


Event:  
Date:  
Place:

**ENERGY in BUILDINGS 2017**  
Saturday October 21, 2017  
Athens, Hellas



<b>#</b>	<b>A. Tsangrassoulis, M.Sc, Ph.D.</b>	
Title:	Associate Professor, Dept. of Architecture, University of Thessaly	
email:	atsagras@uth.gr	•
Presentation title:	<b>Solar Gains Control and Building's Energy Balance</b>	
<p>Shading can have an impact on both building's energy balance affecting not only annual energy consumption but peak loads as well. In addition influences users' visual and thermal comfort. Proper selection of shading system is a key factor for reducing unwanted solar gains satisfying simultaneously daylight adequacy and aesthetic desires. Obviously, the optimization of building façade in terms of daylighting/solar radiation control can be considered as a corner stone strategy for low-energy building design. This chapter present basic information on the parameters that affect the selection of shading &amp; daylighting systems. This includes a review of metrics used to characterize these systems according various European norms and energy codes. Antagonistic phenomena are discussed in detail together with synergies with glazing selection. In addition a number of selected systems are presented along with their operational principles.</p> <p>The lecture lasts 2 hours and during its course current international practices and analysis techniques will be presented together with the basic parameters that affect the selection of a glazing /shading system using computational methodologies.</p> <p>The lecture is designed for new graduate engineers (graduation in the last five years). All participants should own a laptop computer in which the software mentioned below have to be installed.</p> <p>Maximum number of participants : 20</p> <p>Software that participants will use is the following :</p> <ol style="list-style-type: none"> <li>1. <a href="https://windows.lbl.gov/software/optics/optics.html">https://windows.lbl.gov/software/optics/optics.html</a> (Version 6)</li> <li>2. <a href="https://windows.lbl.gov/software/window/window.html">https://windows.lbl.gov/software/window/window.html</a> (Version 7.5)</li> <li>3. <a href="http://www.parasol.ebd.lth.se/downloadparasol.htm">http://www.parasol.ebd.lth.se/downloadparasol.htm</a></li> </ol> <p>All climate data needed, will be distributed during the lecture.</p>		
Short CV:		
<p>Aris Tsangrassoulis is an Associate Professor in Low Energy Building Design at the Dept. of Architecture, University of Thessaly. His research activity focuses on daylighting, shading, the development of techniques for achieving lighting energy savings and the impact of building design and operation on thermal/visual comfort . He currently runs the Unit of Indoor Environment and Low Energy Building Design, which is involved in lighting national/ international research projects while it supports consultancy work in daylighting/ design and simulation assisted low energy building design. He has served in various postgraduate programs and research centers and in national and international committees as an expert member.</p>		