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Robert M Fossum* (rmfossum@uiuc.edu), 405 N. Mathews, Urbana, IL 61801. *Subspace Arrangements and Generalized Principal Component Analysis.*

The Generalized Principal Component Analysis (GPCA) is a process applied to data that segments or clusters the data into a union of subspaces. A union of subspaces is called a subspace arrangement. In this talk the relation between the algebraic geometry and algebra of subspace arrangements and GPCA will be discussed.

Several applications of GPCA will be illustrated. Future investigations will be indicated. (Received April 04, 2007)