Main structures, applications and multiarray spectral data relevance in the Finslerian anisotropic framework

Abstract. Among the promising extensions of Riemannian structures, the Finslerian ones prove their usefulness in various fields, like Biology, Physics, GTR, Monolayer Nanotechnology and Geometry of Big Data. In the present talk we characterize the Finsler structures and several notable extensions, and illustrate the theory by a brief account on m-th root spaces. We further give basic notions on spectra and critical values for tensors, and describe applications to Finsler models which arise from Langmuir-Blodgett interface theory and Oncology. A powerful data structuring analysis tool, the Tucker decomposition, is exemplified for these models, and shown to provide a relevant insight for the geometric underlying structures.

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