Abstract

Recent advancement in remote sensing facilitates collection of hyperspectral images (HSIs) in hundreds of bands which provides a potential platform to detect and identify the unique trends in land and atmospheric datasets with high accuracy. But along with the detailed information, HSIs also pose several processing problems such as 1) increase in computational complexity due to high dimensionality. So dimension reduction without losing information is one of the major concerns in this area and 2) limited availability of labeled training sets causes the ill posed problem which is needed to be addressed by the classification algorithms. Initially classification techniques of HSIs were based on spectral information only. Gradually researchers started utilizing both spectral and spatial information to increase classification accuracy. Also the classification algorithms have evolved from supervised to semi supervised mode. This paper presents a survey about the techniques available in the field of HSI processing to provide a seminal view of how the field of HSI analysis has evolved over the last few decades and also provides a snapshot of the state of the art techniques used in this area.
A Survey on Trends and Techniques used in Hyperspectral Image Processing

interference rejection approach to target detection and classification for hyperspectral imagery.


A Survey on Trends and Techniques used in Hyperspectral Image Processing


- D. Xu, S. Yan, L. Zhang, S. Lin, H.-J. Zhang, and T. S. Huang,


Index Terms

Computer Science

Image Processing

Keywords

Hyperspectral images (HSIs) remote sensing dimension reduction ill-posed problem