

Master Thesis Brief Description

Thesis Title	Numerical investigation of Photovoltaics passive cooling using Finite Element Methods
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
Student's Name	Panagiota Papadopoulou
Students Reg. Number	9189
Supervisor	Dr.-Ing. Paris A. Fokaides, V. Lecturer, Civil Engineering Department
Supervisory Committee	Dr George Karagiorgis, Assoc. Professor, Mechanical Engineering Department Dr Byron Ioannou, Ass. Professor, Architectural Department
Semester	Fall Semester 2015
Short Description	The purpose of this study was the numerical simulation of the thermal performance of a PV element integrated into a light tube using finite element methods. Particularly the subject of the study was the definition of the ambient conditions under which the PV element did not reach its NOCT limit, as well as the required variations in geometry of the integrated element towards improving its passive cooling.