SIUE's Bouvier Co-Authors #4 Most Influential Computer Science Paper

by Megan Weiser
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EDWARDSVILLE - Southern Illinois University Edwardsville School of Engineering's Dennis Bouvier, PhD, associate professor in the Department of Computer Science, is co-author of a computer science paper deemed #4 most influential in recent history by the Association for Computing Machinery (ACM) Special Interest Group on Computer Science Education (SIGCSE).

In celebration of the ACM's 50th annual SIGCSE Technical Symposium, the leading computer science education group highlighted research that has shaped the field. The top 10 papers were chosen from among the best papers presented at the Symposium during the last 49 years, totaling approximately 2,000. Researchers were recognized during the 2019 Symposium held on Saturday, March 2 in Minneapolis.

Bouvier's paper, titled "A Multi-Institutional Study of Peer Instruction in Introductory Computing," is the result of a multi-institutional study of the practice of teaching computer science. It focuses on peer instruction, a student-centered pedagogy that emphasizes active participation in the classroom.

"I have been attending the ACM SIGCSE Symposium since 1994, and learned a great deal from the community of educators who present at the Symposium each year," said Bouvier. "To have this same community recognize my work as one of the best is an amazing honor."

Bouvier notes two major parts of his and his coauthors' work that stand out from other publications. First, the study is a multi-institutional effort involving eight authors that represent seven colleges from three countries. Second, the study's methodology was sound, ensuring confidence in the results that showed peer instruction is a good way for students to learn in an introductory computer programming course.

"Given the expected growth in both computer careers and careers utilizing computing, we need to know the best ways to prepare students for these careers," Bouvier said. "I am working on a proposal to the National Science Foundation to continue this influential work. If funded, I will train more computer science teachers to use peer instruction with the goal of building a community of teachers who use it for computer science courses."

A complete list of the noted papers is available at ACM.org.

The SIUE School of Engineering offers one of the most comprehensive and affordable engineering programs in the St. Louis region with eight undergraduate degrees, five master's degrees and a cooperative doctoral program. Students learn from expert

faculty, perform cutting-edge research, and participate in intercollegiate design competitions. Companies in the metropolitan St. Louis area provide students challenging internships and co-op opportunities, which often turn into permanent employment. Students gain hands-on experience in the School's state-of-the-art facilities, including the new Fowler Student Design Center.-SIUE-

Photo: SIUE School of Engineering's Dennis Bouvier, PhD, associate professor in the Department of Computer Science.