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Jack A. Ryan* (jaryan@noctrl.edu). *Recognition of Textural Differences in Infrared and Ultraviolet Imagery Using Fractal Characteristics.*

This project utilized an algorithm written by Troy Thielen that is used to estimate the fractal dimension (complexity) and lacunarity (spread) of gray-scale images. New ultraviolet and infrared images were taken throughout the project and analyzed using this algorithm. The fractal characteristics of these images were then analyzed to recognize textural differences within imagery, a useful method when attempting to recognize objects or locate targets. Differences between ultraviolet, infrared and visual imagery were analyzed, and additional implications of the recognition of textural differences were explored. (Received September 15, 2014)