

Current AFIT Student Thesis/Dissertations related to MASINT/AGI Research and Supporting Technologies

Steven Brady, Thesis, March 2010: Frequency Diverse Array Radar: Signal Characterization and Measurement Accuracy

Manuel Arriagada, Thesis, March 2010: Performance of Scattering Matrix Decomposition and Color Spaces for Synthetic Aperture Radar Imagery

John McGowan, Thesis, April 2010: The Effect of Synthetic Aperture Radar Image Resolution on Target Discrimination

Sheldon Munns, Thesis, March 2010: Spectral Domain RF Fingerprinting for 802.11 Wireless Devices

Todd Book, Thesis, March 2010: Design Analysis of a Space Based Chromotomographic Hyperspectral Imaging Experiment

Daniel O'Dell, Thesis, March 2010: Development and Deployment of a Field-Deployable Fast Chromotomographic Imager

Wesley Schuler, Thesis, March 2010: Nuclear Forensics: Measurements of Uranium Oxides Using Time-of-Flight Secondary Ion Mass Spectrometry (TOF-SIMS)

Douglas MacDonald, Thesis, March 2010: Passive Ranging Using Infra-Red Atmospheric Attenuation

Anthony Young, Thesis, March 2010: Scene Change Artifacts in Fourier Transform Spectroscopy of Temporally Changing Sources

Nathan Boyce, Thesis, March 2010: Thermal Neutron Point Source Imaging using a Rotating Modulation Collimator (RMC)

John Haiducek, Thesis, March 2010: Experimental Validation Techniques for the HELEEOS Off-Axis Laser Propagation Model

Jeffery McGuirk, Dissertation, December 2009: Electromagnetic Field Control and Optimization Using Metamaterials

Kenneth Bradley, Dissertation, September 2009: Midwave Infrared Imaging Fourier Spectrometry of Combustion

Jawad Farooq, Dissertation March 2009: Frequency Diversity for Improving Synthetic Aperture Radar Imaging

Philip Sheirich, Thesis March 2009: An Engineering Trade Space for a Spaced-Based Hyperspectral Chromotomographic Scanner

Daniel Gallagher, Thesis March 2009: Surface Acoustic Wave Devices as Chemical Vapor Sensors

Neil R. Jesse, Thesis March 2009: Satellite-Based Fusion of Image/Inertial Sensors for Precise Geolocation

Michael K. Miller, Thesis March 2009: Exploitation of Intra-spectral Band Correlation for Rapid Feature Selection, and Target Identification in Hyperspectral Imagery

Ashley L. Schmitt, Thesis March 2009: Radar Imaging with a Network of Digital Noise Radar Systems

J. Jean Cohen, Thesis March 2009: Demonstration and Verification of a Broad Spectrum Anomalous Dispersion Effects Tool for Index of Refraction and Optical Turbulence Calculations

John McShane, Thesis March 2009: Application of Time-Frequency Representations to Non-Stationary Radar Cross Section

Torsten E. Howard, Thesis March 2009: Abstracting GIS Layers from Hyperspectral Imagery

Brian Donnell, Thesis March 2009: Using Shadows to Detect Targets in Synthetic Aperture Radar Imagery

Randall W. Klein, Dissertation September 2009: Application of Dual-Tree Wavelet Transforms to Burst Detection and RF Fingerprint Classification

LaTosha M. Bell, Thesis June 2009, Effect of Advanced Synthetically Enhanced Detector Resolution Algorithm on Specificity and Sensitivity of Portable High Purity Germanium Gamma detector Spectra

Buckley E. O'Day, Thesis March 2009: Nuclear Forensics: Estimation of Minimum Weapon Yield from Inversion of Dose Rate Contours

Spencer J. Bowen, Thesis March 2009: Hyperspectral Imaging of a Turbine Engine Exhaust Plume to Determine Radiance, Temperature and Concentration Spatial Distributions

Steven P. James, Thesis March 2009: Two-Channel Blind Deconvolution Using Polarization Diversity

Steven E. Slagle, Thesis March 2009: Advanced Radiometry for High-Explosive Fireball Characterization

John J. Tatar, Thesis March 2009: Wave Optics Simulation of Optically Augmented Retroreflections for Monostatic/Bistatic Detection

Seth L. Marek, Thesis March 2009: A Computational Tool for Evaluating THz Imaging Performance in Brownout Conditions at Land Site throughout the World

Daniel I. Mattei, Thesis March 2009: The Use of Spider Silks as Passive Bioaerosol Collectors

Michael A. Koehl, Thesis March 2009: Thermal Pulse Simulator

Steven Johnson, Dissertation September 2008: Range Precision of LADAR Systems

Michael B. Walsh, Thesis September 2008: ROC Curves of Fused Independent Classification Systems

Daniel A. LeMaster, Dissertation September 2008: Statistical Processing Methods for Polarimetric Imagery

Matthew D. Sambora, Dissertation September 2008: Statistical Methods for Image Registration and Denoising

Melody L. Massar, Thesis June 2008: Time-Frequency Analysis of Terahertz Radar Signals for Rapid Heart Rate Detection

Scott N. Long, Dissertation June 2008: Characterizing Effects and Benefits of Beam Defocus on High Energy Laser Performance under Thermal Blooming and Turbulence Conditions for Air-to-Ground Engagements

Veth, Anderson, Webber, Nielsen, Report 2008: Tightly-Couples INS, GPS, and Imaging Sensors for Precision Geolocation

Teresa J. Fondren, Thesis March 2008: Time Resolution of Collapse Events during the Propagation of Ultraviolet Light Filaments

Todd M. Venema, Dissertation September 2008: Closed-Loop Adaptive Optics Control in Strong Atmospheric Turbulence

Samuel I. Harkiss, Thesis March 2007: A Study of Bi-directional Reflectance Distribution Functions and their effects on Infrared Signature Models

Veth, Raquet, Pachter, Report 2007: Stochastic Constrains for Fast Image Correspondence Search with Uncertain Terrain Model

David A. Kerns, Thesis March 2007: Automatic Target Recognition User Interface Tool

Uttam K. Majumder, Thesis March 2007: Point Spread Function Characterization of a Radially Displaced Scatter Using Circular Synthetic Aperture Radar

Joseph P. Bellucci, Thesis March 2007: Improved Hyperspectral Image Testing Using Synthetic Imagery and Factorial Designed Experiments

Joshua T. Werner, Thesis March 2007: Assessment of the Impact of Various Ionospheric Models on High-Frequency Signal Raytracing

Christopher P. Jones, Thesis March 2007: High Resolution Mesoscale Weather Data Improvement to Spatial Effects for Dose-rate Contour Plot Predictions

Robert A. Steenburgh, Thesis March 2007: Holes: Ionospheric Scintillation GPS and Imputation

Peter M. Johnson, Dissertation March 2007: Phase Diversity and Polarization Augmented Techniques for Active Imaging

Myrna B. Montminy, Thesis March 2007: Passive Geolocation of Low-power Emitters in Urban Environments Using TDOA

David F. Orth, Thesis June 2007: In Infrared Camera Simulation for Estimating Spatial Temperature Profiles and Signal-to-Noise Ratios of an Airborne Laser-Illuminated Target

Randall L. Rockrohr: Determining Source Position Using Spectra Collected from a Portable High Purity Germanium Gamma Detector