

ibpsane 2 number 2 www.ibpsa.org



GLOBAL COMMUNITY NEWS
FORTHCOMING EVENTS
NEW SOFTWARE
PUBLICATIONS

from IBPSA Canada, China, Danube, England, France, Italy, Korea, Spain, Switzerland and USA Building Simulation 2011, and 10 others from around the world Bentley's new graphic interface for EnergyPlus, AECOsim Energy Simulator V8i the contents list for JBPS volume 4 no 3



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The International Building
Performance Simulation
Association exists to advance and
promote the science of building
performance simulation in order to
improve the design, construction,
operation and maintenance of new
and existing buildings worldwide.

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President's message

Dear IBPSA colleagues and friends,

The 12th international conference of IBPSA is just around the corner. In under two months, building simulation researchers and practitioners from around the world will gather in Sydney to share experiences, knowledge, and the latest developments in our burgeoning field. An exciting programme awaits us. Veronica Soebarto and her Scientific Committee have scrutinized an incredible number of submissions and have selected only those that make useful and interesting contributions to the field. And Paul Bannister and his team have organized this content into a fabulous programme that features keynote speakers, poster sessions, oral presentations, along with a conference dinner and cruise of the Sydney Harbour. This is a conference not to be missed for anyone serious about the field of building performance simulation.

The annual meeting of IBPSA's Board of Directors will be held in Sydney on the Thursday following this conference. This meeting will be attended by the elected board as well as a representative from each of IBPSA's 23 regional affiliates. This is an important meeting during which IBPSA will reflect upon its activities, plan its future, and make important financial decisions. If you have any suggestions or feedback on IBPSA's operations, then I encourage you to communicate your thoughts to your regional affiliate representative or to one the elected board members in the near future, or during a tea break or social programme at the conference in Sydney. Your input is important to IBPSA.

Most conference delegates will arrive in Sydney on Sunday or earlier. If this is your case, then I encourage you to participate in one or more of the IBPSA committee meetings that will be scheduled on Sunday prior to the conference's opening reception. IBPSA has many working committees that are the backbone of its operations. Each committee has a chair (refer to *IBPSA Committee Chairs & Contacts* in this Newsletter) and includes a core of active members, but all IBPSA members are welcomed and encouraged to participate. You may be interested, for example, in helping to develop IBPSA's website, assisting in administering IBPSA awards, or sharing your ideas on developing the membership. If so, please come to these committee meetings, express your ideas, and become involved. Both you and the society will benefit. In the near future the agenda for the committee meetings in Sydney will be distributed via the IBPSA members' e-mail list.

Best regards to all, and see you in Sydney!

Ian Beausoleil-Morrison

Van Bauto

BS2011 Sydney – Don't Miss!

Preparations for BS2011 (14-16 November 2011) in Sydney Australia are well advanced with all papers in and registrations pouring in. This promises to be the largest IBPSA conference to date, with over 300 oral papers and over 50 poster presentations over 3 days. Key features of the conference include:

- Sunday evening cocktail welcome function
- Keynote addresses from John Mitchell Principal, CQR Chair, Australasia Chapter
 buildingSMART, Professor Dr Ardeshir Mahdavi, Director of Graduate Studies in
 Building Science and Technology, Vienna University of Technology, and Dr Ellen
 Franconi, Senior Consultant, Built Environment Team, Rocky Mountain Institute.
- Three days of papers with seven parallel sessions covering every aspect of simulation, including streams dedicated to various aspects of building performance simulation including: simulation in design processes and practice; BIM; simulation validation, calibration and testing; application of simulation in regulatory processes; advances in building physics; building services; energy capture and operation; new work in simulation development; and many more.
- Evening special interest workshops on Building Energy Modelling (BEM), simulation training, and ESP-r community
- Pre-conference Design Builder software workshop
- Sydney harbour cruise conference dinner viewing beautiful Sydney harbour and the spectacular Sydney opera house and harbour bridge (more details below)
- Seaside location at the Novotel Brighton-le-Sands

All in all it is promising to be the best IBPSA conference ever – so don't miss it!

Venue

A leading venue for meetings and events, Novotel Sydney Brighton Beach (www. novotelbrightonbeach.com.au) is the premier conference facility in southern Sydney. The hotel is located 4 km from Sydney Airport (15 km from the central business district) and directly opposite the beach with spectacular views across Botany Bay. Relax by taking a leisurely walk along the beach or take a stroll around Brighton Le Sands where you will find an array of local shops, cafés and restaurants.

Novotel Sydney Brighton Beach has a range of room types to meet the needs of all guests, including Standard Rooms, Bayview Suites, Bayview Spa Suites, Executive and Penthouse Suites. The hotel offers a variety of facilities including an outdoor swimming pool with spa, restaurant and bar, 24 hour room service, a day spa and health centre with large modern gymnasium, steam room and indoor pool. BS2011 has 200 rooms allocated for the conference.



Conference dinner / harbour cruise

The conference dinner will be held on the Starship Sydney, Australia's largest and most contemporary glass cruise boat, giving all guests panoramic uninterrupted views of the harbour. Set over 3 separate levels with 3m high floor to ceiling glass and an open air top deck, Starship Sydney offers guests a unique entertaining experience. Be captivated by the breathtaking scenery as you cruise through the shimmering Sydney Harbour with its mesmerising panorama of bright city lights, Opera House and the famous Harbour Bridge.

For more information about the venue and the technical and social programme, please visit: www.bs2011.org.



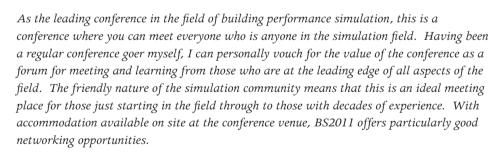
Dear fellow IBPSA members



I am delighted to personally invite all IBPSA members to BS2011 in Sydney. There are many outstanding features of this conference that make it a must for anyone with an interest in the development, research and application of performance simulation techniques in the built environment.

We in the conference committee have worked very hard to put together a spectacular conference both in terms of the sheer

quality and quantity of information content and of course the fantastic location in Sydney, one of the most beautiful cities in the world.



Of course, once the conference is over, you must stay and experience some of the fabled Australian hospitality and stunning tourist destinations such as Sydney itself with its famous beaches, the nearby Blue Mountains, and metropolitan city centre, and destinations further afield in the tropical north, the Red Centre, through to wine growing areas such as the Hunter Valley.

So register, book your tickets now and I look forward to meeting you at BS2011.

Regards Dr Paul Bannister Conference Chair















Forthcoming events

Date(s)	Event	Information
2011		
23-29 October 2011	SIMUL 2011: Third International Conference on Advances in System Simulation Barcelona, Spain	www.iaria.org/conferences2011/SIMUL11. html
14-16 November 2011	November 2011 Building Simulation 2011 www.bs2011.org	
	Sydney, Australia	
2012		
21-25 January 2012	ASHRAE Winter Conference Chicago, Illinois, USA	www.ashrae.org/events/page/chicago2012
12-13 March 2012	ASHRAE High Performance Buildings Conference San Diego, California, USA	www.ashrae.org/events/page/hpbconf
26-30 March 2012	SimAUD 2012: Symposium on Simulation for Architecture & Urban Design Orlando, Florida, USA	www.simaud.org/2012/
02-03 May 2012	eSim 2012 Halifax, Novia Scotia, Canada	www.esim.ca
23-27 June 2012	ASHRAE Annual Conference San Antonio, Texas, USA	http://ashraem.confex.com/ashraem/s12/ cfp.cgi
08-12 July 2012	Healthy Buildings 2012 Brisbane, Australia	http://hb2012.org
01-03 August 2012	SimBuild 2012 Madison, Wisconsin, USA	www.ibpsa.us/conferences.shtml
10-11 September 2012	BSO12: Building Simulation & Optimization Loughborough, UK	www.bso12.org and see flyer at the end of this ibpsaNews
2013		
16-19 June 2013	CLIMA 2013: REHVA World Congress Prague, Czech Republic	www.clima2013.org

Note that the dates in this calendar may, but do not necessarily, include pre and/or post-conference workshop days

23-29 October 2011

Barcelona, Spain www.iaria.org/ conferences2011/ SIMUL11.html

SIMUL11: Third International Conference on Advances in System Simulation

SIMUL11 is the latest in a series of events focusing on advances in simulation techniques and systems providing new simulation capabilities. The conference will address both the fundamentals of system simulation and its application in all fields, from social policy to buildings and warfare. The main tracks will be:

- Simulation models
- Simulation methodologies
- Sensitivity analysis
- Simulation mechanisms
- Model based system quality prediction
- Distributed simulation
- Human-in simulation
- Simulations in advanced environments
- Practical applications on process simulations
- Case studies on social simulation
- Online social simulation
- Building simulation
- Transport simulation
- Warfare simulation
- Simulation tools and platforms
- Experience report on ready-to-use tools

Barcelona is a major Mediterranean port, nestled in the northeast corner of Spain, not far from the border with France. With a population of 2 million, it is the capital of the Catalonian region, as well as a major cultural and business center - most major companies choose either Madrid or Barcelona for their base of operations in Spain.

The area along the Mediterranean east of the Pyrenees has been under Phoenician, Greek, Roman and Moorish control during its long history. Barcelona has been the region's traditional capital since it came into being in the Middle Ages after Charlemagne built up the area as a defense against invading Moors. Today, it offers just about everything for today's tourist or conference delegate - sights, culture, cuisine and history.

For more information, visit the conference web site at www.iaria.org/conferences2011/SIMUL11.html.

12-13 March 2012 San Diego, California, USA www.ashrae.org/events/ page/hpbconf



ASHRAE High Performance Buildings Conference

Government agencies are seeking substantial reductions in building energy use and the architectural, engineering and green building communities are already working hard to change energy-use in the built environment. This conference will give participants an opportunity to discuss current energy saving efforts, share best practices, and capture the scale needed to accomplish these goals: high performing equipment and operational practices together have the potential to reduce, or eliminate a need for external energy sources for some buildings while maintaining quality indoor environments.

This conference will guide the building design professional, building owner/managers, building operating staff and government officials about what does and what doesn't work in energy efficiency, renewable energy, and operating practices. Both new construction and refurbishment will be addressed.

The conference will have two tracks:

- a technical applications track focusing on strategies, technologies, tools, measured performance, and optimal operations
- a policy track with a focus on current and future regional and national legislation and related programs in the areas of standards, performance rating and labeling, disclosure laws, etc.

Policy and decision makers will offer updates and forecasts on enabling legislation and programs likely to impact the target audience, and case studies will be presented.

The main topics will be:

- Applications results
- Energy audits
- Commissioning
- Benchmarking of utility consumption
- Economics, design and construction
- Energy efficient IEQ strategies and technologies, and
- Energy efficiency strategies
 - Building envelopes
 - Lighting and daylighting
 - Passive
 - HVAC
 - Plug loads

Registration fees are \$550 for ASHRAE, USGBC and AIA members and \$650 for non-members.

For more information, visit www.ashrae.org/events/page/hpbconf.

26-30 March 2012 Orlando, Florida, USA www.simaud.org/2012/

SimAUD 2012: Symposium on Simulation for Architecture and Urban Design



This new Symposium on Simulation for Architecture and Urban Design, organised by Autodesk in collaboration with ACM/SIGSIM and sponsored by The Society for Modeling and Simulation International, will offer a venue for researchers in simulation, architecture, urban design and planning, HCI, ubicomp and infoviz, as well as engineers, software developers, managers, educators and business professionals, to come together to focus on this important area. Buildings are the largest consumers of energy in the USA and the complexity of building design and construction, and of urban design and society, make modeling and simulation invaluable techniques for understanding the issues and optimizing building and urban design.

Researchers and professionals who develop or use modeling, simulation, visualization, validation, or interaction techniques or tools related to the built environment are all invited to participate and present original papers, data sets, and videos.

All submissions will be peer-reviewed and considered for selection by the Committee, and all accepted submissions will be published in the ACM Digital Library.

Topics will include:

- Whole System Simulation and Analysis
- Post Occupancy Performance Evaluation
- Building Comfort and Energy Performance
- Design Tools and Methods
- Materials, Components and Innovative Systems
- Multi Disciplinary Optimization
- Simulation Performance and Scalability
- Design and Decision Support
- Energy Performance Simulation and Analysis
- Intelligent Building & Building Lifecycle Management
- Sensor Network and Building Performance Monitoring
- Visualization of Simulation-based Data
- Theory and History of Environmental Simulation and Controls

The abstracts deadline is 18 November 2011 and the submission deadline 25 November 2011.

For more information, visit www.simaud.org/2012/



02-03 May 2012 Halifax, Nova Scotia, Canada www.esim.ca



eSim 2012 - IBPSA Canada's 7th biennial conference

IBPSA-Canada's biennial conference, eSim, will bring together professionals, academics and students interested in advances in building performance simulation and in its applications. The 2012 conference is being hosted by Dalhousie University (www.dal.ca), in collaboration with Natural Resources Canada (www.nrcan.gc.ca), in the beautiful port city of Halifax on 2 and 3 May 2012. There will be additional workshops on the day before and the day after the conference.

The main conference venue is the historic Pier 21 Museum on the downtown Halifax Harbour waterfront (www.pier21.ca). The large-windowed conference rooms boast magnificent view of Georges Island, a national historic site. The banquet will be based on traditional Atlantic foods and there will be ferry trips to technical tours of the Centre for the Built Environment (www.nscc.ca/about_nscc/cbe/). Most activities will be reached via a stroll down the waterfront boardwalk.

The conference themes will be:

- Recent developments for modelling the physical processes relevant to building performance (thermal, air flow, moisture, lighting)
- Methods and algorithms for modelling conventional and innovative building systems (including envelope, lighting, controls, HVAC, renewable energy and distributed generation systems)
- Methods for modelling and characterizing whole building performance, including interactions between systems within the building, and interactions between the building and its surrounding neighbourhood and community
- Methods for modelling and characterizing occupant comfort and well-being (including thermal comfort, acoustic performance, air-quality, ventilation and lighting)
- Building simulation software development and approaches to quality control
- Use of building simulation tools in building design, optimisation, code compliance and incentive programs
- Use of building simulation tools in stock- and sector-modelling studies at neighbourhood, community, municipal and national scales
- Moving simulation into practice—case studies of innovative simulation approaches
- Validation of building simulation software
- User interface and software interoperability issues
- Architectural and engineering data visualisation and animation

Solar temperiormance slunyversite storage wells cooling ventilation constant temperature walls constant temp

Please visit the website at www.eSim.ca for more information, to register, and (for Canadian students only) to apply for student travel sponsorship from IBPSA-Canada.

08-12 July 2012 Brisbane, Australia http://hb2012.org



Healthy Buildings 2012

Since their inception in 1988, the Healthy Buildings conferences have been held in various locations throughout Europe, North America and Asia. Healthy Buildings 2012 will be the first held in the Southern Hemisphere. It is being hosted by the Queensland University of Technology (QUT), which is home to one of the largest academic programs focused on air quality, and in particular indoor air quality, in Australia, the International Laboratory for Air Quality and Health (ILAQH). The ILAQH is a member of the Faculty of Science and Technology (FaST) and the Institute of Health and Biomedical Innovation (IHBI) at QUT, which are the key entities hosting the conference.

The venue is the Brisbane Convention & Exhibition Centre, which is located in the heart of the city of Brisbane, with ample accommodation options, a good climate – pleasant, dry and sunny in July, with an average day time maximum temperature of $21^{\circ}C$ ($70^{\circ}F$) – and numerous opportunities for recreational activities nearby. The conference will offer a social program with a truly Australian spirit, which would enable plenty of opportunities for interaction between the participants, while at the same time allowing for enjoyment of the subtropical ambience of outdoor Brisbane.

The proposed topics for plenary presentations are:

- Climate change, sustainable development, energy efficiency and IEQ
- Healthy building issues related to modern materials and chemicals used in buildings
- Healthy building issues related to rapid urbanization in communities in both developed and developing countries
- IEQ in developing countries
- Healthy building issues related to spread of respiratory diseases (infectious disease transmission and control)

and those for workshops/symposia/fora are:

- Particles
- Air change measurements.
- Procedures for certification of indoor environment in buildings.
- Residential ventilation and indoor air quality.
- How to get from present research to future actions from science to practice.
- Medical science and practice (i.e. health problems related to buildings)
- Solving old problems, preventing emerging risks
- Effects of extreme weather events (connected or not with climate change)
- IEQ of schools
- Hot topics

For more information about the conference, paper submission, and Brisbane, visit the conference web site at http://hb2012.org.

Software news



AECOsim Energy Simulator V8i

AECOsim Energy Simulator (AES), released in late September 2011, is a completely new Bentley Building Performance product: a full-featured, graphic interface for building performance simulation built from the ground up which uses the US Department of Energy's flagship energy simulation program, EnergyPlus, as the core calculation engine.

AES is built on Bentley's BIM platform to make it easy for users to visualize their building's geometry, systems, and performance. It supports easy importing of DGN, DWG, gbXML, and other formats, and includes standardized building design load calculations from ASHRAE (Radiant Time Series) and CIBSE and extensive databases of materials, constructions, schedules, spaces, HVAC equipment, and systems. AES comes with 17 preconfigured HVAC systems including all those required for use in ASHRAE Standard 90.1-2004 and 2007 energy cost budget (Section 11) and performance rating methods (Appendix G).

The interface has a ribbon bar menu system, putting multiple layers of options at user's fingertips. The project tree allows easy visual navigation of the building spaces, walls, windows, doors, ceilings, roofs, and HVAC components. Data managers provide easy access to extensive databases of materials, weather data, HVAC systems, space types, and other information. Users can customize the existing datasets or import their own. The HVAC Designer makes it easy to configure HVAC components and systems using a visual drag and drop system.



AECOsim Energy Simulator workflow

More information on AECOsim Energy Simulator is available on Bentley's web site, www.bentley.com/en-US/Promo/AECOsim/aecosim+energy+simulator.htm

News from IBPSA affiliates

IBPSA affiliates are asked to submit a report to the IBPSA Board each year to keep Board members informed about their activities and membership. These are too detailed to include in ibpsaNEWS, so affiliates have been asked to make their latest annual report available through their web sites, and this section includes only selected, recent news. Other news from affiliates may be available from their websites; the URLs for these are available on the IBPSA Central web site at www.ibpsa.org/m_affiliates.asp.

IBPSA-Canada

IBPSA-Canada's 7th biennial conference, eSim 2012, will be beld in Halifax, Nova Scotia on 2 and 3 May 2012. For more information, see page 10 in the Forthcoming Events section of this newsletter or the conference website at www.esim.ca.

IBPSA-China

US/China CERC on BEE – Building Performance Simulation Project

As a follow up of a research plan by the US/China Clean Energy Research Center (CERC) developed in March 2011, a building performance simulation project workshop was held at Lawrence Berkeley National Laboratory (LBNL) in San Francisco on July 21st 2011 organized by Dr. Tianzhen Hong from LBNL and Associate Prof. Da Yan from Tsinghua University. It was attended by 19 participants from 6 different units.

Tsinghua University The workshop included two sessions, on Simulation and Behavior Modeling and Comparison of DeST, DOE-2, and EnergyPlus. In the past half year with the efforts of both sides (China and the US), an initial model for human behavior has been added to these tools, and this has changed our view about the use of building energy simulation. Comparisons between DeST, DOE-2, and EnergyPlus have deepened our understanding of building performance simulation, and will help us in future developments and application of the software. We agreed a plan for further work, which will focus on human behavior modeling in building simulation.





The workshop was attended by Jan Hensen (TUE, Netherlands), Kevin Mo (Energy Foundation, USA), Joe Huang (Whitebox Technologies, USA), Amir Roth (USDOE, USA), researchers from Lawrence Berkeley National Lab, USA, including Mark Levine, Tianzhen Hong, Steve Selkowitz, Phil Haves, Paul Mathew, Wei Feng, Rick Diamond, Richard Lin, Yiwen Jian, Liping Wang, Xiufeng Pang, and researchers from Tsinghua University, China, including Da Yan, Jianjun Xia, Qi Shen, and Chen Peng.

IBPSA-Danube

Marja Todorovic

Jan Hensen's student wins the Willis Carrier Young Scientist Award

At the 23rd International Institute of Refrigeration (IIR) International Congress of Refrigeration, held in Prague, Czech Republic, Marija Trcka, originally from Serbia, received the Willis Carrier Young Scientist Award for her PhD Thesis on *Co-simulation for performance prediction of innovative integrated mechanical energy systems in buildings*, supervised by Prof. Jan Hensen at TUE, Netherlands. The award commemorates Willis H. Carrier (1876-1950), who was one of the pioneers of air conditioning and is often called the Father of Air Conditioning.

IIR Award Committee judged that Marija Trcka's research opens new frontiers of modeling and simulation in a domain of heating, ventilation and air-conditioning systems in buildings by fully integrating simulation tools from different domains and thus allowing flexible performance assessment of new or reconstructed building and HVAC systems and subsystems including energy supply systems and technologies.

Her research focused on better and more efficient use of building performance simulation tools by investigating, developing and implementing co-simulation of diverse simulation packages, and demonstrating that co-simulation can help in performance prediction



Marija Trcka displays her Willis Carrier Young Scientist Award

of innovative integrated HVAC mechanical energy systems in buildings. This was achieved by a thorough investigation, development and implementation, numerical experimentation and usability testing of cosimulation between different BPS tools.

The research has shown that the co-simulation approach can overcome some of the he limitations of current BPS tools by allowing them to pool resources and allowing simulators to complement each other without creating undue redundancy. The use of co-simulation to enable combination of the complementary features available in coupled tools was demonstrated by a few case studies. This facilitates fully integrated HVAC building design analysis, which would not be possible if any of the BPS tools were used individually.

With the co-simulation approach any new development in a single simulation tool can be made immediately available to the user of any other BPS tool, once the communication protocol between the tools has been implemented. In perspective, this thesis showed and discussed the advantages of co-simulation in terms of simulator flexibility and capability extension, by combining features from different tools. This result is not only an important scientific result but also a potentially useful development for encouraging the use of building performance simulation programs and co-simulation in engineering practice, and so enhancing the reliability of predictions and improving energy efficiency and the integration of HVAC in buildings.

IBPSA-England

Simon Rees, Ruchi Choudhary and Malcolm Cook

In April, IBPSA-England held an event on Visualizing Building Performance hosted by Arup. This sought to open the discussion on ways to communicate building simulation results more effectively to clients and the design team. Currently, results from building and urban environments simulation tools are used to inform policy making decisions on possible measures to reduce the built environment's carbon footprint. The tools provide quantitative answers on predicted consumption and possible savings from alternative energy saving scenarios. Although they have been continuously developing and improving since the 1970s they are still criticized for being limited in their scope, unfriendly to users, and with built-in simplifications to complex building science phenomena. Data output is presented as a plethora of numbers and tables that are difficult to analyze. This has cast some doubts on their value: are they design tools or boardroom visualization? And how can we enable the building simulation team to communicate their ideas better to the design team and have a more positive impact on providing better places for people and reducing the carbon footprint of buildings?

The event included presentations from practitioners and academics that introduced innovations in visualisation and gave many examples of state of the art methods applied in recent projects. The type of data being considered included CFD and thermal simulation data but also daylighting and urban

scale analysis. The event was concluded with a workshop session on Future Directions in Visualizing Building Performance that enabled broad discussion of the current limitations and potential advances in visualization. Thanks are due to Neveen Hamza for organising this event and to Arup and Jake Hacker for being our hosts.

Two months later, in June, Emmanuel College at Cambridge University became the stunning venue for our latest event, organised by students from the Energy Efficient Cities initiative (EECi) in the Cambridge University Engineering Department. The provided a forum for research students from across the UK involved in building simulation and energy modelling to present their work in a friendly setting and meet like-minded people.

The day-long event was split into three sessions: modelling environmental impacts, indoor air quality, and thermal comfort; urban-scale modelling of energy consumption and energy supply systems; and strategising, optimisation, and uncertainty handling building energy use.

The first session included presentations from Tom Kane of Loughborough University on his investigation of indoor temperatures in residential buildings, as well as presentations from Anna Mavrogianni and Clive Shrubshole, both from UCL, on the modelling of heat wave vulnerability and indoor exposure to particulate matter respectively.

The second focussed on energy supply systems, with presentations by Akomeno Omu from Cambridge University on distributed energy resource planning and Islam Abohela from Newcastle University on the effect of roof shapes when positioning wind turbines. There were also presentations from Dr. Vicky Cheng and Dr. Wei Tian, both from Cambridge University, on urban-scale modelling of domestic and non-domestic buildings respectively.





The third and final session showcased the work of Ralph Evins of Bristol University on the optimisation of CHP systems and research by Francis Li on the simulation of UK heat sector decarbonisation strategies. Adam Booth and Adam Rysanek, both from the EECi in Cambridge University, also presented on the handling of uncertainty in housing stock modelling and the cost optimisation of retrofit investments for non-domestic buildings respectively.

The event provided a much-needed opportunity for research students to meet peers from the same field, and to see what work is being done in universities elsewhere in the country. Such events will hopefully become a regular fixture in the IBPSA-England calendar.

IBPSA-England is now planning its first national conference which is scheduled for 10-11 September 2012. Further details, including a call for papers will be issued at BS11 in Sydney. Alternatively, contact Malcolm Cook (malcolm.cook@lboro.ac.uk).

IBPSA-France

Past events

A workshop on vegetable fibre materials and their use in buildings, organized under the aegis of IBPSA France, was hosted by the Research Group in Engineering Sciences (GRESPI), University of Reims, on the 1st July 2011.

Given their physical performance and being environment friendly materials, vegetable fibres are of great interest in buildings. Several studies have investigated and measured their physical properties, but few have examined their application in buildings. In order to develop research in this area, about thirty French researchers and industrials participated in the workshop. Topics varied from experimental to numerical methods used to investigate coupled heat and mass transfer in different types of concrete made from hemp, starch, flax, wood and resins. Preliminary studies about their moisture buffering on wall level and on whole building level were also shown.

For more information contact chadi.maalouf@univ-reims.fr or m.lachi@univ-reims.fr .

Forthcoming events

The AUGC (French Academic Civil Engineering Association) has organized a first *Day of Habitat and Energy* in association with IBPSA-France, to be held in SMABTP in Paris on 24 October 2011.

The aim of the day is to inform and raise the awareness of researchers and professionals in the building sector, and put them in contact. The day is to be structured around the following themes:

- The place of energy in buildings and ways to optimize energy consumption
- Practical techniques as described in the "Grenelle de l'environnement", a French national research program where, for the first time, the government and representatives of civil societies have worked together to establish a road map for ecology and sustainable development
- The operation and behaviour of innovative and energy efficient buildings
- Technical and research issues for the rehabilitation of existing buildings
- Issues related to passive building design, and associated risks.

The next biennial IBPSA France congress will take place between 6-8 June 2012, at Chambery, in the French Alps. The congress is being organised in cooperation with the French Academic Civil Engineering Association (AUGC). Further information and a call for papers will be released soon.

IBPSA France is delighted to welcome the next IBPSA World Conference, BS2013, between 25-28 August 2013, also at Chambery. More information about the conference will be published in the next edition of *ibpsa*News.







Chambery - the venue for BS 2013

IBPSA-Italy

Vincenzo Corrado

IBPSA-Italy held its inaugural meeting on 20 January 2011 in Torino. It now has about 100 members including university professors, researchers, professionals, software developers, and students. The members of the board are Vincenzo Corrado (Polytechnic of Torino, President), Piercarlo Romagnoni (University Institute of Architecture of Venezia, Vice-President), Fabio Sicurella (French National Institute of Solar Energy, Secretary), Enrico Fabrizio (University of Torino, Treasurer), Natale Arcuri (University of Calabria), Alfonso Capozzoli (Polytechnic of Torino), Luigi Marletta (University of Catania), Livio Mazzarella (Polytechnic of Milano), and Alessandro Prada (University of Trento).

IBPSA-Italy's first initiatives are:

- Surveying members and potential members to collect information on their preferred activities, where building simulation is used in practice, the software codes and programs used, and their views on needs for training and professional development.
- Setting up an IBPSA-Italy website. The website will include a Forum for the exchange of information and promotion of collaboration among members and a Wiki section (in Italian), which is inspired by the Wiki project Simupedia (started by IBPSA-Germany and IBPSA-USA), and will provide a platform for the collaborative development of online guidelines on building simulation.
- Conducting a joint event with the Italian Thermo-technical Association (ATI) on 6 September 2011, at the ATI National Congress held at the University of Calabria. This took the form of a Panel Discussion on the theme of *Dynamic simulation of buildings: from research to application*, and attracted about 70 participants. The event provided an opportunity to present IBPSA-Italy to the community of Italian university professors in building physics and building services and to the official representatives of the

- technical professions. Discussions focussed on the need for training among architects and engineers in order to promote building performance simulation.
- Establishing formal collaborations with important cultural associations, such as the Italian Society of air conditioning, heating, refrigeration (AiCarr) and the Italian Green Building Council (GBC Italy).

IBPSA-Korea

Kwang-Woo Kim

IBPSA-Korea has received 102 individual membership applications since it was formed in October 2010. The most recent board meeting, on 25 March, discussed activities, membership and future action plans; 14 board members attended.

IBPSA-Korea holds events jointly with the Korean Institute of Architectural Sustainable Environment and Building Systems (KIAEBS), and helps KIAEBS organize a biannual national conference. The board decided to hold a special "building simulation" session at the KIAEBS Fall Conference on 27 October 2011, in KOEX, Seoul; the next board meeting will also be held at this conference.



IBPSA-Korea board meeting on 25 March 2011

The special session is designed to bring more attention to IBPSA-Korea and to promote the exchange of simulation knowledge and information. Four or five selected speakers will present their use of building simulation for design and analysis, optimization, uncertainty, and other advanced issues such as agent-based, acausal, and heterogeneous simulation. Further information is available at www.ibpsa.kr/html/meetings.asp.

IBPSA-Spain

In collaboration with Structuralia (a recognized Specialized Training School) IBPSA-Spain has developed a specialized on-line course on Building Energy Simulation. Forming part of a programme called the *Advanced Programme in Energy Efficiency & Savings*, this has been designed by renowned experts from businesses, universities and institutions with extensive experience in the field of energy saving and energy efficiency. It integrates all the knowledge needed to practise successfully in the field and includes many case studies, making it a very practical training programme which recognises market realities.

The whole programme comprises:

- Energy Efficiency: Buildings and Installations (60 hrs)
- Building Energy Simulation (75 hrs)
- Renewable Energy Integration in Buildings (60 hrs)
- Energy Systems in Buildings (55 hrs)



The main subjects of the Building Energy Simulation section are:

- 1. Energy balance of a building and Introduction to Energy Simulation
- 2. Calculation Engines for Energy Simulation: DOE 2.2 & Energy+
- 3. Complete Tools: TRNSYS, TRACE 700, HAP 4.5, GBS
- 4. Interfaces for calculation engines: DOE 2.2 and Energy+
- 5. Spanish Administration's tools for fulfilling the Energy Efficiency Certification (European EPBD) CALENER and postCALENER
- Methods and tools for compliance with the credits/energy and environmental criteria required for LEED (US) and VERDE (Spain) certification.
- 7. Application practice cases of simulation tools.

IBPSA-Switzerland

Gerhard Zweifel

Successful CISBAT 2011 Conference in association with IBPSA-CH

The biennial CISBAT conference took place on 14-16 September 2011 at the EPFL in Lausanne, Switzerland, this year with the theme of *CleanTech for Sustainable Buildings - From Nano to Urban Scale*. Organized as usual by the IPB-LESO, it was held this time in association with IBPSA Switzerland. Out of the total of 171 published papers, 33 were in the double session on *Building and Urban Simulation* organised jointly with IBPSA-CH, of which 13 were oral presentations and 20 were posters (see http://cisbat.epfl.ch/pages/papers.php#9). IBPSA-CH members contributed many of the papers, alongside others from renowned international contributors in the field.

This collaboration was initiated and strongly supported by the IBPSA-CH board member Darren Robinson, who worked for EPFL-LESO until August 2011, when he left to take up a chair at Nottingham University. We are sorry to lose his input to the work of the IBPSA-CH board, and we wish him all the best for his new activities and look forward to receiving his contributions from beyond the channel.

IBPSA-USA

SimBuild 2012 Conference in Madison, Wisconsin

IBPSA-USA's SimBuild 2012 Conference will be held August 1-3, 2012 at The Madison Concourse Hotel in Madison, Wisconsin. This is the fifth biennial conference held by IBPSA-USA to improve the design and operation of buildings through advances in the modeling and simulation of building performance.

As with the previous conferences, there will be both double-blind, peer-reviewed technical papers and invited seminar speakers on a variety of topics in the building performance simulation area. There will be some technical areas stressed in the program such as the future of BEM software; modeling controls in BEM software; use of simulation in real-time to support building operation; dealing with uncertainty in building performance

simulation; validation, calibration and verification of simulation using real time data; model predictive control in buildings; use of BEM to support fault detection and diagnostics, appropriate modeling for the different phases of a building design; and others.

We will continue our previous efforts of high student involvement in the conference with poster sessions and job fairs. Pre-conference workshops on the use of specific simulation programs as well as on more general building simulation topics will be offered.

The conference will be chaired by Timothy McDowell of Thermal Energy System Specialists, LLC. The scientific committee is chaired by D. Michael Utzinger of the School of Architecture and Urban Planning at the University of Wisconsin-Milwaukee. The conference is hosted in conjunction with the University of Wisconsin-Madison's Department of Engineering Professional Development.

For previous conferences and their publications, visit www.ibpsa.us/publications.shtml .

BEMBook Workshops

IBPSA-USA has organized a series of workshops about Building Energy Modeling, covering modeling fundamentals, ASHRAE 90.1 performance rating, modeling best practices, modeling to inform design and measurement & verifications.

Four events have already been held:

- September 22, 2011 in San Juan, Puerto Rico, sponsored by the Puerto Rico ASHRAE Chapter, instructors Liam Buckley, Joe Deringer
- September 26, 2011 in Boston, Massachusetts, sponsored by the Boston IBPSA-USA Chapter, instructors Liam Buckley, Chris Balbach
- October 11, 2011 in Chicago, Illinois, sponsored by AEE at the World Energy Engineering Congress, instructors Liam Buckley, David Eldridge

The next will be:

- December 8, 2011 in Washington, DC, sponsored by ASHRAE at the EcoBuild Conference, instructors Chris Balbach, Joe Deringer
- January 11, 2012 in St. Louis, Missouri, sponsored by the St. Louis ASHRAE Chapter
- Janaury 24, 2012 in Chicago, Illinois at the ASHRAE Winter Conference, instructors: Erik Kolderup, Ellen Franconi.

See www.bembook.ibpsa.us/index.php?title=Plan_and_Status for an updated list and links to registration. Slides can be downloaded from www.bembook.ibpsa.us/index.php?title=Downloads after each event.

Regional Chapters

IBPSA-USA has provisionally approved six regional chapters throughout the United States. If you are a group interested in forming a local chapter in your area within the United States, please contact Michael Wetter at mwetter@lbl.gov.

Approved Provisional Chapters include Boston, Houston, New York City, Raleigh-Durham, San Francisco and Washington DC. For contact and link to these chapters, visit www.ibpsa.us/chapters.shtml .

The regional chapters provide an opportunity for local people to meet and discuss issues that arise in building simulation. For example, the Boston Chapter, formed in February 2011, held a series of symposia on "The Big Uglies," or major unknowns in design-phase energy modeling, including Occupancy & Plug-Loads, Weather, and Infiltration. These events featured expert speakers from across the US and Canada as well as lively group discussions joined by online participants around the world.

The Boston Chapter, nicknamed "IBPSA-Boston", was founded by a group of Boston academics and practitioners. At a kick-off meeting on February 22, invited speakers from different parts of the building simulation community spoke about their visions for the chapter. This was followed by a group discussion to brainstorm future meeting topics.

The series of symposia on "The Four Big Uglies" was one of the outcomes. The first, on Occupancy and Plug Loads, was held on May 19th at Harvard University and attracted about 40 attendees from both academia and industry. The presentation and group discussion were broadcast live, and several more participants from various countries joined in the conversation. The presentations from both meetings and a recording of the May 19th symposium are available at http://ibpsa-boston.com under "Events."

Future IBPSA-Boston events will be announced on the Bldg-Sim list at http://lists.onebuilding.org, and interested people can join the emailing list by emailing ibpsa.boston@gmail.com.





Christoph Reinhart of Harvard University (left) and Chip Barnaby of IBPSA USA (right), at the IBPSA-Boston kick-off meeting

Travel Grants for Building Simulation 2011

IBPSA-USA conducted a student scholarship competition to award \$2,000 each to attend the Building Simulation 2011 conference in Sydney, Australia. Participants had to contribute at least three pages to the Building Energy Modeling Body of Knowledge wiki http://bembook.ibpsa.us/. Submissions included articles about energy modeling, computational fluid dynamics, daylight simulation, model calibration and measurement and verification.

IBPSA-USA congratulates the following awardees on their success in the competition: Holly Wasilowski Samuelson, Harvard Graduate School of Design; J. Alstan Jakubiec, Harvard Graduate School of Design; Fei Zhao, College of Architecture, Georgia Tech; Yuming Sun, College of Architecture, Georgia Tech; Dana Etherington, University of Massachusetts, Lowell; Sang Hoon Lee, College of Architecture, Georgia Tech; Yeonsook Heo, College of Architecture, Georgia Tech; Brian Coffey, School of Architecture, UC Berkeley.

IBPSA announcements

Journal of Building Performance Simulation update

Volume 4 Issue 3 (2011) of Journal of Building Performance Simulation, the official journal of IBPSA, has been published. This issue contains the following papers:

M. Wetter, Co-simulation of building energy and control systems with the Building Controls Virtual Test Bed, Journal of Building Performance Simulation, 4 (3), 185-203

A. Laouadi, The central sunlighting system: development and validation of an optical prediction model, Journal of Building Performance Simulation, 4 (3), 205-226

D. Johansson & H. Bagge, Simulating space heating demand with respect to non-constant heat gains from household electricity, Journal of Building Performance Simulation, 4 (3), 227-238

W. O'Brien, A. Athienitis & T. Kesik, Thermal zoning and interzonal airflow in the design and simulation of solar houses: a sensitivity analysis, Journal of Building Performance Simulation, 4 (3), 239-256

V. Garg, K. Chandrasen, J. Mathur, S.Tetali & A. Jawa, Development and performance evaluation of a methodology, based on distributed computing, for speeding EnergyPlus simulation, Journal of Building Performance Simulation, 4 (3), 257-270

S. Patidar, D. P. Jenkins, G. J. Gibson & P. F. G. Banfill, Statistical techniques to emulate dynamic building simulations for overheating analyses in future probabilistic climates, Journal of Building Performance Simulation, 4 (3), 271-284

M. Ucci, P. Biddulph, T. Oreszczyn, D. Crowther, T. Wilkinson, S. E. C. Pretlove, B. Hart & I. Ridley, Application of a transient hygrothermal population model for house dust mites in beds: assessment of control strategies in UK buildings, Journal of Building Performance Simulation, 4 (3), 285-300.

IBPSA Corporate membership

The International Building Performance Simulation Association (IBPSA), is a non-profit international society of building performance simulation researchers, developers and practitioners, dedicated to improving the performance of the built environment. It is IBPSA's mission to advance the science and application of building performance simulation in order to improve the design, construction, operation, and maintenance of new and existing buildings worldwide.

IBPSA disseminates information through a semi-annual newsletter, central and regional websites, and through a biennial conference, this to-date having been held in the USA, China, Brazil and Japan, among other countries.

IBPSA has a worldwide membership of over 2000, the membership being supported through 23 regional affiliates located in countries spanning 5 continents. Corporate members are companies or organisations that have an interest in the research, development, or application of building performance simulation.

Corporate Membership

Corporate members of IBPSA have the benefit of:

- The company (or organisation) logo on the IBPSA website (www.IBPSA.org), with a link to the company's own website.
- The company logo, contact information, and a half-page advertisement in the IBPSA newsletter, which is published twice a year and distributed to the 2000 members worldwide. The newsletter is freely available on the IBPSA Central website.
- A free copy of the biennial conference CD.

There are two categories of Corporate membership, standard and gold. Fees are US\$750 per annum for standard corporate membership and US\$5,000 per annum for gold corporate membership. Gold corporate members have the benefit of the company logo and contact details being placed in a prominent position on the IBPSA website, and are offered a full-page rather than half-page advertisement in the IBPSA newsletter. Free corporate membership may also be granted to sponsors of the biennial conference.

An application form can be downloaded from the IBPSA Central website at www.ibpsa.org/m_membership. asp#_Corporate_Members.

For further information please contact:

Jonathan Wright,
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Loughborough University, Loughborough,
Leicestershire, LE11 3TU, UK

Tel: +44 (0)1509 222621 Email: J.A.Wright@lboro.ac.uk

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SCHOOL OF ARCHITECTURE, LANDSCAPE ARCHITECTURE AND URBAN DESIGN	School of Architecture, Landscape Architecture & Design University of Adelaide www.architecture.adelaide.edu.au 2011-13
Team Catalyst ACN 1/4 5721084 'Driving Sustainability through Teamwork'	Team Catalyst www.teamcatalyst.com.au 2011-13

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TRNSYS17	TRNSYS http://sel.me.wisc.edu/trnsys/ 2011-13

Full details of corporate membership are given on page 23.

IBPSA affiliates

URLS for IBPSA affiliates' websites and email addresses for their contact persons are available on the IBPSA Central web site at www.ibpsa.org/m_affiliates.asp.

米	IBPSA Australasia contact:	Paul Bannister
*	IBPSA Brazil	Nathan Mendes
+	IBPSA Canada	Stephen Kemp
*0	IBPSA China	Da Yan
	IBPSA Czech Republic	Martin Bartak
	IBPSA Danube	Marja Todorović
+	IBPSA England	Malcolm Cook
	IBPSA France	Etienne Wurtz
	IBPSA Germany	Christoph van Treeck
0	IBPSA India	Rajan Rawal
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IBPSA committee chairs & contacts

Regional Affiliate Development Committee

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Awards Committee

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Veronica Soebarto

IBPSA News

Veronica Soebarto, Editor-in-Chief Marion Bartholomew. Editor

To submit Newsletter articles and announcements: Veronica Soebarto (Newsletter Editor-in-Chief) University of Adelaide, Australia Email: veronica.soebarto@adelaide.edu.au

IBPSA Corporate Address

148 Fanshaw Avenue Ottawa, Ontario K1H 6C9 Canada

For additional information about IBPSA, please visit the Association's web site at www.ibpsa.org. For information on joining, contact your nearest regional affiliate.

IBPSA's mailing list has been consolidated into another listserver known as BLDG-SIM, which is a mailing list for users of building energy simulation programs worldwide, including weather data and other software support resources. To **subscribe** to BLDG-SIM, to unsubscribe or to change your subscriber details, use the online forms at http://lists.onebuilding.org/listinfo.cgi/bldg-sim-onebuilding.org.

To post a message to all members, send email to bldg-sim@lists.onebuilding.org.

The BLDG-SIM list is provided by GARD Analytics. If you have any questions, please contact the list owner Jason Glazer at **jglazer@gard.com** or +1 847 698 5686.

Privileges and obligations of IBPSA Members and Affiliates

All members are encouraged and entitled to take part in the activities of IBPSA, subject to constitutional or special provisions by the management of IBPSA. The aims of the activities are to disseminate information and aid the progress of IBPSA's efforts and image.

All members have the right to participate in meetings of IBPSA, but the right to vote is subject to the provisions for voting as contained in the present By-Laws. Members holding their membership through an Affiliate are not eligible to vote if the Affiliate has not submitted its membership roster to the Secretary of IBPSA. Affiliates, therefore, need to keep their membership rosters up to date and communicate them to the Secretary.

All members joining IBPSA must undertake to observe the IBPSA constitution and By-Laws and all obligations arising from them. They must also accept the obligation to contribute to the accomplishment of the activities of IBPSA according to their particular competence.

Any member may submit any communication for consideration at a General or Special Meeting of IBPSA or the Board of Directors. The Board will indicate its decision on the proposals within a reasonable timeframe that allows for an IBPSA Board meeting, either in person or by e-mail.

Affiliates are entitled to appoint one representative to the Board and take part in activities of IBPSA. Affiliates, upon joining IBPSA, must undertake to observe the IBPSA constitution and By-Laws and all obligations arising from them. Special obligations of Affiliates include annual notification to the Secretary of IBPSA of the following items:

- 1 the name of the Affiliate's board representative
- 2 the Affiliate's membership roster
- 3 reports of meetings and/or conferences held by the Affiliate, and
- 4 other information or reports requested by the Board.

Resignation and Termination

Affiliates wishing to terminate their affiliation may do so at any time subject to 90 days notice. Notice of termination must be transmitted in writing to the Secretary. If all communications from an Affiliate to the Board have ceased for a period of two years prior to any Board meeting, that Affiliate will be considered to have resigned.

CALL FOR PAPERS

New to Taylor & Francis for 2008

Journal of

Building Performance Simulation

Official journal of the International Building Performance Simulation Association (IBPSA)

EDITORS:

lan Beausoleil-Morrison, Carleton University, Canada **Jan Hensen,** Eindhoven University of Technology, The Netherlands

Taylor & Francis would like to invite you to submit your article to Journal of Building **Performance Simulation**

The Journal of Building Performance Simulation (JBPS) is the official journal of the International Building Performance Simulation Association (IBPSA). IBPSA is a non-profit international society of computational building performance simulation researchers, developers, practitioners and users, dedicated to improving the design, construction, operation and maintenance of new and existing buildings worldwide.

The JBPS is an international refereed journal, publishing only articles of the highest quality that are original, cutting-edge, well-researched and of significance to the international community. The journal also publishes original review papers and researched case studies of international significance.

The wide scope of JBPS embraces research, technology and tool development related to building performance modelling and simulation, as well as their applications to design, operation and management of the built environment. This includes modelling and simulation aspects of building performance in relation to other research areas such as building physics, environmental engineering, mechanical engineering, control engineering, facility management, architecture, ergonomics, psychology, physiology, computational engineering, information technology and education. The scope of topics includes the following:

- Theoretical aspects of building performance modelling and simulation.
- Methodology and application of building performance simulation for any stage of design, construction, commissioning, operation or management of buildings and the systems which service them.
- Uncertainty, sensitivity analysis, calibration, and optimization.
- Methods and algorithms for performance optimization of building and the systems which service them
- Methods and algorithms for software design, validation, verification and solution methods.

Submissions

Manuscripts will be considered on the condition that they have been submitted only to Journal of Building Performance Simulation, that they have not been published already, and that they are not under consideration for publication or in press elsewhere. All submissions should be in English. Papers for submission should be sent to the Editors at i.hensen@tue.nl. For full submission details, please see the journal's homepage www.informaworld.com/jbps and click on the "Instructions for Authors" tab.

To register to receive an alert when the first issue is published, please visit: www.informaworld.com/jbps

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IBPSA England is an affiliate of the International Building Performance Simulation Association
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