Sums of independent random matrices

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Abstract:

This series of talks will describe Ashwelde-Winter's method, which produces deviation inequalities for sums of independent random matrices. This simple method is parallel to the classical exponential concentration inequalities (e.g. Chernoff's) for sums of independent random variables. The crucial tool to work with random matrices rather than random variables in Golden-Thomson trace inequality. Ashwelde-Winter method implies in particular Rudelson's sampling theorem for random vectors in the isotropic position.