Simple buildings, better buildings?
Delivering performance through engineered solutions

Session programme
#CIBSEsymposium

## Day one – morning

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>09:00 –</td>
<td>Registration and refreshments</td>
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<tr>
<td>09:45 Room A</td>
<td>Welcome: Tadj Oreszczyn, Director of the Bartlett School of Environment, Energy and Resources</td>
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<td>Opening address: Nick Mead, CIBSE President Elect</td>
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<tr>
<td>10:00 Room A</td>
<td>Session 1</td>
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<td></td>
<td>Case Study: Danish buildings 1986-2014. From simple building services to complex building services – and back again?</td>
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<td></td>
<td>Sergio Fox, Architecture without Engineers, Denmark</td>
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<td>10:30 – Parallel sessions</td>
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### Room A – Session 2 – Modelling for building reality (IBPSA)

- Chair: Rokia Rasian, UCL
- Climate-based daylight modelling and its discontents: John Mardaljevic, Loughborough University
- Modelling ‘Buildings In Use’ effects on heterogeneous turbulent sensible heat in real urban districts: Mohammed Bakkali, UCL
- Urban heat island analysis of Birmingham and Manchester for the creation of new Design Summer Years: Dane Virk, UCL and CIBSE

### Room B – Session 3 – Soaking up the sun

- Chair: Tariq Muneer, Edinburgh Napier University
- CIBSE Guide A2: Tariq Muneer, Edinburgh Napier University
- Investigating the impact of ground albedo on the performance of PV systems: Yash Kotak, Heriot-Watt University
- Automated daylight autonomy made real: Sam Woodward, Lutron EA Ltd
- Experiencing daylight. Why office architecture is not promoting healthy work environments and what kind of design approach can improve the existing situation?: Karolina Zielinska-Dabkowska, Hochschule Wismar, Germany

### Room C – Session 4 – Passive or aggressive building operation?

- Chair: David Fitzpatrick, Ruskin UK
- Analysis of the first and lifetime cost benefits of increased insulation to 2010 and 2013 levels: Ewan Jones, AECOM and Tony Ryan, Kingspan
- Sustainable indoor comfort concepts with PCM containing building materials: Marco Schmidt, BASF, Germany
- 350 Euston Road: Improving building performances and carbon footprint with innovative HVAC solutions: Phil Draper, Broadgate Estates
- Evaluating appropriate residential ventilation strategies in dense urban environments and the challenges for passive design: Ashley Bateson, Hoare Lea
12:15 Room A  Session 5 – Compendiary presentations for posters 1  Chair: Mike Smith, BSRIA Ltd

How does a well-insulated building, during a UK heat wave, perform in comparison to its predicted performance? Lloyd Philips (research undertaken while at Loughborough University)

Occupant comfort in mid-rise residential buildings in Abuja, Nigeria: The trade-off between thermal and visual performance Mahmood Abdulkareem, University of Portsmouth

Are we significantly oversizing domestic water systems? Jess Tindall, Northumbria University

An integrated carbon and sustainability index from green buildings in the tropics Shireen Jahnkassim, International Islamic University Malaysia

12:40 – Lunch and posters

Day one – afternoon

13:40 – Parallel sessions

Room A – Session 6 – Information driven building modelling
Chair: Andrew Geens, CIBSE

How manufacturer's 'Active BIM' objects can help achieve BIM level 2 compliance Warwick Taylor, S&P Coil Products Ltd

The integration of building energy system optimisation modeling into the building design process Doug Baldock, Hoare Lea

Towards BIM-integrated, resource-efficient building services Mike Medas, AECOM

Development of a web-based BMS data visualisation platform using Building Information Models Ronan McCaffrey, National University of Ireland

Room B – Session 7 – Networking for success
Chair: Emilia Targonska, Hoare Lea

Combined HV-LV earthing of substations in the built environment Tony Sung, Chair of CIBSE Electrical Services Group

Integral approach from user towards Smart Grid Yang Zhao, Eindhoven University of Technology, Netherlands

The price of heat and the regulation of the UK’s heat market Thomas Briault, Arup

The development of a new Heat Networks Code of Practice Phil Jones, Building Energy Solutions

Room C – Session 8 – Lessons for Future Schools (Sponsored by the School Design Group)
Chair: Dejan Mumovic, UCL Institute for Environmental Design and Engineering

CIBSE TM57 Integrated School Design: Overview John Palmer, AECOM

The use of the curriculum, school buildings and Iris as tools for learning, occupant awareness and collection of simple post-occupancy data Isabel Why, Cocreate Consulting (research undertaken while at Inkling LLP)

Climate based daylight modelling and the optimisation of school classroom design – An industrial view Iain Hill, Mott MacDonald

Case study: Review of control strategy for a primary school built to PassivHaus standard Chryssa Thoua, Architype
### #CIBSEsymposium

**15:20 – Refreshments and posters**

**1340 – Parallel sessions**

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<tr>
<th>Room A – Session 9 – Evaluating real operational performance</th>
<th>Room B – Session 10 – Improving building performance through monitoring</th>
<th>Room C – Session 11 – Sustainable cooling by system integration</th>
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<tbody>
<tr>
<td>Chair: Geoff Prudence, Chair of CIBSE FM Group</td>
<td>Chair: Andrew Saville, Armville Consultancy</td>
<td>Chair: David Hughes, CIBSE Past President</td>
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<tr>
<td>Analytics of building management systems for improved energy and plant performance</td>
<td>Automatic commissioning of CO₂ sensors in air conditioning systems</td>
<td>Opportunities for combined heating and cooling using data centres</td>
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<tr>
<td>Andre Pinho, Johnson Controls</td>
<td>Arie Taal, Eindhoven University of Technology, Netherlands</td>
<td>Gareth Davies, London South Bank University</td>
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<td>The development of a new voluntary Display Energy Certificate Scheme (VolDECs) for commercial offices</td>
<td>Simulation of proactive occupancy based HVAC control for Linate Airport, Milan</td>
<td>The potential use of the mains water loop for cooling, heat and energy networks</td>
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<tr>
<td>Malcolm Hanna, The National Energy Foundation</td>
<td>Blaise Kelly, Austrian Institute of Technology</td>
<td>Graeme Maidment and Alex Paurine, London South Bank University</td>
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<td>Lessons for improving building performance based on a two-year evaluation of a city-centre hotel</td>
<td>Effectiveness of monitoring energy consumption in domestic dwellings</td>
<td>Fuel cells: Providing combined cooling and power to data centres</td>
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<tr>
<td>Julie Godefroy, Hoare Lea</td>
<td>Patrick Fleming, Opus21 Ltd</td>
<td>Daragh Campbell, Imperial College London</td>
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**17:00 Room A – Session 12 – Mock arbitration**

Chair: Richard Rooley, ASHRAE Past President

Arbitrator: Victoria Russell, Partner, Fenwick Elliott, LLP

Examining lawyer: Matthew Needham-Laing, Partner, Stevens & Bolton LLP

Expert: David Arnold, Troup Bywaters + Anders

Design Engineer: Tom Walton, AECOM | Contractor: Richard Rooley

**18:00 – (approx.) Day one close**

**19:15 – Informal buffet reception at Millbank Tower – all delegates welcome**

**19:30 – Opening remarks by Alan Penn – Dean of the Bartlett School of Environment, Energy and Resources, UCL**
### Day two – morning

**08:30 – Registration and refreshments**

**09:00 Room A – Session 13 – Learning from actual building performance**
Chair: Graeme Maidment, IoR President

- Creating a robust dataset for benchmarking the cultural building sector  
  Luke Ramsay, Julie’s Bicycle

- Building performance evaluation of dwellings: A case study of the Seager Distillery development  
  Michael Lim, AECOM and Steve Harper, Galliard Homes

- A review of the predicted energy performance of buildings assessed against BREEAM New Construction 2011  
  Jose Ortiz, BRE Global Ltd

**10:15 – Refreshments and posters**

**10:40 – Parallel sessions**

| Room A | **Session 14** – Understanding real world building performance  
  Chair: Susie Diamond, Inkling LLP
  
  TM54: Beyond the methodology – the process of evaluating operational energy performance of buildings at design stage  
  Matthew Webster, British Land

  A tale of two civic buildings: Comparative evaluation of the actual energy performance of a ‘sustainable’ community centre and a public library building  
  Rajat Gupta, Oxford Brookes University

  Why education and user feedback won’t close the Performance Gap for university accommodation  
  Aaron Gillich, London South Bank University

  Engineering design for In-use: Modelling of occupancy presence in an acute hospital in the UK  
  Matthew Bacon, The Conclude Consultancy Ltd |
| Room B | **Session 15** – Futuristic performance for real buildings  
  Chair: Geoff Levermore, University of Manchester

  Generative HVAC design and how it could affect consulting engineering  
  Andrew Corney, Sefaira

  Carbon reduction and energy optimization strategy for one NHS Trust  
  Issa Chaer, London South Bank University

  Investigation of the sensitivity of the future climate and building construction standards to the ground source heat pump (GSHP) design  
  Bobo Ng, Northumbria University

  Ecoshopping: Energy efficient & cost competitive retrofitting solutions for retail buildings  
  Andy Lewry, BRE |
| Room C | **Session 16** – The natural solution (Sponsored by the Natural Ventilation Group)  
  Chair: Martin Liddament, Chair of CIBSE Natural Ventilation Group

  CIBSE Guide A 2015 – Overview of enhanced aspects of ventilation assessment  
  Martin Liddament, Chair of CIBSE Natural Ventilation Group

  Passive ventilation and cooling  
  Shaun Fitzgerald, Breathing Buildings

  Passive cooling strategies in Plus-Energy houses  
  Malcolm Cook, Loughborough University

  Productivity, investment and energy in a naturally ventilated ‘lean’ office development  
  Craig Robertson, Allford Hall Monaghan Morris Ltd |
12:25 Room A – Session 17 – Symposium sponsor address
Continuous flow water heaters – Simple innovation to meet energy and regulatory demands
Chris Goggin, Rinnai UK

12:35 Room A – Session 18 – Compendiary presentations for posters 2 Chair: Charlotte Mercer, AECOM
Renewable energy technologies in campus-sized developments: A spatial study
Hadi Arbabi, University of Sheffield
Cost effective low carbon store analysis and replication
Julien Bos, Imperial College London
Optimising a multi-storey atrium building for stack ventilation
Andrew Acred, University of Cambridge
Performance analysis of a fuel cell micro-CHP – The CIBSE HQ case study
Alem Tesfai, KTP Associate, CIBSE

13:00 – Lunch and posters
Day two – afternoon

14:00 Room A – Session 19 – Realising truly sustainable buildings
Chair: Lynne Jack, Heriot-Watt University

Misconception of insulation in energy efficient buildings
Conn Yuen, CO2nsulting, Hong Kong

S-Curves to model and visualise the Energy Performance Gap between design and reality – First steps to a practical tool
Roderic Bunn, BSRIA and UCL

The sustainable efficacy of design approaches to the delivery of truly sustainable buildings
Gillian Menzies, Heriot-Watt University

Fifty shades of green, or why we should live in a luxuriant urban oasis
Elinor Huggett, Max Fordham LLP

15:35 Break area – Conference close, prize presentation and drinks reception
Chair: Hywel Davies, CIBSE Technical Director

16:30 – (approx.) Day two close

WHY ATTEND?

- Keep informed about changes to legislation and the critical issues facing today’s built environment professionals
- Learn from the most innovative and influential practitioners and discover some of the most cost effective solutions to delivering building performance
- Retain your competitive advantage with 10 hours of CPD over the two days
- Be seen and raise your profile, meet and network with like-minded industry professionals, clients and suppliers from around the world

For more information please contact the event organisers on 01892 518877 or email stevewebb@stepex.com

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