

1106-AE-1326      **Nathaniel Beagley\*** ([nathaniel.beagley@jhuapl.edu](mailto:nathaniel.beagley@jhuapl.edu)), 11100 Johns Hopkins Road, Laurel, MD 20723-6099. *The Application of Signature Models to Intelligence, Surveillance, and Reconnaissance Research.*

One area in the field of ISR (Intelligence, Surveillance, and Reconnaissance) research involves combining measurements from sensors along with kinetic models in a Kalman Filter framework to locate, identify, and track targets of interest. The problems spaces can grow quickly in complexity with the use of multiple sensors requiring methods for optimally managing data collection, and with the presence of multiple targets requiring association algorithms to resolve between multiple candidate scenarios.

This talk will describe our efforts to augment this process using signatures, developing and inserting signature models into traditional ISR processes and accurately quantifying the predicted performance change. We are specifically interested in developing signature models that allow high levels of ISR performance to be maintained when tested with environments that cause degraded or missing sensor data. (Received September 12, 2014)