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**M. Reba\*** (mreba@clemson.edu), Department of Mathematical Sciences, Martin Hall, Clemson University, Clemson, SC 29634, and **A. Guest, M. Burr, R. Pargas, C. Williams** and **T. Khan**. *Calculus and Mobile Apps: Mathematics Partnering with Computer Science to Provide Informal Learning Opportunities*. Preliminary report.

Through two NSF grants, the Department of Mathematical Sciences collaborated with the School of Computing (1) to use technology, both inside and outside the calculus classroom, in order to increase learning opportunities for at-risk STEM students, and (2) to identify biomedical and bioengineering applications of calculus by forming alliances with other departments and other universities. Our current focus is the result of these efforts. We are building two sets of mobile apps (one for Apple iPads and another for Android tablets) that will provide to under-performing and under-represented students opportunities to revisit certain calculus concepts and to explore calculus applications. The mathematical content in the apps is presented in conjunction with the calculus classroom. One set of mobile apps will focus on six areas of Calculus I in which errors occur most often (based on an extensive error-analysis of final exams). The second set of apps will investigate the use of calculus in areas such as Epidemiology, Orthopedics, Radiology, and Heat Propagation. These apps are based on materials developed in Creative Inquiry courses at Clemson and partnering universities. We will discuss our efforts on this project as well as demonstrate one or more of the apps. (Received September 16, 2014)