Oberseminar Analysis und Theoretische Physik

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Geodesic flows of the Fisher-Rao metrics for the statistical transformation models

The statistical transformation models appear in the statistical inference for the manifolds of samples on which a Lie group acts smoothly. It is natural to consider a family of probability density functions on the sample manifold with the parameter in the Lie group. Being (relatively) invariant, this family gives rise to the Fisher-Rao (semi-definite) metric, as well as the Amari-Chentsov cubic tensor, on the Lie group, both of which are fundamental objects in the information geometry.

This talk gives an overview on the general framework of the statistical transformation models and then deals with the geodesic flows of the Fisher-Rao metrics for specific examples from the viewpoint of geometric mechanics. Some relation with sub-Riemannian structures will also be mentioned.

Based on joint works with J.-P. Françoise (LJLL, Sorbonne Univ.).

Dienstag, 1.11.2022, 15:00 Uhr, Raum c311
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Dazu laden herzlich ein:
Prof. Dr. Wolfram Bauer, Prof. Dr. Joachim Escher, Prof. Dr. Johannes Lankeit, Prof. Dr. Elmar Schrohe, Prof. Dr. Christoph Walker