ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

INVITATION TO A GUEST LECTURE

Stochastic Gradient Descent for Linear Systems

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Chaired by Angelika Wiegele | Department of Mathematics

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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.

We hope to see you there!