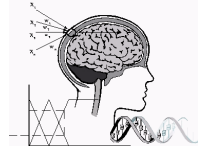




# International

*Innovation in Knowledge Based and Intelligent  
Engineering Systems*



## INVITED SESSION SUMMARY

**Title of Session:**

*Data-driven approaches and IT systems for the energy management of buildings and districts*

**Name, Title and Affiliation of Chair:**

Dr. Roberto Garay-Martinez, PhD.  
Principal Investigator  
Deusto Sustainable Research Group  
Institute of Technology, Faculty of Engineering  
University of Deusto

**Details of Session (including aim and scope):**

Data is the new Petrol. In the context of building energy design and management, it allows to know a lot about its performance, so that advanced building controls and/or informed buildings retrofits are enabled.

Building design and operation has been largely based on prescriptive design criteria and simple, rule-based controls. These approaches have been proven robust to deploy energy efficiency and conservation at scale, with reduced knowledge on the actual performance and dynamics of buildings.

Digital and interconnected IT systems are being generalized in buildings in the last decades. Smart meters, advanced SCADA systems, and edge-cloud interactions. Altogether, these allow to perform very detailed building energy use profiles, optimize building & building services retrofits, track energy improvement roadmaps, develop predictive control strategies, etc.

Energy Engineers in the 21<sup>st</sup> century need to be fully performant in the domains of Energy Engineering, Data-driven modelling and Building Controls.

**Main Contributing Researchers / Research Centres (tentative, if known at this stage):****Website URL of Call for Papers (if any):****Email & Contact Details:**

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