Name-Surname	**Georgios Giannakogiorgos**
Thesis Title	*Optimization of thermal environmental impact in urban areas with combined use of SENTINEL and LANDSAT satellite data*
Supervisor	C. Cartalis, Professor
Summary	This study aims to compare classification accuracies of land cover/use maps created from Sentinel-2 and Landsat-8 data. Athens metropolitan city of Greece, with a population of around 5 million, having different landscape characteristics was selected as study area. Water, forest, agricultural areas, grasslands, transport network, urban, airport-industrial units and barren land- mine land cover/use classes adapted from CORINE nomenclature were used as main land cover/use classes to identify. To fulfil the aims of this research, recently acquired dated 28/09/2016 Sentinel-2 and dated 29/09/2016 Landsat-8 images of Athens were obtained and image pre-processing steps like atmospheric and geometric correction were employed. Maximum Likelihood (MLC) supervised classification method was applied to both data sets. Error matrix was created using different reference points for Sentinel-2 and Landsat-8 classifications. After the classification accuracy, results were compared to find out the best approach to create current land cover/use map of the region. Finally, from surface ground temperatures, air temperatures were computed through a linear relationship and these were compared with temperatures of selected stations.
Key words	Classification, Accuracy, Sentinel, Landsat, LST
Evaluation committee	C. Cartalis, Professor M. Assimakopoulos, Assistant Professor N. Chrysoulakis, Research Director