



Event:  
Date:  
Place:

**ENERGY in BUILDINGS 2018**  
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Athens, Hellas



<b>#</b>	<b>Stelios Krinidis</b> Computer Science	
Title:	Postdoctoral Research Associate at Information Technologies Institute/ Center for Research and Technology Hellas (ITI/CERTH)	
email:	<a href="mailto:krinidis@iti.gr">krinidis@iti.gr</a>	
Presentation title:	<b>Towards Occupancy Inference in a Smart Home Using Energy and Environmental Data Sources and Binary Classification Techniques</b>	
<p>This work, deals with the problem of occupancy detection in a domestic environment based on available data resources such as smart homes' overall energy consumption and basic environmental features (temperature, luminance and humidity). The most popular machine learning binary classification techniques are used to model occupancy. A series of Monte Carlo simulation schemas are used for decision making under uncertainty so as to decide for a dominant classifier and its internal parameters that can have an effective performance on the occupancy detection problem. Simulation results show the domination of decision tree and random forest machine learning classifiers compare over the rest classification techniques achieving almost 77% on accuracy and 70% on F1-Score evaluation measures, respectively.</p>		
CV:	<p>Dr. Stelios Krinidis is a postdoctoral researcher in CERTH/ITI. He received the Diploma degree and the Ph.D. degree in Computer Science from the Computer Science Department of the Aristotle University of Thessaloniki (AUTH), Thessaloniki, Greece, in 1999 and 2004 respectively. He has also served as an adjunct lecturer at the Aristotle University of Thessaloniki, the Democritus University of Thrace, and at the Technological Institute of Kavala during the period 2005-2012. He is currently working on H2020 projects, focusing on smart IoT devices, FoG computing and infrastructures, big data analysis &amp; analytics, visual analytics, smart buildings, energy efficiency buildings, occupancy analysis and energy disaggregation. His main research interests include computational intelligence, computer vision, pattern recognition, signal processing and analysis, 2D and 3D image processing and analysis, occupancy detection, tracking and analysis, and visual analytics. He has authored more than sixty five (65) papers in international scientific peer review journals in international and national conferences. He has also been involved in thirteen (13) research projects funded by the EC and the Greek secretariat of Research and Technology.</p>	