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Allen Guest* (aguest@clemson.edu), Department of Mathematical Sciences, Martin Hall, Clemson University, Clemson, SC 29631, and **Marilyn Reba**, **Calvin Williams**, **Roy Pargas** and **Ellen Breazel**. *Mathematics Partnering with Computer Science to Improve Calculus Instruction and Learning*.

Over the four years of an NSF-CCLI-II grant, we have implemented technology to increase interaction between instructors and at-risk STEM students in the teaching of calculus. We have created web-based software using digital ink for the submission of group activities and quizzes, and for an error-tagging project on exams. From a 2010 error-analysis on thousands of pages of Calculus I final exams, we created targeted online quizzes to alert students early to common errors that typically escalate into course failure. Can we encourage at-risk students to remediate these mistakes while moving ahead in the course? For the second year, we have worked with faculty at Tri-County Community College in an online synchronous team-taught Calculus I course. We provide group activities for each class, as well as exams and the remediation quizzes. This pedagogical shift benefits students who transfer from Tri-County to Clemson. Prior to these joint efforts, there was a high failure rate (60%) when Tri-County students continued their Calculus studies at Clemson. We will share our performance statistics, surveys, and interview results. (Received September 25, 2012)