

Master Thesis Brief Description

Thesis Title	Numerical simulation of thermal performance of buildings thermal bridges
Programme of Studies	MSc in Energy Systems and the Built Environment
Course	MES 580 Master Thesis
Area of Study	Computational Building Physics – Finite Elements Methods
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Students Reg. Number	230
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Supervisory Committee	Dr. Christos Anastasiou, Ass. Professor, Civil Engineering Department Dr. Nicholas Christofides, Lecturer, Electrical Engineering Department
Semester	Spring Semester 2015
Short Description	This study emphasized on thermal bridges of building structural elements. A numerical finite element tool was used to perform heat transfer analysis on intermediate floors, corners and roofs. The results of the heat transfer analysis came back with couple of conclusions. The heat losses in a structural element were affected from the thermal insulation layer. The structural element was affected by the fluctuation of the temperature. This phenomenon was found to disturb the energy balance of the building, resulting to a lower level of comfort for the building's occupants.