1116-VR-2878 **Paul E. Seeburger*** (pseeburger@monroecc.edu), Monroe Community College, 1000 E. Henrietta Rd., Rochester, NY 14623. *Playing with Multivariable Calculus Concepts Wearing 3D Glasses.* Preliminary report.

A tour of an NSF-funded project that seeks to develop geometric intuition in students of multivariable calculus. CalcPlot3D, an online exploration environment, allows students (and instructors) to create and freely rotate the graphs of functions of two variables, contour plots, vectors, plane and space curves, regions of integration, vector fields, parametric surfaces, implicit surfaces, etc. 3D glasses can be used for a real 3D perspective! Come get a pair and try it out! A series of four assessment/exploration activities has also been created to help students "play" with the 3D concepts themselves and to assess improvements in geometric understanding gained from these activities. Topics of these explorations include Dot Products, Cross Products, Velocity and Acceleration Vectors, and Lagrange Multiplier Optimization, and more are being developed. The grant project is titled, Improving Conceptual Understanding of Multivariable Calculus Through Visualization Using CalcPlot3D (NSF-DUE-IUSE # 1524968). See http://web.monroecc.edu/calcNSF/. (Received September 22, 2015)