

5005-B1-49

Joel A. Tropp*, University of Michigan. *On the linear independence of spikes and sines.*

This talk will survey results that guarantee linear independence for collections of impulses and complex exponentials, i.e., spikes and sines. This rich vein of research encompasses the Donoho–Stark uncertainty principle and the Restricted Isometry Property for Fourier matrices. It also includes a new result on random collections of spikes and sines, which is essentially sharp for certain cases. (Received July 02, 2007)