculty mentor for the students' Independent Study project, said that he initially approached the students with the idea for the project because he thought it would be a good exercise for them.

"I think it's awesome," Kurkovsky said of the project. "A mechanism like this could provide a safeguard against unwanted access to mobile devices." This is especially important as more people use mobile devices to store important information. While there are safety features that can be utilized already, such as entering a PIN to gain access to a cell phone, iris recognition is much more secure and simpler to use.

"With iris recognition all you need to do is look into the camera, push the button, and you're in," Kurkovsky said. As irises are unique, this makes their use in authentication much more secure.

To win the competition, Carpenter and MacDonald's proposal was accepted beforehand, and they were allowed to present a poster on their work at the competition. "The tricky part was that the judges were interspersed in with the regular attendees," MacDonald said. "This probably made it easier than speaking directly to someone you knew was a judge."

From all the posters only five finalists were selected. Each finalist then made a 15-minute presentation to the judges, who then scored them. Carpenter and MacDonald, who received the highest score, took home first place. Carpenter, who presented the pair's work in the final round, said, "I had been to the conference the year before as a spectator and the questions were hard! Overall I think the speech went well, but there was one question that I had to wing because it caught me off guard."

The two students already had an idea on what to expect, since they had attended the conference with Kurkovsky and another student the previous spring. "I wanted them to see what it was like so they knew what to expect," Kurkovsky said. The idea certainly seemed to pay off, and Carpenter and MacDonald have something else to look forward to. A paper they co-authored with Kurkovsky on the project is set to be presented in Las Vegas this year. And their victory in Milwaukee places them in a "virtual competition," during the next few months, with the top three winners from other computer science competitions.

The experience of performing and presenting their research is something that MacDonald feels can be beneficial for students. "If anybody else here at Central gets the opportunity to do student research, I say to go for it," he said. "It did have its ups and downs, but the benefits of attending the conference and competing with other students far outweigh any negatives."

Carpenter and MacDonald's success was made possible in part by the Computer Science, Mathematics, and Physics (CSMP) Scholarship Program at Central, which receives funding from the National Science Foundation's program Scholarships in Science, Technology, Engineering, and Mathematics. The scholarship supported the students' educational expenses and enabled them to focus on academics and their research.

"The CSMP Scholarship was my greatest achievement as an undergraduate," Carpenter said. "There's a good chance that this project never would have occurred without the scholarship."