Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

Department of Computer Science

College of Engineering
2000A Torgersen Hall, Blacksburg, VA 24061-0106
(540) 231-4354, FAX (540) 231-6075
Email: **shaffer@vt.edu**
WWW: **http://people.cs.vt.edu/~shaffer**

May 19, 2015

This letter is in support of Austin (Cory) Bart's proposal to participate in the ICER 2015 doctoral consortium program. I have been working with Cory since he entered the graduate program in Computer Science at Virginia Tech in Fall 2012, and am his co-advisor along with Eli Tilevich.

Since he was an undergraduate, Cory's focus has been on Computer Science Education as a research field. During the roughly three years that Cory has been in our program, he has done outstanding work on a series of related projects that seek to motivate students in a range of Computer Science courses through the use of authentic programming exercises. In recognition of his work and his potential, he has received an NSF Fellowship. He has already completed a certificate program from the Virginia Tech graduate school on learning sciences, and this training helps to inform the pedagogical side of his work.

Cory's research program is a good balance of technology and pedagogy. Technically, he has developed a series of tools that support the introduction of real-time and "big" data streams into introductory courses. This involves various levels of scaffolding (adjustable to the level of the course) to hide or expose details of the data streams. The tools collectively allow instructors to easily introduce more authentic projects into their courses, even to the level of allowing each student to use their own online data source from a wide variety of topics available in the support library. His software has been used in at least three courses that I am aware of. The overarching goal is to move the dial on motivation and ultimately retention of students, especially during their first experience with computing. So an important part of Cory's work is to study and evaluate the effects of the various interventions.

As you can see from this description, Cory is involved in the full gamut of CS Education research, from systems development to pedagogy to evaluation. His work has proved interesting enough to the community that he has been the lead presenter for his systems at SIGCSE workshops two years running, and has also presented his work at SPLASH-E.

Cory expects to graduate in two years time. He is now at a critical stage in his program where he has results to report, but still has enough time left to adjust his focus based on feedback from the ICER community. Thus, the ICER Doctoral Consortium this year will be an ideal experience for him. I enthusiastically endorse his proposal, and hope that he will be selected to participate.

Yours Sincerely,

Clifford A. Shaffer
Professor