

Lothar-Collatz-Seminar

Wed, 03. July · **11:00** · Geom 241

Dr. Tizian Wenzel (Universität Hamburg)

Kernel based approximation - Direct and inverse statements

Abstract:

Kernel methods provide versatile tools for scattered data approximation, numerical analysis and machine learning. In this talk, we consider the interpolation of functions in reproducing kernel Hilbert spaces (RKHS) based on function values.

In the first part of the talk, we deal with direct estimates, where we show convergence rates for various greedy strategies. Especially we show that an adaptive greedy choice of interpolation points provides faster convergence rates than the ones given by uniform points or randomly selected points. In the second part of the talk, we deal with inverse estimates which allow to conclude the smoothness of a function based on approximation rates. For this, we discuss two utility statements, which are of independent interest.

Some open problems are highlighted during the talk.

For further information please contact

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www.c3s.uni-hamburg.de/news-events/seminar-c3s.html

