

1125-VE-2869      **Alfredo Villanueva\*** ([villanuevaa@savannahstate.edu](mailto:villanuevaa@savannahstate.edu)), 3219 College St, Department of Mathematics, Savannah, GA 31404. *3-Ellipses on Spheres.*

A traditional ellipse is a closed curve in the plane, where the sum of the distances from each point of this curve to two fixed points (foci) is constant. A 3-ellipse is a closed curve in the plane with 3 foci. This notion of 3-ellipses was introduced by the Scottish physicist and mathematician James Clerk Maxwell. Here we are extending this definition from the plane to a sphere; a 3-ellipse is a curve in the sphere, where sum of the distances from each point to three fixed points is constant. We also show explicit examples of these curves. These are the grounds to generalize n-ellipse curves (n foci) on Riemannian manifolds. (Received September 20, 2016)