1046-91-1115 **Ryan Lewis*** (me@ryanlewis.net), School of Mathematical Sciences, 85 Lomb Memorial Drive, Rochester Institute of Technology, Rochester, NY 14623, and **Anthony Harkin** (aahsma@rit.edu), School of Mathematical Sciences, 85 Lomb Memorial Drive, Rochester Institute of Technology, Rochester, NY 14623. *A Network Theoretic Approach to Hyperspectral Image Classification.*

A hyperspectral image has n pixels with $k > 100$ spectral bands. Hyperspectral imaging has a variety of applications, for example: geological research, wetlands mapping, and plant and mineral identification. We present a novel technique to classify the pixels of a hyperspectral image into spectrally similar groups. Our method represents the image data as a subset of R^k, and is based on Newman's Method of Optimal Modularity in Social Networks. (Received September 14, 2008)