

On the invertibility of random submatrices and sparse recovery problems

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Time **Thursday, January 22, 2015 at 14:00**

Place **Campus Kirchberg, room B04**

We present a simplified and improved study of the quasi-isometry property for most submatrices of a $n \times p$ matrix, obtained by uniform column sampling. Our results improve some previously known values by a large factor. The analysis relies on a tail-decoupling argument, of independent interest, and a version of the Non-Commutative Chernoff inequality. We will motivate this study for sparse recovery problems. (Joint work with S. Chretien)