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Thesis Title	<i>Optimization of hot spots in the urban environment by using LANDSAT and MODIS satellite images and the application of down scaling method</i>
Supervisor	C. Cartalis, Professor
Summary	<p>The aim of this paper is the measurement of the surface temperature at Attica and more specifically at the municipality of Athens, in order to locate the hot spots, i.e. areas with extremely high surface temperatures. These areas burden the thermal environment, whereas they reflect reduced thermal comfort and increased consumption in energy for cooling. With the use of downscaling techniques, an effort is made to improve the thermal and spatial location of hot spots.</p> <p>At last, a correlation of the urban heat island and energy consumption. It is demonstrated that the increase in air temperature as this relates to the surface temperature leads to an increase in energy consumption mainly during summer months.</p> <p>This study is based on the principles and techniques of remote sensing as these are applied with the use of satellite images from LANDSAT 8 and MODIS.</p>
Key words	LST, hot spots, downscaling, energy consumption
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