1096-F1-2709 **James D. Factor*** (james.factor@alverno.edu) and **Susan Pustejovsky**. *Transforming Linear Algebra with GeoGebra.* Preliminary report.

Linear Algebra is a course where the main concepts have algebraic and graphical facets, providing a perfect setting to foster student mathematical growth by encouraging the integration of algebraic and graphical understandings of central ideas. GeoGebra is a dynamic mathematics tool, allowing the creation of interactive learning modules so a student can explore and learn Linear Algebra ideas in a setting in which fluency in moving between algebraic and graphical representations is encouraged.

This talk will present a package from a sequence of three GeoGebra applet packages centered on vectors and their representations, vector operations, and linear combinations of vectors. The sequence of learning module packages begins at the foundational level and moves to intermediate level ideas, finally to a more advanced level, each level building on the previous one(s). Each applet package includes a 2D/3D interactive applet, instructional support, and applications.

The work is part of a larger project entitled "Transforming Linear Algebra Education with GeoGebra Applets" (NSF DUE-1141045).

Our goal is to support students so they can easily use geometric, analytic, and numeric representations in the process of understanding and solving linear algebra problems. (Received September 18, 2013)