Event: **ENERGY in BUILDINGS 2017**
Date: Saturday October 21, 2017
Place: Athens, Hellas

ASHRAE Hellenic Chapter TEE

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Presentation title:	**Adaptive street lighting and control protocols for urban streets using the revised street lighting standard EN 13201 The case study of V. Olgas Avenue, Thessaloniki**	

Outdoor lighting accounts for up 60% of a municipality's electric utility bill. Moreover, maintenance is labour-intensive and represents a significant cost. It is expected that demographic factors such as migration and aging population will increase further more the urbanization and the energy demand for the cities. The possibility of cutting this cost by implementing more cost – effective techniques is very tempting for tight municipal budgets. The urgency to replace outdated road lighting with more energy efficient technologies can no longer be ignored. Light emitting diodes (LEDs) are proven to be the most efficient option for road lighting today. This coupled with the introduction of adaptive lighting with communication protocols in the new version of EN 13201-1:2014, is essential to meet the expected increase in energy demand in an environmentally sustainable manner.

The definition of adaptive street lighting, according the revised street lighting standard, is temporal controlled changes in luminance or illuminance in relation to traffic volume, time, weather , type of primary user(motorized or pedestrian), or other parameters. Whilst the luminance or illuminance levels may be varied, the quality parameters of the applicable lighting class specified in EN 13201-2 should be maintained at all times. This paper underlines the differences between the previous and the revised standard, using as example the emblematic Vassilissis Olgas Avenue at Thessaloniki, Greece. Furthermore, this paper exams and compares three discrete cases with adaptive lighting and communication protocols.

CV:	

Electrical and Computer Engineer, graduate of Aristotle University of Thessaloniki since 2001. His Diploma Thesis was “Identification of vectorial model Preisach for the calculation of magnetic hysteresis with adaptation in experimental data”. He has previous practice experience in the Public Power Corporation - Transmission Division (Practice Period 1998-1999) and has also attended seminar programs such as “Photovoltaic Technology”, “Lightning Protection”, “Medium Voltage Switchboards” “Road Lighting” etc. He has efficient knowledge in English (First Certificate in English-University of Cambridge, 1990).

He is a certified Energy Auditor since 2013. He has Master of Arts degree in Lighting Design from the Hellenic Open University. He also attended the light training school on light pollution, “Lighting Design: state of the art and new trends” in Berlin, Germany. His thesis was Adaptive street lighting and control protocols for urban streets using the revised street lighting standard EN 13201 The case study of V. Olgas Avenue, Thessaloniki.

He has a A' class designer degree in category 09 (MEP designs) and an A' class designer degree in category 14 (industrial designs). He is a member of the Technical Chamber of Greece (TEE) and member of the Mechanical Electrical Engineer Association of Northern Greece (Σ.M-H.B.E.). He works as Free Lancer in MEP installations elaboration and he is a permanent collaborator of P.KIKIDIS & ASSOCIATES” and “D. BOZIS Engineering Office since 2002.