



Event:
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 <a href="http://www.constru
ctpv.eu/">http://www.constru ctpv.eu/	<p>Dimitris Mantelis MSc. Mechanical Engineer</p>	
Title:	Junior Researcher at National Technical University of Athens, Athens, Greece	
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Presentation title:	<p>Building integrated Photovoltaic Systems: Integration and Performance Evaluation in real site application at NTUA premises</p>	
<p>One of the most popular and easily installed renewable energy systems are photovoltaic systems (PVs). Nevertheless, for the successful integration of PVs into the building envelope, aesthetic issues along with technological issues, such as the highest possible energy performance, need to be considered and addressed. According to the “Construct PV” concept, PV panels are not mere means of harvesting solar energy but they are actually customizable, efficient and low-cost building components, integrated in the opaque part of the building skin.</p> <p>An overview of the existing PV integration solutions into building surfaces will be mentioned, covering the majority of the different roof topologies within Europe. Furthermore, the real demo BIPV installation, constructed on the roof of the School of Mining and Metallurgical Engineering at NTUA premises will be presented. At the demo site, an advanced online monitoring system has been installed providing the ability to gather all the necessary data for the performance evaluation of the BIPV system, such as power and specific energy yield. Additionally, for an in-depth and detailed analysis, a number of different sensors have also been installed, accumulating data from weather conditions to specific in-plane solar irradiation and module temperature in correlation to different inclinations. In this paper, the performance evaluation as well as the factors affecting the performance (i.e. temperature, shading effect) are discussed and analyzed, quantifying the results for the new BIPV technology. Suggestions and improvements for future installations will be also included in the conclusions.</p>		
CV:		
<p>M.Sc. Mechanical Engineer Dimitris Mantelis graduated as Mechanical Engineer from the University of Western Macedonia, Kozani, Greece. His thesis project was at the field of “Deposition Mechanisms into Boilers of S.P.P (Steam Power Plants) and their effect in the Heat Transfer and the Efficiency Ratio of the Boiler’ by using the FORTRAN Software”. Thesis project had been carried out for six months in Kardias Steam Electrical Station of the Greek Public Power Corporation S.A., Kozani, Greece.</p> <p>His obtained his M.Sc. degree from the Royal Institute of Technology (KTH), Sweden, where he was specialized in the field of Sustainable Energy Engineering. His dissertation was in the field of “Feasibility of Wind energy/Fuel cell as Off-Grid Hybrid Power Systems in Remote Locations” in which the technical as well as the economic feasibility of such system was analyzed extensively.</p> <p>Currently he is working as a junior researcher at the school of Mining and Metallurgical Engineering of the National Technical University of Athens (NTUA), as a member of the “Raw Materials Exploitation & Sustainable Energy Solutions” Research Team led by Professor I. Paspaliaris. He is mainly involved in several European Research Programs focusing in energy efficiency, building energy management and process optimization.</p> <p>He has been a member of the Technical Chamber of Greece since 2007.</p>		