Spectra of Symmetric Tensors and m-Root Finsler Geometry Models

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In the framework of supersymmetric tensors and multivariate homogeneous polynomials, the talk discusses the relevance of the spectral properties of the Berwald-Moor, Chernov and Bogoslovski multilinear forms, towards the underlying geometry of the locally-Minkovski Finsler associated structures, which have been intensively investigated as promising candidate models for Special Relativity Theory ([5,6]).

The three types of spectra, the corresponding eigenvectors, the recession and degeneracy vectors, the characterization points, rank, asymptotic rays and base index are studied, and the best rank-one approximation is obtained.

Finally, the relations induced by the spectral properties between the m-root models, are emphasized.

MSC: 65F30, 15A18, 15A69, 53B40, 53C60.

Keywords: E/H/Z-spectra, eigenvectors, recession and degeneracy vectors, asymptotic rays, best rank-one approximation, Finsler spaces, Berwald-Moor models, m-root structures.

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