İTÜ | MATEMATİK BÖLÜMÜ

Efficient Feature Extraction in Hyperspectral Imaging via ADMM-Optimized Enhanced Multivariance Products Representation

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This seminar addresses the challenges posed by the growing complexity and dimensionality of Hyperspectral Imaging data, emphasizing the need to preserve essential data characteristics while maintaining computational efficiency. It introduces an Enhanced Multivariance Products Representation that iteratively optimizes support vectors using the Alternating Direction Method of Multipliers, exploiting its decorrelation capabilities. The proposed framework functions as an effective feature extraction technique, transforming high-dimensional data while retaining intrinsic structural information. Experimental analyses on hyperspectral datasets indicate that the method strengthens data representations for subsequent classification tasks by reducing noise and artefacts without compromising salient features. Results further suggest that the approach adapts well to varying dataset scales, enhancing its suitability for diverse hyperspectral applications.

***Tarih*: 17 Aralık 2025 Çarşamba**

***Saat*: 14:30-15:30**

***Yer*: Fen-Edebiyat Fakültesi B1-326**

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