

1125-H5-2330      **Monica M VanDieren\*** (vandieren@rmu.edu), Dept of Mathematics, RMU, 6000 University Blvd, Moon Township, PA 15237. *Three Ways of Using CalcPlot3D in the Multivariable Calculus Classroom*. Preliminary report.

CalcPlot3D is an on-line, freely available, 3D graphing applet developed by Paul Seeburger (See <http://web.monroecc.edu/calcNSF/>). This applet was originally developed to help students explore and visualize multivariable calculus concepts, but it has the potential to be used in other mathematics, engineering, and science courses in which three-dimensional visualization may aid in student understanding. Through concrete examples, I will describe three different ways in which I employ CalcPlot3D in my classroom: demonstrations, labs, and homework assignments. I will summarize some on-going research which identifies some of the pros and cons of this implementation and how it may improve student understanding. This work is funded by NSF-IUSE #1524968, NSF-IUSE #1523786, and NSF-IUSE #1525216. (Received September 20, 2016)