1116-H1-2745 **James D. Factor***, James.Factor@alverno.edu, and **Susan F. Pustejovsky**, Susan.Pustejovsky@alverno.edu.

Dynamically Connecting Visual and Algebraic Representations of Linear Algebra Concepts Using GeoGebra
. Preliminary report.

This presentation will use interactive GeoGebra applets to show connections between algebraic and graphical perspectives of the following successively more complex linear algebra ideas:
a. Vector definition of a line in 2-space and in 3-space.
b. Two linearly independent vectors in 3-space generate a plane.
c. The role of linear combinations in transforming geometric objects from 2- to 3-dimensions, such as a line, or a circle.
The interrelationship of linear combination, matrix multiplication, and linear transformation will be emphasized in the presentations of these concepts.

The GeoGebra applets presented here, as well as others from the NSF project, are freely available for an instructor to use as demonstrations in class. Activities have been designed to guide students in using the interactive applets to enhance learning. This work is part of the NSF project entitled *Transforming Linear Algebra Education with GeoGebra Applets (NSF TUES Grant DUE-1141045).* Additional information about applets with activities is available at the MAA/NSF Poster Session. (Received September 22, 2015)