



Information Fusion with Quantized Uncertainty for Heterogeneous Multimodal Data

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Abstract:

The University of Hawaii ETI team concentrated on the development and implementation of a standardized, quantized, constant-quality-factor (constant-Q) framework for the analysis of heterogeneous multimodal sensor data. Associated new information fusion methods, metrics, and uncertainty quantification strategies are applied to signatures from selected MINOS scenarios, UAVs, rockets, and explosions, with the aim of developing signal annotation, feature extraction, machine learning, and edge computing pipelines. Collaborative efforts and internship opportunities with INL, LLNL, NNSA, ORNL, and SNL will be discussed. Smartphone app enhancements are in rapid development to collect performance metrics that will permit quantitative cost-benefit analyses of small size, weight, power and cost (SWAPC) platforms.