A KNOWLEDGE BASED APPROACH TO URBAN LAND USE CLASSIFICATION USING HYPERSPECTRAL IMAGERY AND LiDAR
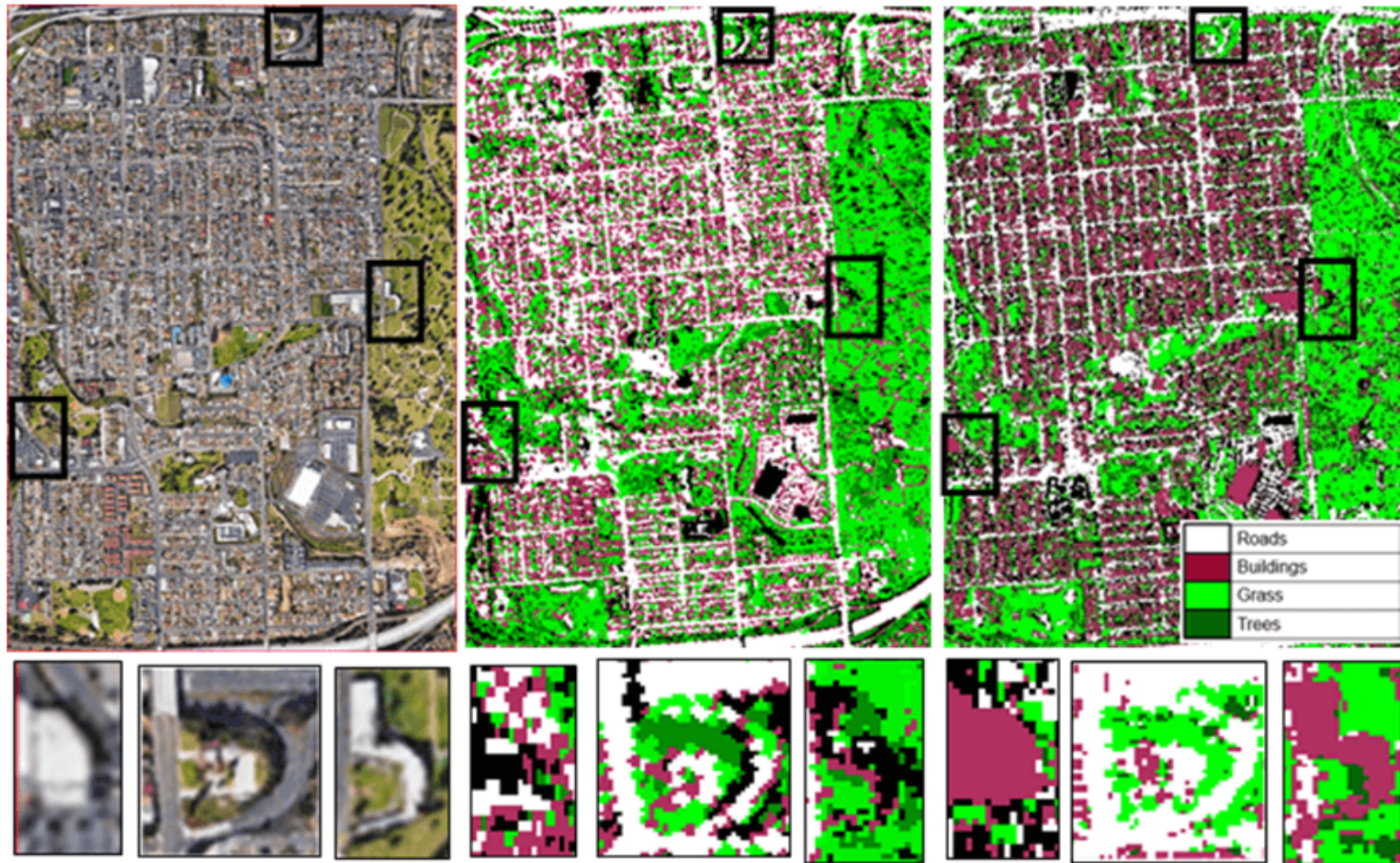

AVIRIS 5.8m HRS image

SAM classification

Knowledge based classification

Legend:
- Roads
- Buildings
- Grass
- Trees

- LiDAR data is very helpful in separating similar spectral signatures
- Hyperspectral: Spectral information
- LiDAR: Spatial information (Third dimension)
- AVIRIS data for San Diego with 5.8m resolution, 224 spectral bands, 10 nm
- Road extraction using SAM classification only showed over classification into the road category.
- Accuracy was 6% more in knowledge based classification than SAM