Oberseminar
Mathematische
Strömungsmechanik

Institut für Mathematik der Julius-Maximilians-Universität Würzburg

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Tensor tomography: Momentum ray transforms

Abstract:

The central question in tensor tomography is to recover a symmetric m-th tensor field from its ray trans-from (I^0). The ray transform I^0 was studied by several authors since it had many tomographic applications. It is well known that, any tensor field can be decompose into solenoidal part and potential part. Potential part lies in the kernel of the ray transform I^0, so only solenoidal part can be recovered from the ray transform (I^0) (Vladimir A. Sharafutdinov, *Integral geometry of tensor fields*, Inverse and Ill-posed Problems Series. VSP, Utrecht, 1994). In this talk, we discuss an algorithm for recovering f from the first $m+1$ momentum ray transform. Moreover, we obtain a stability estimate for $m = 1$ and $m = 2$.

Raum 40.03.003 (Mathematikgebäude Ost)	Dienstag, der 7. Mai 2019 um 13 Uhr

Zu diesem Vortrag sind Sie herzlich eingeladen.

gez. Christian Klingenberg