

1106-G1-1970 **Yevgeniy V. Galperin*** (egalperin@esu.edu), 200 Prospect St., East Stroudsburg, PA 18301.
Topics in Linear Algebra through Signal and Image Processing.

We help the students appreciate the importance of non-commutativity of operators through the proof and a discussion of the classical uncertainty principle. Several topics in linear algebra (such as the Vandermonde Matrix) are introduced within the context of the discrete version of the Uncertainty Principle of Donoho and Stark. We use discrete wavelet transforms as a vehicle to illustrate the convenience of working with partitioned matrices, the importance of orthogonality, and the use of linear independence in proofs. (Received September 15, 2014)