

Matrix concentration inequalities via the method of exchangeable pairs

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Time **Thursday, April 2, 2015 at 14:00**

Place **Campus Kirchberg, room B27**

This talk discusses a new way to establish moment inequalities for the spectral norm of a random matrix. The analysis is based on a matrix extension of the scalar concentration theory developed by Sourav Chatterjee using Stein's method of exchangeable pairs. This approach offers a truly elementary proof of the noncommutative Khintchine inequality. It also delivers matrix versions of the classical inequalities due to Hoeffding, Bernstein, Rosenthal, McDiarmid, and more.