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Sukanya Basu* (basus@gvsu.edu), Department of Mathematics, A-2-178 Mackinac Hall, 1 Campus Drive, Allendale, MI 49401-6495. *A Comparison of Different Pedagogical Approaches to Linear Algebra.*

In this talk, we will explore the four key ideas of linear combination, span, linear independence and basis in Linear Algebra from three different viewpoints, namely, algebraic (formula-oriented), geometric (visualization-oriented) and numerical (matrix-oriented). We will also compare pros and cons of using each viewpoint over the other when introducing these ideas in the classroom. Finally, we will explore connections between these key ideas from Linear Algebra and other areas of mathematics such as Multivariable Calculus and Differential Equations. (Received September 18, 2011)