

INVITATION TO A GUEST LECTURE

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“Stochastic Gradient Descent for Linear Systems”

📍 N.2.01

📅 Tuesday, 15 September 2026

🕒 1:00 p.m.

Abstract

Stochastic Gradient Descent needs no introduction. A particularly nice setting in which one can study this fundamental idea is the problem of minimizing $\|Ax - b\|^2$ to (approximately) solve the linear system $Ax = b$. We'll discuss a nice old method by Stefan Kaczmarz from the 1930s, how it gained momentum with a brilliant randomization by Strohmer & Vershynin and how this has given rise to a very beautiful marriage between classical Euclidean geometry and Probability Theory. A great many open problems remain and will be discussed.

Angelika Wiegele and the Department of Mathematics look forward to seeing you at the talk!