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| **Professor**  | **Assistant Professor**  |  **Lecturer** |  **Assistant Lecturer**  | Career  |
| Using The Canonical Correlation Analysis Technique For Imaging Dimensionality Reduction In Multisource Landsat Images  | Research Title  |
| Single |  | Shared name  | Shared or Single |
| Iraqi journal of stistics sciences | Published Journal title  |
| 21 | Volume Number |
| 112-139 | Page  |
| 2011 | Year |
| A satellite multispectral sensor provides data in the form of several spectral images of aparticular area of the earth under observation. Each image represents the spatial distribution of reflected or emitted electromagnetic energy as seen through agiven spectral bands. The amount of data by multispectral source is quite large that exhibit high-inter band correlation with redundancy of the information , It therefore leads to inefficient of analysis and process by the methods of image processing. We suggest the canonical correlations analysis technique (CCA) in the dimensionality reduction images for the multivariate multisource data applied in remote sensing . These techniques transform multivariate multiset data into new orthogonal variables called canonical variates (CVs). These variate exhibit ever- decreasing similarity between the set of multivariate multispectral correlation at fixed points in time, and the set of multivariate multispatial correlation at fixed wavelength. We applied this research by the LANDSAT-5 TM data for the set of multivariate multispectral correlation at fixed points in time with six spectral bands over three months in two years 88 &89 consecutive for Iraqi map. The results show maximum similarity for the low- order canonical variates and minimum similarity for the high- order canonical variates.  | Abstract |

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| **Professor**  | **Assistant Professor**  |  **Lecturer** |  **Assistant Lecturer**  | Career  |
| Using the Karhunen Loeve (KL) Algorithm and correspondence analysis algorithm for extraction the feature in the sequences multivarite images  | Research Title  |
| Single |  | Shared name  | Shared or Single |
| Iraqi journal of stistics sciences | Published Journal title  |
| 7 | Volume Number |
| 232-269 | Page  |
| 2008 | Year |
| This research using the Karhunen Loeve (KL) Algorithm and correspondence analysis algorithm for extraction the feature and find the region of interest in the sequences multivarite images by dimensinality reduction and then comparison by them to show whose method that give the best results . The potentials for use this method is illustrated through actual examples dealing with the study of chloride secrtion by airawayepithial cells for 21 bands. We can see that the multivariate analysis allow to distinguish dataset of multivariate dimensinallity at once, and discrbtit them for the relation by different information in the data . We show that the multivariate imaging can be register multivariate datasets for the high information that may be not appear and we must extraction .  | Abstract |