1077-D5-778 **Andrew J Rich*** (arich@macalester.edu), Macalester College, 1600 Grand Ave, Saint Paul, MN 55105, **Daniel T Kaplan** (kaplan@macalester.edu), Macalester College, 1600 Grand Ave., Saint Paul, MN 55105, **Randall J Pruim** (rpruim@calvin.edu), Dept. of Mathematics, Calvin College, Grand Rapids, MI 49546, **Nicholas J Horton** (nhorton@smith.edu), Smith College, Northampton, MA 01063, and **JJ Allaire** (jj.allaire@gmail.com). *Taylor Polynomials in R.* Preliminary report.

In keeping with the format of the session, we will present a lesson on Taylor Polynomials that makes use of interactive graphical software in R. Although R is best known for its important uses in statistics and is a professional-level technical computing environment, it is quite suitable for teaching introductory university-level courses such as calculus. It's also free, and can be run using a browser-based interface (RStudio), which makes it easy to deploy to students in the classroom. The Taylor Polynomial lesson will make use of the symbolic differentiation capabilities built in to R. It illustrates how the quality of the approximation varies with the order and highlights the difference between Taylor polynomials and least-squares polynomials.

In addition to the Taylor Polynomial lesson, we have R software for teaching a complete introductory calculus course, including integration and differentiation operators and several interactive, graphical lessons on various aspects of calculus. Like the R software itself, our calculus software and lessons are free and available on line through Project MOSAIC: www.mosaic-web.org. Instructions for installing the software will be given there at www.mosaic-web.org/JMM2012. (Received September 12, 2011)