



Einladung zum Oberseminar Wissenschaftliches Rechnen

Julius-Maximilians-Universität Würzburg
Lehrstuhl für Wissenschaftliches Rechnen IX

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Minimax detection of frame-based signals in statistical inverse problems

We start this talk by giving a brief overview of the core ideas of testing and minimax distinguishability.

Afterwards, we focus on linear inverse problems with Gaussian white noise. In this setting, we provide asymptotic upper and lower bounds for the minimax detection threshold of signals which are members of certain collections of frame vectors. The thresholds will be characterized in terms of the redundancy of the frame and the degree of ill-posedness of the inverse problem corresponding to the forward operator. We are especially interested in finding combinations of signals and operators for which sharp thresholds can be derived, which means that the upper and lower bounds coincide.

Finally, we discuss our results for the example of the 2D Radon transform.

Ort: Zoom Videokonferenz

Zeit: Mittwoch, 16.06.2021, 14:00 Uhr

Zu diesem Vortrag laden wir Sie herzlich ein.
You are cordially invited to this lecture.

gez. Prof. Dr. Alfio Borzi
gez. Prof. Dr. Frank Werner