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Inside:

- The IBPSA community in Scotland: a full report on **Building Simulation 09**
- Interviews with IBPSA President Jan Hensen, Terry Williamson, recipient of the IBPSA Award for Distinguished Service to Building Simulation, and Tom Maver, distinguished professor of architecture and simulation pioneer
- News from IBPSA affiliates in Australasia, Brazil, Canada, England, Germany + Austria and the USA
- Details of new and updated design tools from LBNL and US DOE

Contents

President's message

Dear IBPSA friends,

It has been (and still is) a very busy period. Oddly enough the general economic slowdown translates into an increased workload for many researchers because of governmental incentives towards more research projects.

Nevertheless, Building Simulation 2009 in Glasgow was very well attended. You will find some notes and images from the conference in this Newsletter. Anecdotal feedback suggests that the conference is highly appreciated. Personally I would say that it was "pure dead brilliant" (see wikipedia for explanation). Since we are very keen on getting more objective information in order to make our future conferences even better, please take a short time to complete the online questionnaire if you participated in the conference.

The bi-annual international conference is a good opportunity to reflect on how we are doing and where we are going. The figures overleaf show how we have grown over the years in terms of members and number of conference papers. Building Simulation is also where the IBPSA awards are handed out. The various awards and winners are noted elsewhere in this Newsletter. Once more, congratulations to all of them.

Before and after the conference there was the very well attended Board of Directors meeting. This was preceded by various committee meetings. (If you are interested in working in one of these committees, don't hesitate to contact me or the Chair of the committee.) Some of the outcomes are noted elsewhere in this Newsletter, e.g. about the IBPSA Fellow program and about the IBPSA Corporate Membership. We also discussed the status of our 18 current Affiliate Organizations and plans for at least 10 new affiliate regional organizations around the globe. If you are interested in setting up a new affiliate regional organization, please get in touch with Drury Crawley, the IBPSA Regional Affiliate Liaison.

The closing session included an impressive presentation of Wellington, New Zealand, the location of Building Simulation 2011. Don't miss it!

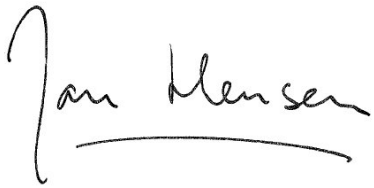
Before we go there, there will be many other interesting meetings including building performance related conferences around the world as you can see in the calendar of forthcoming events.

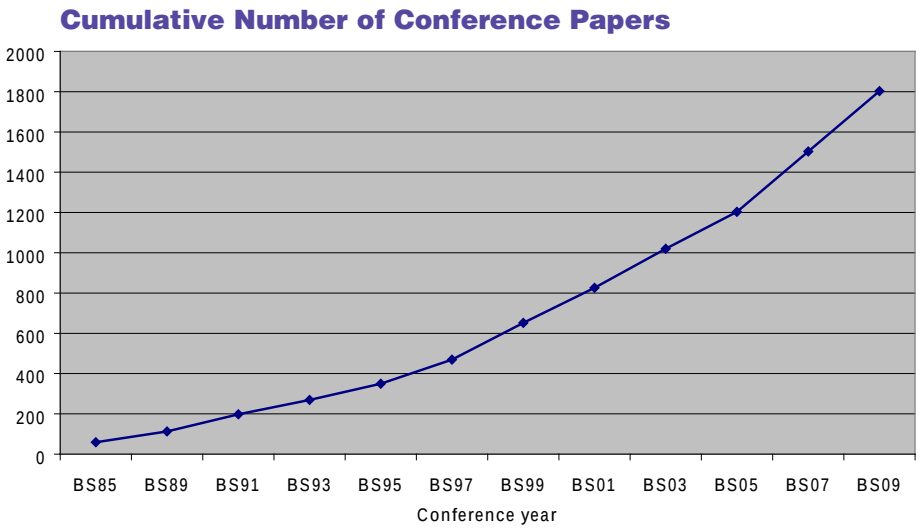
In Glasgow we also had a meeting of the Editorial Board of the IBPSA Journal of Building Performance Simulation. IBPSA is very proud and pleased with how the journal is doing. You can read more about it in the letter from Alison Oliver, Taylor & Francis' Managing Editor of the journal on **page 17**.

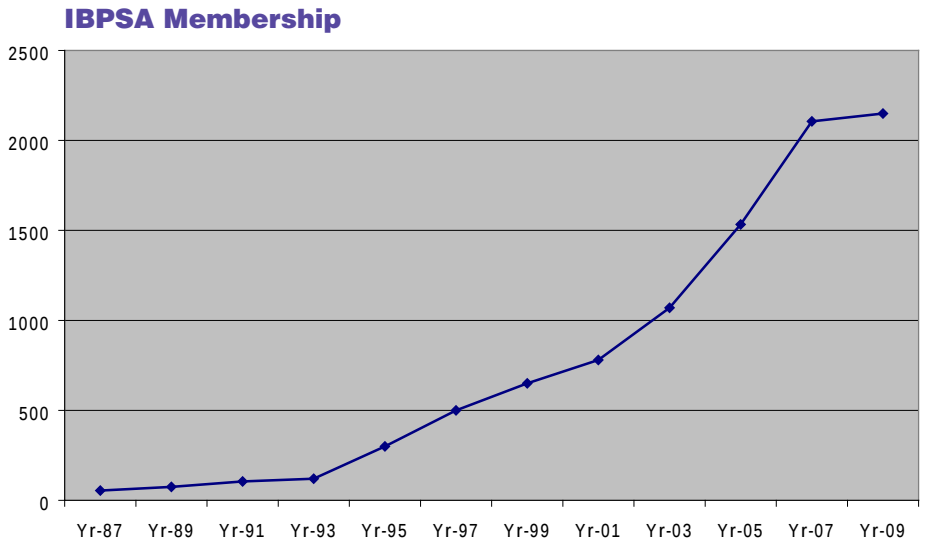
Finally: this is going to be my last President's Message since my 4 year term ends this year. (Time flies when you're having fun ;-) You may expect a call for votes for the new Board of Directors later this year. Please vote.

Honestly, it was a huge honour and a real pleasure to serve as President of IBPSA. I would like to take this opportunity to thank you for your trust and cooperation.

Happy reading and best regards,







A moment with IBPSA President Jan Hensen

After the Building Simulation Conference in Glasgow, IBPSA News Editor-in-Chief, Veronica Soebarto (VS), "spoke electronically" with Jan Hensen (JH), our current IBPSA President. Dr Jan Hensen is a full professor in computational building performance simulation at the Department of Architecture, Building and Planning, Technische Universiteit Eindhoven, Netherlands. He is also a part-time professor in environmental engineering at the Faculty of Mechanical Engineering of the Czech Technical University in Prague. His background is in building physics and mechanical engineering, while his teaching and research focuses on development and application of computational building performance simulation. He is the founding co-editor of the Journal of Building Performance Simulation and he is on the Editorial Boards of Building and Environment and of Energy and Buildings. Jan Hensen is also a Fellow of the American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE).

About IBPSA and membership

VS: Since its inception IBPSA members have grown from less than 100 in 1987 to more than 2000 worldwide in 2009. What do you think have attracted scholars, researchers, practitioners and others to be part of IBPSA?

JH: Over the years it has become clear that computational simulation is one of the most powerful engineering tools — it is used to simulate everything from war to economic growth. Modeling and simulation of building thermal performance using digital computers has been done since the late 1960s. It started with load calculations and energy analysis, now we integrate simulation of heat and mass transfer in the building fabric, airflow in and through the building, daylighting, and a vast array of system types and components. This is because the indoor environment (temperature, air flow and quality) — and the energy which is needed to realize this — results from various interactions between the building and the heating, ventilation and air-conditioning system under the influence of occupants and outdoor climate. These are all quite complex and dynamic sub-systems in their own right. In order to analyse and predict (future) overall behaviour we need to properly account for this complexity in an integrated fashion. When used appropriately building performance simulation has the potential to reduce the environmental impact of the built environment, to improve the indoor quality and productivity, as well as facilitating future innovation and technological progress in construction. This is not a trivial exercise by the way, and I strongly feel that the quality of the results depends more on the knowledge and diligence of the user than on the features of the simulation software. We also still have a long way to go in terms of more efficient use of simulation in design, operation and management of buildings.

So there are huge opportunities as well as major issues in building performance simulation. I actually expect that both opportunities and issues will increase, because of the highly dynamic context which includes global climate change, depletion of fossil fuel stocks, changing occupancy patterns, higher comfort demands, increasing awareness of strong relations between indoor environment vs. health and productivity, growing

interest in green and high performance buildings, as well as novel organizational constructs such as the design-build-finance-operate and public/private partnership approaches.

VS: What do you think have been the greatest benefits to members of IBPSA?

JH: Over the years IBPSA has developed into a forum based on a network of researchers, practitioners, teachers, students and others interested in building performance simulation. The main benefit to the members is the information generation and exchange which takes place, as well as the opportunity to establish contacts e.g. for co-operative projects. IBPSA does not focus merely on research; we are also very much concerned with teaching and applications. IBPSA is a sort of community of practice; i.e. a loosely coupled group of people who work and learn together around a certain broad topic over an extended period of time. We operate on the basis of joint interest, spontaneous interaction, and mutual development. Over the years IBPSA has developed various mechanisms to make this happen such as bi-annual international conferences, regional affiliate organizations, our website, newsletters and since last year the Journal of Building Performance Simulation.

About Building Simulation Conferences

VS: Similarly, Building Simulation conferences have got bigger. Twelve years ago, there were only just above 100 papers presented at the Prague Conference, and recently there were more than 400 papers accepted for presentation at the conference in Glasgow. There was already a poster session yet there were more parallel sessions than ever. Has IBPSA felt the pressure to accept more papers in order to embrace more scholars, researchers and practitioners to be actively involved in building performance simulation?

JH: I think that the main reason for the increasing size of the Building Simulation conferences is the growing interest in building performance simulation. Participants seem to like the conferences because a lot of them come again and again. I also think that Building Simulation conferences offer excellent value for money in terms of learning, socializing and networking opportunities. There are numerous other conferences where computational simulation is high on the agenda, but Building Simulation (and the regional equivalents such as Esim, SimBuild, BauSim and many others) is the only one which focuses on building performance simulation. Building Simulation covers aspects such as sustainability, energy, moisture, indoor climate, acoustics, lighting, heating, ventilation and air-conditioning; considers the whole building life cycle including policy making, design, operation and management; and discusses issues related to research, (software) development and application. There is a lot to be learned from each other.

Over the years IBPSA has constantly updated the conference formula to cater for changed interests and the growing number of participants. I think that Building Simulation 2009 showed a good balance between technical content, application oriented information and networking time. However we need the participants' feedback to check whether they also feel this way, and to consider future changes in order to make the conference even more interesting.

VS: In regard to the question above, are you concerned that the quality of the papers may be less than satisfying because the review process may not be as rigorous as it should be if the organiser were to accept much fewer papers? Or, do you think the quality of the papers is actually improving?

JH: Although it is difficult to assess this objectively, I do think that the overall quality is actually improving. This is mostly based on the observation that there are now many more papers which have the potential of being expanded into a journal level publication than a number of years ago. I suppose that the main reason for this is the increasing number of researchers in our field which in itself is also expanding its scope.

About emerging areas of research in building simulation

VS: In the recent Building Simulation 09 Conference there were increasing numbers of papers dealing with behaviour simulation though it is obvious that this area is still in its infancy and further work still needs to be done. This is a promising yet challenging area — many simulations and simulationists tend to ignore the fact that human occupancy and operation do change the 'behaviour' of buildings, resulting in buildings that 'behave' much differently than predicted. Do you think simulation can predict human behaviour to an acceptable level of accuracy? Where do you think this area of research will go? What do you think needs to be looked at more carefully?

JH: From my point of view, the influence of people (ie. their stochastic behaviour) should certainly be dealt with much more rigourously. This also holds for other stochastic effects, such as wind forces. We definitely need to decrease the gap between predicted and real energy use. If we would be able to identify confidence intervals for our predictions, it would be possible to say with some certainty whether the gap is due to uncertainty in our predictions or whether there is something wrong with the building; ie as part of the (continuous) commissioning process. Using simulation for operation and management purposes would greatly increase the added value of modelling and simulation.

VS: Similarly, in the recent Building Simulation Conference in Glasgow, there were more papers dealing with predicting the impact of climate change on building performance. Do you have any suggestion as to how we should approach this area and how we should use the data out there, considering that the extent of climate change and the accuracy of the predictions is still debatable?

JH: I think that we should use the scenarios which are predicted by meteorologists. The uncertainty in these scenarios result in huge spread in, for example, temperature and precipitation change predictions. One of the strong points of building simulation is that it allows a building and system designer to deal with these uncertainties. It is quite possible to combine uncertainty and sensitivity analysis with building simulation for design support purposes. This allows the prediction of the robustness of building and systems concepts in view of future changes in usage as well as climate changes.

About the role of building performance simulation and IBPSA in general

VS: In your honest view, do you think building simulation has helped designers and other stakeholders in the building industry create better buildings than before? Are buildings performing better because of simulation?

JH: I am absolutely convinced that that is the case. There are many (high performance) buildings all over the world which couldn't have been designed without supporting simulation studies. This mostly depends on the innovativeness of the design and/or on the building/system concept. If a designer doesn't want to innovate, he/she might just as well copy an existing building. Predictions are not needed since the proof (of success and failures) can be observed in reality. To predict whether or not this copy will still work in the future would still require simulations. Examples of concepts which cannot be designed without simulation include double-skin facade, natural/hybrid ventilation, and thermally activated building systems.

It should also be noted that almost all buildings benefit from indirect use of simulation; simulation is very often used for development of (parts of) standards related to energy consumption and indoor environmental quality.

VS: In the closing keynote speech of the recent Building Simulation Conference, Professor Joe Clarke urges IBPSA to take a leading role as the main vehicle for integrated building simulation, linking both the researchers/academia and practitioners. If IBPSA agrees with this suggestion, what are the steps that IBPSA plans to take to achieve this goal?

JH: I suppose there are two main approaches to take an even more leading role. One is to become a more professional organization rather than depending almost entirely on volunteer efforts. This would mean that we have to increase our income, for example, through increased sponsorship and/or membership dues. The other would be to cooperate more with societies such as ASHRAE and REHVA. Probably we will try to do both. The next question is what to do in addition to our conferences, website, newsletter and journal. The answer could include simupedia, guidebooks, courses, and cooperative research projects analogous to the IEA Annexes/Tasks.

VS: As the President of IBPSA, what are your plans for the organization until the end of your term of presidency and what would you like to see in the future?

JH: My term as president ends this year, so that is a very short period. For IBPSA I would like to see that we succeed in what is mentioned above. On a personal level I would like to continue to do interesting and (I hope) relevant research together with (I'm certain) nice people, and disseminate our findings via publications and organizations such as IBPSA.

VS: Finally, what do you wish for Building Simulation 2011 in New Zealand and what would you like to see happening between now and then?

JH: I wish the organizers much success in the preparation. From personal experience I know that it involves a lot of hard work by many volunteers, but also that it is a very rewarding undertaking. New Zealand is an exciting location, and I am already looking forward to going to the conference. I hope — and expect — that IBPSA by then will be able to address the points made by Professor Joe Clarke in his closing keynote in Glasgow.

In the mean time, I hope that many will participate in next year's regional conferences, that IBPSA as an organization will rise to the next level, and that the Journal of Building Performance Simulation will achieve an ISI impact factor.

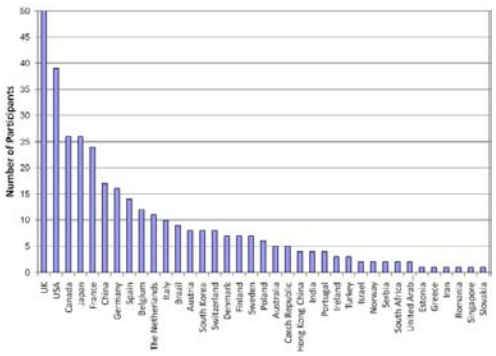
Notes from Building Simulation 09

Veronica Soebarto — with contributions from Paul Strachan and Chadi Maalouf, and additional photographs from Jon Hand, Larry Degelman and Yoshiyuki Shimoda

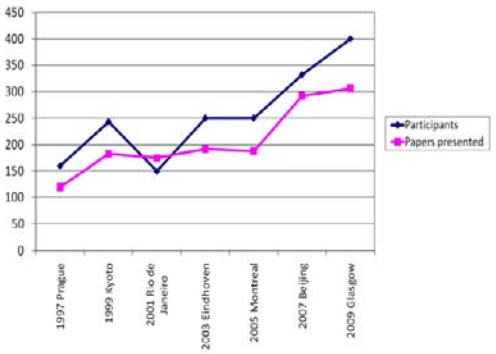
The 11th International Building Performance Simulation Association Conference and Exhibition was successfully held at the University of Strathclyde in Glasgow, Scotland, from 27 to 30 July 2009. The conference was hosted by IBPSA Scotland with the US Department of Energy, SUST and the Lighthouse (Scotland's Centre for Architecture, Design and the City) as the main sponsors. The organising committee was chaired by Dr Lori Mc Elroy and co-chaired by Dr Paul Strachan who was also the Chair of the Scientific Executive Committee.

An opening reception was held at the School of Architecture, University of Strathclyde on 26 July while on Monday 27 July the conference delegates were welcomed by the Lord Provost of Glasgow in a beautiful Civic Reception at the Glasgow City Chambers.

Delegates came from 37 countries and attendance exceeded 400 for the first time, of whom around 300 presented either technical papers or posters (Graphs 1 and 2, below). A wide range of topics was presented in the papers and posters including HVAC, air flow and control modelling, commissioning, compliance and regulations, calibration and validation, lighting and daylighting, performance optimisation, renewable and low energy carbon energy systems and urban scale modelling. It was worth noting that compared to previous IBPSA conferences, in this conference there was a growing

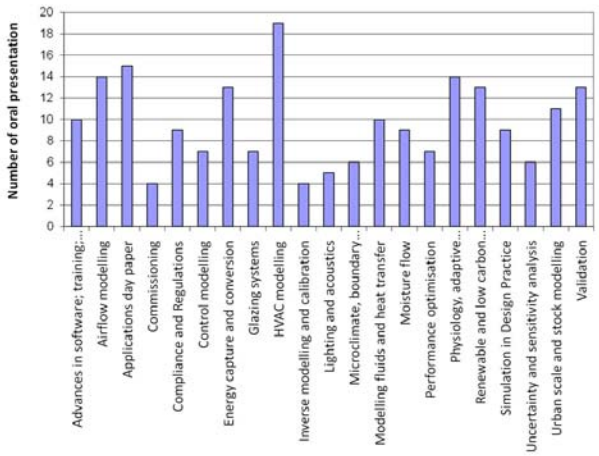


Graph 1: Participants in BS 09



Graph 2: Participants & papers presented since BS 97

number of papers dealing with behaviour modelling although the work in this area is still at an early stage (Graph 3, next page).



Graph 3: Topics of papers presented at BS 09

The Conference was opened with a keynote speech by Professor Tom Maver. Professor Maver is Research Professor in the Mackintosh School of Architecture at Glasgow School of Art and an Emeritus Professor of the University of Strathclyde. He was the founding Director of the Architecture and Building Aids Computer Unit, Strathclyde (ABACUS), and a founding member of eCAADe and CAADFutures. His keynote address, titled "In the Beginning… Personal Perspective on the Origins of Building Performance Simulation" described changes that occurred in the building industry, from a focus on analysis, to articulation of tentative philosophies and theories relating to the creative human activity of design and emergence of computing technologies. He then offered a retrospective on how these changes impacted, profoundly, on the way the building industry, the private and public agencies that commission buildings and those who populate and use them, can contribute, collaboratively, to a more sustainable, and more delightful built environment. He emphasised the need for collaboration between academia and praxis, and in the integration of real and virtual environments and worlds. (Read more of Professor Maver's thoughts on challenges and the future of building simulation on **page 22**.)

For the first time in IBPSA conferences, an Application Day was held during this conference. This event provided a unique opportunity for practitioners involved in building design and performance assessment to exchange experiences using simulation software and to interact with the worldwide community of software developers. A number of developers presented their simulation software including Integrated Environmental Solutions, Environmental Design Solutions, Vabi Software, EQUA Simulation AB, and DesignBuilder. The Application Day was opened with a keynote presentation by Bill Bordass, an internationally renowned expert in post occupancy evaluation who developed the Probe series of post occupancy evaluation and adviser on usable building design. Dr Bordass addressed a very important problem and challenge for building simulation: despite the fact that simulation has proved invaluable in helping designers to choose between options, it has not always been good in predicting actual outcomes. Dr Bordass

pointed out a number of issues that caused discrepancies between prediction and practical realities based on his numerous post-occupancy surveys. He then challenged the audience to find new and better ways to work together on improving buildings of the future and suggested that for simulation to have more credibility, both input to, and targets in, the simulation should be more realistic to take into account all clients' expectations. He urged that outcomes of and lessons learned from performance-in-use should inform and be used to produce better simulation.

On the last day of the conference, three panel discussions were held focusing on very interesting topics: (1) Model validation: who needs it anyway? (2) Modelling reality: who are we kidding? And (3) The uncontrollable: is building simulation irrelevant to the controls industry? All discussion panels were well attended and participants were actively engaged in the sometimes-heated discussions. If it were not for the closing keynote speech, surely the panel discussions would have gone on longer.

A number of social programmes were held during the conference, including City Centre Walking Tours and the very popular and populated Whisky and Chocolate Tasting (photos below) held at the

Lighthouse building at the end of the second day of the conference. There was a concern that the walking tours might have to be cancelled as the weather did not seem to be too accommodating (who can accurately predict the weather in Glasgow?); however, the rain did not stop many conference delegates from going on the tours to see the architecture of the City of Glasgow. The Whisky Tasting also proved to be very popular and it was indeed heavily populated. Even the Conference Organiser, Lori Mc Elroy, had to serve the conference delegates herself due to the non-stop high demands, all night long!

But of course, the most memorable (and fun) evening was the Conference Banquet, held in the beautiful Old Fruit Market (photos next page). The banquet gave an opportunity to the delegates to meet and converse socially while enjoying the beautifully served dinner. Recipients of various IBPSA awards (read **page 14**) were announced and the awards were presented during the dinner. Conference delegates were then invited to join the traditional ceilidh (pronounced: "kay-lee"). This must have been the most international ceilidh in Scotland: the dance floor was filled with people from all over the world. It must have been a dilemma for the delegates who had to present their papers on the next morning: join the dance or go back to their hotel to prepare their presentation!

The conference was closed on the fourth day with a keynote speech by Professor Joe Clarke. Joe Clarke, Personal Professor within the Department of Mechanical Engineering at the University of Strathclyde, is no stranger to IBPSA. He was the President of IBPSA World from 1994 to 1997 and received an IBPSA distinguished service award in 1999 for his work in the field of

building simulation. His closing keynote address entitled "Integrated Building Performance Simulation: Achievements and Requirements" presented the achievements as well as shortcomings of the general state-of-the-art of building simulation. Ensuring acceptable building performance is a task made complex by the presence of interacting technical domains, diverse performance expectations and pervasive uncertainties. Professor Clarke then proposed Integrated Building Performance Simulation (IBPS) as a means to accommodate this complexity whilst allowing exploration of the impact of design parameters on solutions that provide the required life cycle performance at acceptable cost. In his conclusion, he strongly urged that IBPSA take an active role to be the main vehicle to achieve this goal. Visit **www.ibpsa.org/JAC_review.pdf** to revisit Professor Clarke's keynote presentation.

Toward the end of the Conference, Jan Hensen, President of IBPSA, officially announced IBPSA Australasia and the Victoria University of Wellington as the host for Building Simulation 2011. This was followed by a brief presentation by Paul Bannister, Convener of IBPSA Australasia, on the conference theme and logistic as well as about Wellington.

Two tours were held on the Friday after the conference, the Glengoyne Whisky Distillery Tour, a 200 year-old distillery in a wooded valley in the southern Highlands of Scotland, and a Technical Tour of the Scottish Parliament Building in Edinburgh.

Building Simulation 09 has left us with more issues and challenges to be researched prior to, and debated in, the next conference in 2011.

All papers from Building Simulation 2009 are now available online at **www.ibpsa.org/m_bs2009.asp**.

Scenes from the banquet

From top:

1: The venue, the Old Fruit Market

2: Lori McElroy (Chair of Awards Committee) and Jan Hensen (IBPSA President) announcing IBPSA Awards during the banquet

3: Some of the conference organisers with Joe Clarke (second from right) in traditional Scottish costume

4 and 5: Happy simulationists!

Board meetings were rigorous ..... but then, there were rewards

Healthy debate, indoors and out

More scenes from around the conference ...

The Scottish Parliament building

Kilts ceremonial, kilts informal, and kilts on a Glasgow pub sign

And the winners are .....

Every two years IBPSA presents several awards to acknowledge achievements in, and contributions to, building simulation. The awards were presented during the BS 09 banquet on Wednesday, 29 July 2009. The awardees are:

IBPSA Award for Distinguished Service to Building Simulation

- Terence J Williamson, The University of Adelaide

IBPSA Outstanding Young Contributor Award

- Denis Bourgeois, Agence de l'efficacité énergétique du Québec, Canada

Student Travel Awards

- Jaime M Lee, Massachusetts Inst. of Technology: *Goal-Based Daylighting Design Using an Interactive Simulation Method*
- Holly Wasilowski, Harvard University: *Modelling an Existing Building in DesignBuilder/EnergyPlus: Custom versus Default Inputs*
- Diego Ibarra, Harvard University: *Daylight Factor Simulations – How close do 'beginners' get?*
- Shady Attia, Université Catholique de Louvain: *'Architect friendly': A comparison of ten different building performance simulation tools*
- Jiangtao Du, University of Sheffield: *Computational Simulations for Predicting Vertical Daylight Levels in Atrium Buildings*
- Sanyogita Manu, CEPT University, Ahmedabad: *Impact of Window Design Variants on Lighting and Cooling Loads: Clues for Revisiting Local Building Regulations*

Best Research Paper – BS 2009 Award

- Evy Vereecken, Staf Roels & Hans Janssen: *In situ determination of the moisture buffer potential of room enclosures*

Arup Awards

In addition, Arup, represented by Andrew White, also presented an Award for the Best Simulation Application paper and five Student Awards:

Best Simulation Application Paper

- Holly Wasilowski, Harvard University: *Modelling an Existing Building in DesignBuilder/EnergyPlus: Custom versus Default Inputs* (with Christoph Reinhart).

Best Student Papers

- Daniel Cóstola, University of Eindhoven: *External coupling of BES and HAM programs for whole building simulation* (with Bert Blocken & Jan Hensen).
- Miaomiao He, De Montfort University: *Simulation of a domestic ground source heat pump system using a transient numerical borehole heat* (with Simon Rees & Li Shao)

- Frederick Haldi, EPFL, Switzerland: *A comprehensive stochastic model of window usage: theory and validation* (with Darren Robinson)

Best Student Posters

- Maxime Doya, LEPTIAB, France: *Investigating changes in façades' energy balance according to coating optical properties* (with Emmanuel Bozonnet & Francis Allard).
- Bing Wang – University of Tsinghua, Beijing: *Research on measurement and simulation of the wind environment around buildings in campus* (with Borong Lin).

Taylor and Francis Best Paper Prize

Taylor and Francis, represented by the Managing Editor of the Journal of Building Performance Simulation, Alison Oliver, presented the Journal of Building Performance Simulation Best Paper Prize to Dru B. Crawley, for his paper entitled *Estimating the impacts of climate change and urbanization on building performance*.

Dru Crawley receives the Taylor & Francis Best Paper Prize. Left to right: Ian Beausoleil-Morrison, Alison Oliver, Dru Crawley

Terry Williamson displays his IBPSA Award for Distinguished Service to Building Simulation

IBPSA-England Student Modelling Competition

Finally, IBPSA-England presented two awards to winners of their Student Modelling Competition, held earlier in the year. Muhammad Hamdy Hassan of Helsinki University of Technology (Finland) won in the individual category, and the group award went to Georgia Institute of Technology (USA). IBPSA-England plan to make a similar competition a regular biennial event in the run-up to Building Simulation conferences.

There is more information about the competition on **page 43**.

Software workshops after BS 09

Participants in the Energy Plus workshop with Dru Crawley (front right)

BIM training with Andrew Marsh

After the Building Simulation 09 Conference a number of software training workshops were held at the Department of Mechanical Engineering, University of Strathclyde. They included:

- *Introduction to ESP-r and Flow networks in ESP-r*, led by Jon Hand and Aizaz Samuel from ESRU
- *Introduction to Energy Plus* with Dru Crawley from USDOE
- *BIM and Building Performance Analysis* with Andrew Marsh from Autodesk
- *Introduction to TRNSYS* with David Bradley
- *IDA Indoor Climate and Energy 4.0* with Per Sahlin, and
- *VE-Pro,* led by IES.

All six events were well attended.

Journal of Building Performance Simulation

A letter from Alison Oliver, Managing Editor of JBPS, Taylor & Francis

From 27th to 30th July, I attended the Building Simulation 2009 conference as Managing Editor of *Journal of Building Performance Simulation*. This was the first time Taylor & Francis had exhibited at an IBPSA conference since the launch of *Journal of Building Performance Simulation* in 2007 and it was a great opportunity to hold an Editorial Board Meeting chaired by the Editors, IBPSA President Jan Hensen of Eindhoven University of Technology, The Netherlands and Conference Committee Chair, Ian Beausoleil-Morrison of Carleton University, Canada.

During the conference I managed the Taylor & Francis stand which was located outside the main lecture theatre and session rooms but I was also lucky enough to attend some of the sessions held by Ian, Jan and Editorial Board Members. I particularly enjoyed Ardeshir Mahdavi's session on 'possible relationships between control actions and environmental conditions inside and outside buildings' as well as Veronica Soebarto's session on 'analysis of indoor performance of houses using rammed earth walls'. When not in session, I was at the stand which displayed various related journals and books. Our journals received lots of interest but by far the most popular was Journal of Building Performance Simulation, to the point that I needed to order a further three boxes of sample journal copies when I had run out on the first day! I have never been so busy at a conference and Ian, Jan and I were delighted at the enthusiasm with which the Journal was received and the amount of people approaching us to discuss it.

Whilst it poured with rain outside, myself, Ian, Jan and the Editorial Board held a productive meeting followed by dinner and whiskies (to make up for those missing the whisky tasting!) at the Millennium Hotel to discuss our plans for the journal and its progress so far. Papers are increasing at a very steady rate and we are starting to see articles submitted from outside the community too. The journal has now been submitted to Thomson Reuters for evaluation and we have hopes of gaining an impact factor in a year's time.

Earlier in the year and despite the credit crunch, I found that we had some spare money in the budget so suggested to Ian and Jan a yearly Best Paper Prize. At the conference banquet, an impressively kilted Ian and I presented the Best Paper Award of £250 to Drury B. Crawley for his paper, *Estimating the impacts of climate change and urbanization on building performance*.

An enthusiastic celidih followed and I lost count of how many times I got up to dance, from waltzing with Ian to dosey-doeing with fellow bookworm Jeff Spitler. I had a fantastic time at the conference and on behalf of Ian and Jan and the Editorial

Board, I would like to thank you for your interest in Journal of Building Performance Simulation. We welcome submissions for consideration to the Journal and would encourage you to take up the IBPSA Special Subscription rate of only £25 per year. To subscribe visit **www.tandf.co.uk/journals/offer/tbps-so.asp**.

I look forward to seeing you all again at SimBuild in 2010!

Alison Oliver
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Taylor & Francis
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Visit the Journal of Building Performance Simulation homepage at **www.tandf.co.uk/journals/tbps**, and register your email address at **www.tandf.co.uk/eupdates** to receive information on books, journals and other news within your area of interest.

Journal of Building Performance Simulation update

The third issue of Volume 2 of Journal of Building Performance Simulation, the official journal of IBPSA, has been published. This issue contains the following papers:

Tian, Zhen; Love, James A. and Tian, Wei (2009) *Applying quality control in building energy modelling: comparative simulation of a high performance building*. Journal of Building Performance Simulation, 2 (3), 163 – 178.

Haase, Matthias and Amato, Alex (2009) *A study of the effectiveness of different control strategies in double skin facades in warm and humid climates*. Journal of Building Performance Simulation, 2 (3), 179 – 187.

Laouadi, A. (2009) *Thermal performance modelling of complex fenestration systems*. Journal of Building Performance Simulation, 2 (3), 189 – 207.

Trčka, Marija; Hensen, Jan L. M. and Wetter, Michael (2009) *Co-simulation of innovative integrated HVAC systems in buildings*. Journal of Building Performance Simulation, 2 (3), 209 – 230.

Submitting papers to the Journal

For information on how to submit a paper to the Journal, see the **Call for Papers flyer** at the end of this edition of *ibpsa*NEWS.

Interview with Terry Williamson

Recipient of the IBPSA Award for Distinguished Service to Building Simulation

'We should ensure that designers and planners understand that simulation results should be a vehicle for debate and not "the answer"'

At the Building Simulation Conference 2009 in Glasgow recently, Associate Professor Terry Williamson from the University of Adelaide, Australia, was presented with the IBPSA Award for Distinguished Service to Building Simulation. This award recognizes an individual who has a distinguished record of contributions to the field of building performance simulation, over a long period. This award has been presented to Dr Williamson in recognition of his contributions to the championing of building simulation in Australasia – and in particular in the fields of thermal comfort, thermal and energy simulation, urban micro climate modelling, and building performance monitoring over the years.

Here is an electronic interview by Veronica Soebarto (VS), Editor-in-Chief, with Terry Williamson (TW).

VS: You have recently been awarded the IBPSA Distinguished Service Award. Based on your experience what is your general belief about this area (building simulation)?

TW: Yes, it was a great honour to receive this IBPSA award. When I think about built environment simulation (I prefer this wider description) I think about something I have read by the sociologist Zygmunt Bauman. He suggested that we have an ethical duty to "visualize the future impact of all actions (undertaken or not undertaken) …" Built environment performance simulation has the potential to contribute to this obligation and therefore its use should be a normal part of responsible design decision making.

VS: To what extent, or how far, do you think building simulation can help designers and planners to design and develop better buildings and cities? What are the limitations?

TW: Employing simulation in 'responsible decision-making' should be aimed at achieving a sustainable built environment. This is however not without its problems and these problems should be acknowledged. We must realise that simulation can never pretend to offer the kind of certainty which experts sometimes claim to offer. At the foundational level we must also be mindful of the problem highlighted by the French post-modern critic Jean Baudrillard (1994) when he pointed out that simulation may blur the distinction between the real and unreal; the simulation becomes the determinant of our view of (a certain) reality. I think the language in much of the simulation literature exposes such a muddle because often no distinction is made between instances in simulation and instances in the physical world. We should ensure that designers and planners understand that simulation results should be a vehicle for debate and not "the answer".

VS: What do you see as the biggest challenge of this area including its use in practice as well as in building regulation?

TW: Well I think this is connected to my answer to the previous question. We must find ways of recognising that inevitably there are many uncertainties and "inaccuracies" in the application of simulation. For example, researchers have consistently found large differences of around ± 50% in total building energy consumption when operators are asked to simulate the same building with the same software. Discarding input errors the differences often arise because of the way the simulation operators interpret the building to construct the necessary input data.

We also know that often the fundamental scientific formulations in a simulation model, (for example in thermal performance assessment these include surface resistance, sky emissivity and discharge co-efficient) have accepted values that can be orders of magnitude different yet rarely are these differences and therefore the uncertainties acknowledged in final simulation results. Likewise generic or standard values for the exogenous variables to a simulation, such as climate factors (eg. wind speed, temperature), environmental factors (eg. soil conditions) and building material factors (eg conductivity, emittance) are usually adopted without the "built in" uncertainity of results ever being recognized.

The issue of uncertainty of results has particular implications for cases where simulation is used to show building Code compliance. This usually means satisfying a particular performance standard. So the simulations are comparing apples with apples various "inputs" (eg thermostat settings, hours of occupation, etc) need to be specified, however by doing so the "actual" performance of the building may be very different.

VS: In the Building Simulation 97 Conference you addressed the issue of the complexity of simulating human behavior. In the recent Building Simulation 09 Conference there were increasing numbers of papers dealing with behavior simulation though it is obvious that this area is still in its infancy and further work still needs to be done. What do you think needs to be looked at more carefully and what approaches should be taken?

TW: Yes simulating realistic occupant behavior is a very difficult subject. In the BS'97 paper we showed that, depending on the type of heating & cooling appliance installed in a house, the discretionary operation was different. For example, if people had a gas heater they behaved quite differently to people with electric heaters. Recently we have shown that people in houses with well designed and convenient outside spaces use less energy for cooling because they "behave" differently. That is, they go outside when it's warm, rather than use their air-conditioner. I don't know of any simulation program that is able to model these subtle behavior differences; most assume a rather standard occupant model. It is however these fine differences in facilitating behavior that often distinguishes good from bad design. I'm not sure what the answer is, but again at least acknowledging the limitations of present simulation models would be a good start.

VS: One of your areas of research is urban modeling. Could you please tell us more about your research in this area and what recent work you have done and will continue?

TW: I started on the urban modeling work around 15 years ago for one very simple reason and with one very simple aim in mind. Most building simulation software comes with inbuilt climate data files; either "real" data compiled from stations such as airports or calculated "synthetic" data. In either case, the climate data is assumed to be representative of meso-scale area. However, we know that the climate in urban areas can be very different to the surrounding rural area reference sites where much of the climate data originates. My aim was to develop a "simple" way of transforming the standard climate data to more closely represent the actual climate in an urban setting. If we could achieve this aim one would have more confidence in simulation results, for example, of energy consumption. With my colleague Evy Erell from Ben-Gurion University of the Negev, we have managed to develop a model we call CAT that gives reasonable results when compared to measured data for

a range of climates and urban forms. Our aim is to further develop and refine this model. Perhaps one day it will be a standard feature of all thermal performance simulation programs.

VS: There have been increasing amounts of research in predicting future climate and its impact on future building thermal performance and energy use. Could you comment on this area of research?

TW: I saw recently a graph published by the International Panel on Climate Change (the IPCC). It showed the results of 9 global circulation simulation models which gave predicted global temperature changes from 1990 until around 2090. The results shown for 2090 ranged from about 1°C to just over 5°C. The IPCC appears to take the average of these simulated predictions when it talks about the future climate. As a simulationist I worry about such results: they can't all be equally right, nor I suspect can they all be equally wrong. Given also that these are stochastic models, no attempt is made to express the imprecision of the results. Going back to the first question - if we have a duty to visualize the impact of design decisions then accounting for the future climate may be part of this, but as I have suggested, we must at the same time acknowledge the uncertainties involved in such predictions. A lot of the research in this area is unfortunately lacking in this aspect.

VS: As an academic who teaches building simulation to architecture and engineering students what is your view in terms of to what extent these students should understand and use building simulation? What challenges do you face in teaching simulation to these students and what would you like to advise 'young players' in this area?

TW: I think it's all too easy to teach the use of simulation packages as if they are mysterious black boxes that will solve a designer's problems. Students are often seduced by the apparent complex nature of advanced simulation packages. We tell them, for example, that it's important to consider human comfort in their design work, and after a bit of work to enter some data a simulation will show the average predicted mean comfort vote or similar. It's important however, that students are aware of the background science and assumptions within or behind the simulation models. It is only when students understand these issues that they can begin to appreciate the appropriate use (s) of the simulation.

VS: Finally, what have been your achievements that you are most proud of as they have made impact on students, practitioners, industry, government, or society in general?

TW: You know, I was recently in the south of France and I recalled my first IBPSA conference in 1991 at Sophia Antipolis, in the Cote d'Azur. I remember how excited I was at the time that an organization had been formed whose objectives I could so closely relate to. So excited in fact, that I offered to convene the next conference in Adelaide. While that was certainly a lot of work I think that conference helped give IBPSA a real international focus. After that I contributed to the work of the Board and also as Secretary for a number of years. In Glasgow we could look back with some pride to see how much impact IBPSA is now having on the development of built environment simulation.

The ability (and as I have suggested the obligation) to predict future consequences of present design decisions with any degree of confidence is a relatively new means in the history of human undertakings. If I look back over the stuff I have written over the years on or about simulation the general theme I think deals with trying to understand the meaning of simulation when used as an aid to design. A mature understanding of the implications of applying such tools to built environment design decision making is probably still to emerge but I think I have made some contribution to the debate.

VS: Thank you for your time.

Closing the gaps: interview with Tom Maver

Listening to the keynote speech by Tom Maver, Research Professor in the Mackintosh School of Architecture at Glasgow School of Art and an Emeritus Professor of the University of Strathclyde, at the recent Building Simulation 09 Conference, was always delightful. After the Conference, Veronica Soebarto (IBPSA News' Editor-in-Chief) raised a few more questions and below is an excerpt from the electronic interview with Professor Maver:

VS: As you know IBPSA focuses on building performance simulation whereas associations such as eCAADe and ACADIA focus more on CAAD (design). Hence most people who are doing building performance simulation are engineers, energy specialists and building scientists and researchers whereas CAAD tools are used more by building designers and/or researchers in building design. Despite the fact that there have been numerous attempts in the last 20 years to make building performance simulation part of a design process and make building performance simulation tools more attractive to building designers, very few of them (designers) use simulation tools in practice let alone being attracted to use the tools. On the contrary, CAAD tools are well integrated in most design practices nowadays. So the question is do you think it is reasonable to expect designers (esp. architects) to use simulation tools in the design process and to really understand what's behind the tools? Or should the designer keep focusing on the physical making of the building ("designing") and have someone else on board (eg engineers/simulation specialists) to assist her/him in doing the performance simulation of the design along the way?

TM: Perhaps I can preface my response with a few general remarks about the design of sustainable buildings. Here in Europe we are privileged to continue to enjoy an immensely rich and diverse architectural heritage. I know of no European country which does not boast at least one city of outstanding quality, and each of which is distinctive and internationally recognizable. What has survived from the past, by definition, must have been "sustainable". So – we can readily recognize what has been sustainable; it is less easy to determine what will be sustainable. A starting point might be to articulate the "necessary and sufficient" conditions. My suggestions would be:

- fitness-for-purpose(s)
- cost-beneficial
- ecologically benign
- culturally relevant

Attending IBPSA 2009 was, for me, a privilege and a revelation. Those who founded the Association, those who have maintained it over its evolution and those who are currently contributing so effectively, deserve the warmest congratulations. Over the same time-span, I have been involved in the establishment of eCAADe (Education in CAAD in Europe) and in supporting its sister organizations in North America (ACADIA), South America (SIGRADI), Asia (CAADRIA) and , most recently, the Arab States (ASCAAD). I am sure the CAAD community and the IBPSA community would benefit mutually from some form of interaction. There are too few papers on environmental simulation in the CAAD Conferences and in the International Journal of Architectural Computing; equally, I guess, there are too few papers on designerly issues in the IBPSA Conferences and publications.

One effective mechanism for communication could be the Cumulative Index of Computer Aided Design. CUMINCAD is a database of almost 10,000 papers relating to the application of ICT to Building Design.

Guests to the website (**http://cumincad.scix.net**) can freely access titles and abstracts; current members of eCAADe and its sister organizations can download entire papers. It seems to me that IBPSA could contribute its conference and journal publications to CUMINCAD and, thereby enable its membership to benefit from full access to the database.

You raise the 64,000 EURO question: how to close the gap between the needs of the architect to take robust decisions at the earliest (and most important) stages in the design process, and the responsibility of the engineer to ensure verisimilitude in the simulation process. I see three complementary strategies:

The first is to improve relationships between the professional communities and specialist consultancies. In the design of the 5th Heathrow Airport Terminal, for example, the Design Team embedded, for at least one day a week over the 2/3year span of the design process, a simulation specialist from Integrated Environmental Solutions – the spin out Consultancy from ABACUS/ESRU. Positive experiences such as this should be written up as Case Studies and published as examples of best practice.

The second strategy is to encourage the development of early-stage, easy-to-use models with intelligent defaults relevant to building type, scale, location, etc. These might be validated by carrying out a wide range of full first-principles simulations, then, progressively, "dumbing-down" to provide "simple" models. In this respect, it is important to accept that the good should not be the enemy of the best, and that in the virtual world, decisions can be re-visited and revised.

The third, most radical, long term but, for me, the most important strategy, is to change the educational paradigm. Over a decade ago, with some difficulty, I persuaded Strathclyde University Senate to introduce an undergraduate degree called Building Design Engineering. School leavers with a concern for the built environment, but who were unclear how best to contribute to its improvement, could enjoy 3 years to explore, in design studios, issues of design, environment, technology, design methods, simulation, economics, ICT and architectural patrimony; then, in the subsequent two years, specialize in one of three themes – architecture, environmental engineering and structural engineering – each of which earned exemptions from the relevant professional institutions. I do believe, and indeed have evidence, that graduates from courses such as this have the potential to achieve a renaissance in the way we design buildings.

VS: Do you think building performance simulation practice has indeed created better buildings, and if not, where should we go from here and what would be the critical things to be done?

TM: I do not have the slightest doubt that software tools for performance simulation have had, and progressively will have, major impacts on the creation of better buildings in a number of ways:

- shrinking the carbon footprint, improving air quality and reducing the costs-in-use of utilitarian buildings that make up the bulk of our built environment
- giving leading architect and engineering practitioners the confidence to be as innovative as once they were - and the ability to create buildings that future generations will recognise as "sustainable"
- restoring to designers the understanding of the "cause-and-effect" of how design decisions affect the cost and performance of their design outcomes.

A last thought, if I may? I was struck by how many young people, from all over the world, participated in IBPSA 2009. The emerging information technologies, I do believe, offer an educational paradigm shift in which students and teachers will share the vision and the responsibility for the future.

Building Simulation 2013: Call for Proposals

The board of IBPSA is pleased to issue the following call for proposals from parties interested in hosting Building Simulation 2013. A complete proposal should be sent to the Conference Location Coordinator, Jeff Spitler (**spitler@okstate.edu**), no later than February 15, 2010. Discussions with Jeff of potential proposals prior to the due date are strongly encouraged. The proposal should address the following items:

- proposed venue
- dates
- details of conference secretariat
- organization time line
- detailed budget in local currency and in US dollars
- discussion of possibilities for sponsorship
- details of the conference presentation schedule (e.g. number of parallel and plenary sessions), publication of proceedings etc.
- details of accommodation, including costs, for delegates
- social events
- options for pre and post conference tours
- options for program for accompanying persons
- plans for organization of an IBPSA Regional Affiliate Organization, if applicable
- involvement of existing or planned IBPSA Regional Affiliate(s)
- experience of organizing committee with IBPSA and with organizing similar conferences.

To assist your decision there are several documents available for your review:

- **www.ibpsa.org/IBPSA-Regionalization-Guide.pdf** describes IBPSA's regionalization plans: we schedule all of the Building Simulation conferences in regions with existing affiliates or regions that are starting a new affiliate organization. In a region currently without an affiliate, we will only consider holding the conference there if a regional affiliate organization will be in place by the time of the conference.
- Final reports for the Building Simulation'03, '05, and '07 conferences, which include details of organization, finances (e.g. planned budget and actual expenses), post-conference surveys and other information useful to organizers of future Building Simulation conferences are here:
  - **www.ibpsa.org/BSRFP/BS2003_final_report.pdf**.
  - **www.ibpsa.org/BSRFP/BS2005_final_report.pdf**.
  - **www.ibpsa.org/BSRFP/BS2007_final_report.pdf**.

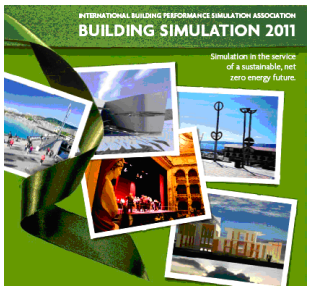
- **www.ibpsa.org/BSRFP/Sponsor_Exposure.pdf** contains suggestions regarding the exposure and benefits of Building Simulation sponsors.
- **www.ibpsa.org/BSRFP/BS_05_MOA.pdf** serves as an example for the contract which will be agreed between IBPSA and the organizers of Building Simulation '13.

Important instructions for preparing a budget and formatting the proposal should be obtained directly from Jeff Spitler; please request these by email.

Proposals will be evaluated using the following criteria:

- Attractiveness and accessibility of location – is this location likely to attract delegates from around the world? (10%)
- Affordability of venue – is the combination of registration fee and accommodation costs likely to not be a hurdle to potential delegates? (In this respect, a range of accommodation types including student dorms or the like is a benefit.) (10%)
- Quality of conference plan and facilities – are the facilities and conference plan conducive to a well-run conference? (10%)
- Likelihood of financial success — will the conference financial plan likely lead to breaking even (at least.)? A financial plan that does not rely on unconfirmed sponsorships to break even is strongly preferred. (30%)
- Support of IBPSA goals – will choosing this proposal help draw new members into IBPSA (in new regions) or support membership in existing regions? (10%)
- Diversity of location - is this location sufficiently distant from recent conferences? (10%)
- Regional participation – is the proposal well-supported by volunteer effort from the regional affiliate and/or nearby regional affiliates? (10%)
- Experience of members of the organizing committee with IBPSA and with organizing IBPSA affiliate conferences or conferences similar to Building Simulation. (10%)

The final decision regarding the location of Building Simulation 2013 resides with the IBPSA Board of Directors and will be made following a thorough evaluation of all submitted proposals.



Building Simulation 2011: Wellington, New Zealand

IBPSA Australasia and the Centre for Building Performance Research in the Victoria University School of Architecture have been selected to host the 12th International Building Performance Simulation Conference in 2011. The conference theme will be "Simulation in the service of sustainable net zero energy future".

The organiser hopes to engage the participants with an examination of the role of building performance simulation in a world that increasingly looks to our community to deliver buildings that perform better. The construction industry is under pressure to deliver good quality buildings that meet the needs of their occupants and at the same time have a zero impact on the environment or demand on energy resources. Performance simulation is becoming an integral part of that delivery process.

The conference welcomes papers on all aspects of modeling and simulation of the built environment. Papers are particularly sought addressing the following issues:

1. advances in the modeling of building energy and mass flows – light, heat, sound, and air
3. developments in the modeling of human comfort and performance in the built environment
3. improvements in the empirical and theoretical modeling of building systems (HVAC or openable windows, or dynamic shading systems)
4. the role of simulation in commissioning and operation and integration with building automation systems
5. the integration of energy capture and conversion models into building performance simulation
6. advances in applications including modeling micro-climate; simulating Indoor Air Quality; integrating performance simulation into the building delivery process
7. demonstration of the reliability of simulation through validation and calibration
8. practical studies of the role of simulation in design practice – including case studies of user interactions with the software
9. examination of the role of simulation in regulation and code compliance
10. and (following the precedent set by the Glasgow conference) an opportunity on "applications day" for practitioners involved in building design and performance assessment to relate their experiences using simulation software, to hear what others are up to, and to interact with the worldwide community of software developers.

Victoria University of Wellington has outstanding conference facilities right in the downtown heart of the capital city of New Zealand. These facilities combined with

New Zealanders' friendliness and willingness to help, make Wellington a great place to meet. Wellington's compactness as a city also makes it highly accessible and easy to get around. The conference accommodation is within easy walking distance of the hotels. The conference venue is adjacent to the Wellington region bus and train transport hub, including the long distance trains. The South Island ferry is a 5 minute bus ride from this hub. The public transport system is efficient and reliable. Those planning side trips before or after the conference will find this location very convenient. (Those keen on their rugby will recognise that the 2011 world cup will conclude in New Zealand just under a month prior to the conference on 22 October).

Wellington, as the cultural capital of New Zealand, offers an unrivalled opportunity to engage with New Zealand's unique Pacific mix of cultures in times out of the conference programme. Its unique shopping experiences, a diverse range of wining and dining experiences at countless restaurants, cafes and bars, and an intriguing selection of theatre productions, live music, opera and exhibitions are all a short walk from the conference venue.

New Zealand is centrally placed in the Southern hemisphere with non-stop flights from Canada, the USA, mainland China as well as Hong Kong, Japan, Dubai, Singapore, Buenos Aires to Auckland. Short flights from Australia direct to Wellington offer an alternate stopover for those wishing to visit other research institutions or conferences on the way.

See you in Building Simulation 2011.

Conference Chair:	Dr Michael Donn (**Michael.Donn@vuw.ac.nz**)
IBPSA Australasia President:	Dr Paul Bannister (**paul@xgl.com.au**)

Other IBPSA announcements

IBPSA Fellow membership grade

The International Building Performance Simulation Association is pleased to announce the creation of a new membership grade of 'IBPSA Fellow' and also call for nominations. This new membership grade will recognize individuals who have made outstanding contributions to the field of building performance simulation. A member is eligible for election if he or she:

> ''has attained distinction in the field of building performance simulation (or in the allied arts or sciences), either by the teaching of major courses in said arts and sciences, or by way of research, simulation code development, original work, or application of building simulation on projects of a significant scope. The individual must have been active in the field for at least ten (10) years''

At present, the IBPSA board plans to elect new Fellows on a two-year cycle, culminating with recognition at the biennial Building Simulation conferences. Nominations for the inaugural class of Fellows are due June 1, 2010. Nominations may be made by IBPSA members other than the nominee. The application package will include details of the nominee's qualifications, a CV, supporting letters, and other relevant materials. The details of the nominee's qualifications shall include summaries of accomplishments in one or more of the following categories: industrial leadership, research, simulation code development, application of building simulation on projects of significant scope, educational leadership, and significant technical contributions to the allied arts and sciences. The application form and instructions are available at **www.ibpsa.org/m_membership.asp#_IBPSA_Fellow**.

IBPSA Sustaining membership becomes Corporate membership

IBPSA Sustaining membership has been replaced by IBPSA Corporate membership, with more clearly defined benefits. Corporate members of IBPSA will 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, this being published twice a year and distributed to the 2000 members worldwide. The newsletter is also 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 for standard corporate membership are set at US$750 per annum. Gold corporate membership is available at a rate of US$5,000 per annum. Gold corporate members have the benefit of the company logo and contact details being placed in a prominent position on the IBPSA website; Gold corporate members are also 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.

A Corporate Membership flyer and an application form can be downloaded from the IBPSA-World website at
www.ibpsa.org/m_membership.asp#_Corporate_Members.

There are currently three gold and eight corporate members, listed on **pages 45 and 46**.

For further information please contact:

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

IBPSA Group formed on LinkedIn networking service

Business networking for professional people has become an important internet tool in today's challenging times, and an IBPSA Group has been formed on the free professional / business-oriented website **www.linkedin.com**. The group is already active and growing, and now has around 500 members, with 300 members from the United States and about 200 from the rest of the world. Each week around 10 new members join the group.

This group is *not* intended to replace the valuable technical forums on the IBPSA BLDG-SIM mailing list, but rather to give voice to those seeking business contacts and commercial opportunities, or those wishing to discuss the industry itself.

There are two focused subgroups at the moment – EnergyPlus and IES, with space for plenty more.

To join the IBPSA Group you need to first be a member of LinkedIn , and then visit:
www.LinkedIn.com/groupInvitation?groupID=75552&sharedKey=68F33973522F.

The group is managed by Mike Barker (**ibpsa@buildingphysics.co.za**) from IBPSA Australasia.

Forthcoming events calendar

Date(s)	Event	Information
2009		
11-14 October 2009	**ISES Solar World Congress 2009** Johannesburg, South Africa	**www.swc2009.co.za**
22-23 October 2009	**8th International Radiance Workshop** Cambridge, Massachusetts, USA	Christoph Reinhart **reinhart@gsd.harvard.edu**
2-3 November 2009	**Sustainable Infrastructure & Built Environment in Developing Countries** Bandung, Indonesia	**www.sibe-2009.org**
26-28 November 2009	**RENEXPO: International Trade Fair & Conference for Renewable Energy & Passive House** Salzburg, Austria	**www.renexpo-austria.com**
7-8 December 2009	**The International Conference on Energy & Environment 2009** Malacca, Malaysia	**http://icee2009.uniten.edu.my/conference/index.php/ICEE/ICEE2009**
14-15 December 2009	**International Conference on Building Science & Engineering** Johor Bahru, Johore, Malaysia	**http://icon-bse09.uthm.edu.my**
2010		
3-6 January 2010	**International Conference on Technology & Sustainability in the Built Environment** Riyadh, Saudi Arabia	**www.capksu-conf.org**
14-16 January 2010	**EPA Indoor Air Quality Tools for Schools National Symposium** Washington DC, USA	**www.iaqsymposium.com**
18-21 January 2010	**World Future Energy Summit** Abu Dhabi, UAE	**www.worldfutureenergysummit.com**
23-27 January 2010	**ASHRAE 2010 Winter Conference** Orlando, Florida, USA	**www.ashrae.org/events/page/957**
29-31 March 2010	**ICSDC 2010: International Conference on Sustainable Design & Construction** Buenos Aires, Argentina	**www.waset.org/wcset10/buenosaires/icsdc/index.html**

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2010 (continued)		
12-14 April 2010	**2010 ARBS (Air conditioning, Refrigeration & Building Services) Conference** Sydney, Australia	**www.arbs.com.au**
21-23 April 2010	**9th Indoor Air Quality Meeting (IAQ 2010)** Chalon-sur-Saone, France	**www.chateaudegermolles.fr/spip.php?rubrique44**
09-12 May 2010	**CLIMA 2010** Antalya, Turkey	**www.clima2010.org**
18-21 May 2010	**eSim 2010** Winnipeg, Canada	**www.esim.ca**
26-30 June 2010	**ASHRAE 2010 Annual Conference** Albuquerque, New Mexico	**www.conferencetoolbox.org/ASHRAE2010/**
27 June - 02 July 2010	**Renewable Energy 2010** Yokohama, Japan	**www.re2010.org/eng-conf/conference/index.html**
30 June - 02 July 2010	**Central Europe Towards Sustainable Building 2010** Prague, Czech Republic	**www.cesb.cz/en**
09-13 August 2010	**SIMBUILD 2010: 4th IBPSA-USA National Conference** New York City, USA	**www.ibpsa.us/news.shtml**
16-19 September 2010	**4th International Solar Cities Initiative (ISCI) Conference** Dezhou, China	**www.chinasolarcity.cn**
22-24 September 2010	**BauSIM 2010: 3rd IBPSA-Germany-Austria Conference** Vienna, Austria	**http://bausim2010.ibpsa-germany.org**
28 September - 01 October 2010	**EuroSun 2010** Graz, Austria	**www.eurosun2010.org/cms/**
29 September - 01 October 2010	**3rd International Conference on Passive & Low Energy Cooling for the Built Environment (PALENC 2010)** Rhodes Island, Greece	**http://palenc2010.conferences.gr**
13-15 December 2010	**SSB 2010: 8th International Conference on System Simulation in Buildings** Liege, Belgium	**www.ssb2010.ulg.ac.be**

11-14 October 2009
Johannesburg, South Africa
www.swc2009.co.za

ISES Solar World Congress 2009

ISES and the Sustainable Energy Society of Southern Africa (SESSA)

ISES 29th Solar World Congress will focus particularly on issues for developing countries which, like Southern Africa, have an abundance of sun and other renewable energy resources. The principal themes will be:

- Resource Assessment: Solar Energy Resources; Wind, Bio, Geo, Ocean Energy Resources
- Solar Heating and Cooling:
  - Solar Collectors and PVT
  - Thermal Storage and other Components
  - Domestic Hot Water and Combisystems
  - Solar Cooling Systems
  - Other Solar Thermal Applications
- Solar Electricity
  - PV Systems
  - PV Cells and Components
  - Solar Thermal Power
  - Wind, Bio, Geo, Ocean and Hybrid Systems
  - Fuels, Chemical and Photochemical Processes
- Solar Buildings
  - Solar Architecture and Building Integration
  - Building Material, Components and Daylighting
  - Rational Use of Energy in Buildings
- Solar Energy and Society: Strategies and Policies, Solar Cities; Marketing, Financing and Standards; Education and Training; Other Nontechnical Issues

Further information is available from **www.swc2009.co.za**.

22-23 October 2009
Cambridge, Massachusetts, USA
reinhart@gsd.harvard.edu

8th International Radiance Workshop

The 2009 International Radiance Workshop will take place on October 22 and 23 at Harvard University's Graduate School of Design in Cambridge, Massachusetts, which is part of the Boston Metropolitan Area. The International Radiance Workshops are annual gatherings of developers and users of the Radiance backward ray tracer. The workshop consists of a series of presentations that in the past has included case studies on the use of Radiance, recent advances in topics such as glare detection and visual comfort, and the use of Radiance in Art and Design. At least one session is typically dedicated to recent technical advances in the Radiance engine.

The 2009 workshop will be split into an 'application day' (day 1) and a more 'technical day' (day 2).

For more information please contact Christoph Reinhart at **reinhart@gsd.harvard.edu**.

12-14 April 2010
Sydney, Australia
www.arbs.com.au

2010 ARBS (Air conditioning, Refrigeration & Building Services) Conference

This event is expected to include a series of introductory talks on the practical use of simulation in a consulting environment, the first part of an initiative by IBPSA-Australasia and AIRAH (the Australian Institute of Refrigeration Air-conditioning and Heating) which responds to the rapid uptake of simulation in the Australian consulting community. IBPSA-Australasia intend to follow up the introductory talks with a series of day-long professional development seminars to be held over the next 18 months to 2 years.

19-20 May 2010
Winnipeg, Canada
www.esim.ca

eSim 2010: IBPSA-Canada's biennnial conference

IBPSA-Canada's biennial conference, eSim, brings together professionals, academics and students interested in building performance simulation issues and applications. The 2010 conference is hosted by Manitoba Hydro, in collaboration with the National Research Council of Canada. It will be held in Winnipeg, Canada on May 19 and 20, 2010 (pre-conference and post-conference workshops on May 18 and 21, 2010).

Conference Themes

- Recent developments for modelling the physical processes relevant to buildings (thermal, air flow, moisture, lighting)
- Algorithms for modelling conventional and innovative HVAC systems
- Methods for modelling the whole-building performance, including integrated resource management, renewable energy sources and combined heat, cool and power generation
- Building simulation software development and quality control approaches
- Use of building simulation tools in code compliance and incentive programs
- 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 visualization and animation
- Optimization approaches in building design

Conference Venue

The newly constructed Manitoba Hydro Place located in downtown Winnipeg will play host to eSim 2010. The building is touted as one of the most energy efficient buildings of its kind in North America and is a model of the benefits of building simulation. For more information visit Manitoba Hydro's website, **www.hydro.mb.ca/projects/downtown/final_design.shtml**.

For more information, to submit an abstract and to apply for student travel sponsorship from IBPSA-Canada (Canadian students only) visit the conference website,**www.eSim.ca.**

22-24 September 2010
Vienna, Austria
http://bausim2010.ibpsa-germany.org

BauSIM 2010: IBPSA-Germany+Austria's 3rd biennial conference

IBPSA-Germany-Austria will hold its 3rd biennial conference in Vienna, Austria on September 22-24, 2010 at the Vienna University of Technology. BauSIM 2010 aims to bring together practitioners, researchers and developers working in the field of building performance simulation and related applications, and will be hosted by the University's Department of Building Physics and Building Ecology. The main theme will be "Building Performance Simulation in a Changing Environment".

The deadline for submitting abstracts is **March 15, 2010**. Submissions in both English and German are welcome. A number of selected contributions will be considered for publication in BAUPHYSIK, published by Ernst & Sohn.

For more information, visit **http://bausim2010.ibpsa-germany.org.**

13-15 December 2010
Liege, Belgium
www.ssb2010.ulg.ac.be

SSB 2010: 8th International Conference on System Simulation in Buildings

The University of Liege's Thermodynamics Laboratory will host SSB 2010 on December 13-15, 2010. The conference is being organized in collaboration with the International Energy Agency (Energy Conservation in Building and Community Systems) and with the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE).

Presentations will include some of the latest results from the IEA-ECBCS Annexes 47 "Cost Effective Commissioning of Existing and Low-Energy Buildings" and 48 "Heat Pumping and Reversible Air Conditioning", HarmonAC "Harmonizing Air Conditioning Inspection and Audit Procedures in the Tertiary Building sector" and the more recent IEA-ECBCS Annex 53 "Total Energy Use in Buildings: Analysis and Evaluation Methods".

You are invited to submit abstracts/papers in the following topics:

- Advances in modeling of HVAC&R systems and components
- Recent developments in building energy simulation methods and tools
- Simulation assisted analysis and evaluation of building energy use
- Applications in commissioning, energy management and maintenance
- Applications in building energy audit and retrofit
- High quality case studies exhibiting in depth use of simulation tools

Deadline for submission of abstracts:	15 February 2010
Deadline for full papers:	17 May 2010
Deadline for revised papers:	27 September 2010
Deadline for conference preregistration:	30 October 2010

For further information visit **www.ssb2010.ulg.ac.be** or email **ssb2010@guest.ulg.ac.be**.

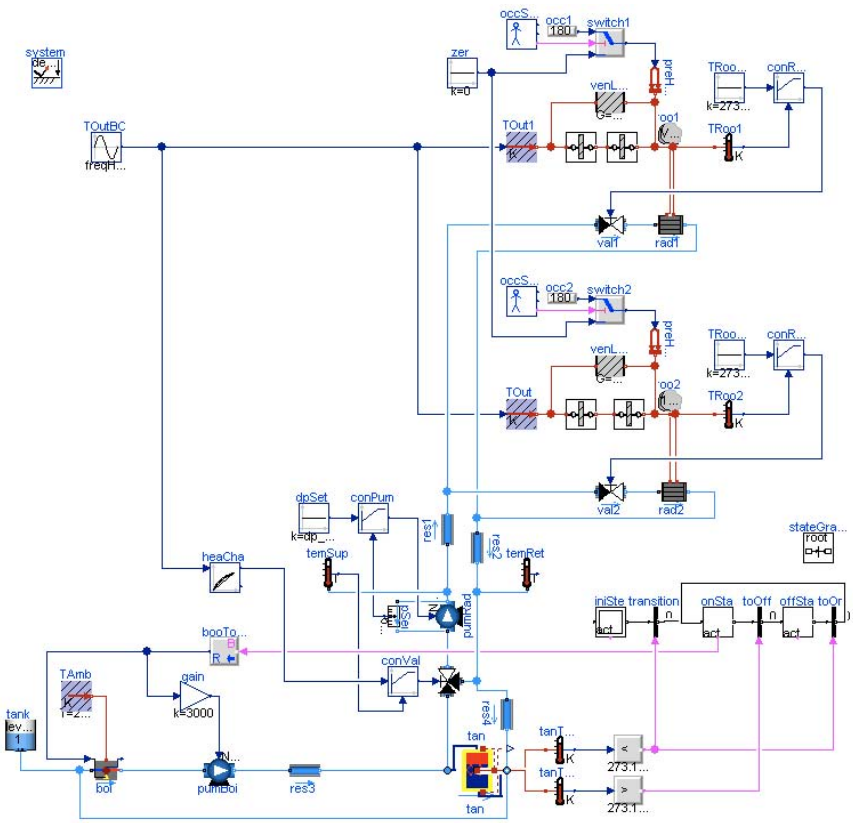
Software news

Modelica Library for building energy and control systems

LBNL's Simulation Research Groups have started an open-source development of a component library for building energy and control systems. The models are developed in the equation-based, object-oriented Modelica language. The intent of this work is to make building system modeling flexible and fast enough so that it accelerates innovation towards Zero Energy Buildings.

The aim of the library is to enable

- rapid prototyping of new building systems,
- development of advanced control systems,
- reuse of models during operation for energy-minimizing controls, fault detection and diagnostics, and
- active involvement of the simulation users in the development process.



The library development is open-source in order to allow others to participate in the development process, and to provide better feedback that steers the further development. By sharing the development effort, participants will have tools that are of high quality due to constant peer-review, and they will be able to allocate more resources to do their actual research.

The diagram (left - zoom in for a clearer view) shows the implementation of a hydronic heating system with storage tank in Modelica.

Please see **http://simulationresearch.lbl.gov/modelica** for further information or email Michael Wetter at **mwetter@lbl.gov**.

GenOpt 3.0

GenOpt 3.0 was released in May 2009, under a BSD style license, with all source code being available at no cost. New in version 3.0 is the implementation of parallel computation which allows GenOpt to run multiple simulations simultaneously, thereby reducing the time needed for optimization and parametric studies. The parallelization of the simulations is done automatically by GenOpt and does not require a special setup by the user.

GenOpt is a freely available open-source optimization program for the minimization of a cost function (such as annual energy use, peak electrical demand, utility cost, etc.) that is evaluated by an external simulation program.

For example, you can compute a building's annual energy cost in EnergyPlus, TRNSYS, IDA, DOE-2, Modelica or any simulation program with text-based input and output, and let GenOpt automatically find the values of selected parameters that yield lowest cost.

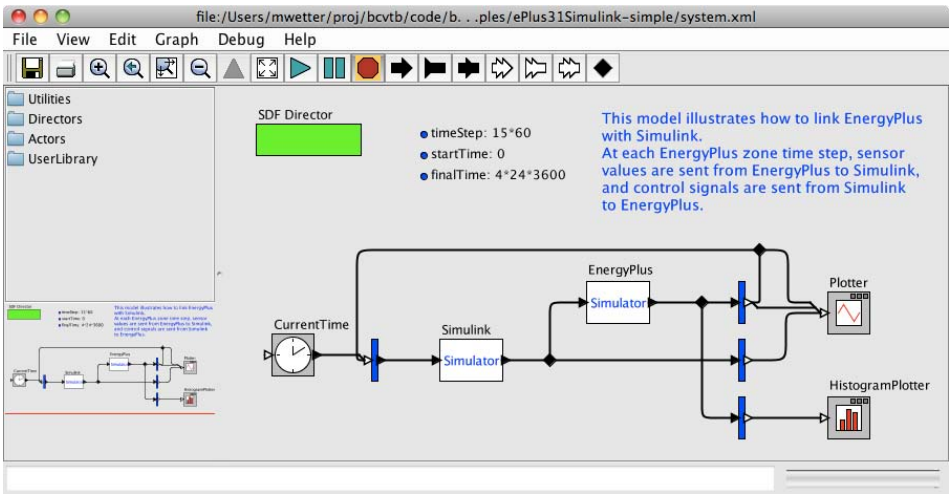
GenOpt has a library with local and global multi-dimensional and one-dimensional optimization algorithms, as well as algorithms for doing parametric studies.

For free download and more information, please visit **http://SimulationResearch.lbl.gov/GO** or email Michael Wetter at **mwetter@lbl.gov.**

Building Controls Virtual Test Bed

LBNL is developing a Building Controls Virtual Test Bed (BCVTB), which allows expert users to couple different simulation programs for distributed simulation of building systems and their control algorithms. The BCVTB The software is still under development and aimed at expert users of simulation. Due to the different programs that may be involved in distributed simulation, familiarity with compiling and configuring programs is essential. More information is available and a development version can be downloaded from **https://gaia.lbl.gov/bcvtb**.

The current release allows coupling of EnergyPlus, MATLAB/Simulink and the Modelica simulation environment Dymola as well as receiving real-time data from web servers. An interface to BACnet compliant Building Automation Systems (BAS) is under development. The BCVTB is based on the Ptolemy II software from the University of California at Berkeley. Ptolemy II provides a graphical modeling environment that can also be used to define system models for physical devices, communication systems or for post processing and real-time visualization. The BCVTB enables extension of EnergyPlus' capabilities for controls simulation and for system simulation.



The screenshot above (zoom in for a clearer view) shows a model that links MATLAB/Simulink with EnergyPlus and plotters that plot time trajectories and histograms while the simulation progresses. In this example, control signals are computed by MATLAB/Simulink and sent to EnergyPlus. EnergyPlus computes the building thermal response and simulates the HVAC system. Measurement signals are then sent from EnergyPlus to MATLAB/Simulink.

Typical applications include:

- performance assessment of integrated building energy and controls systems,
- development of new controls algorithms, and
- formal verification of controls algorithms prior to deployment in a building in order to reduce commissioning time.

Examples are provided with the BCVTB that show how to do distributed simulation. In the examples, we linked the following programs to the BCVTB:

- a development version of EnergyPlus 3.0
- MATLAB
- Simulink
- Dymola
- a simulation program implemented in C
- a simulation program implemented in Fortran 90

The C and Fortran 90 simulation programs are provided to show developers how to couple a new program to the BCVTB. Such a coupling can be done by calling C functions that are provided as part of the BCVTB. The BCVTB also contains examples that show how control models can be implemented directly in Ptolemy II using Ptolemy II's graphical model editor. The control examples include a heterogeneous system consisting of a discrete time controller with a Finite State Machine.

The interface to the Modelica modeling and simulation environment Dymola allows advanced users to

- define on the fly new HVAC components and systems in a modular, hierarchical, object-oriented, equation-based graphical modeling environment and couple them to EnergyPlus,
- innovate new HVAC system and control architectures for which models do not yet exist in off-the-shelf building simulation programs, and
- analyze dynamic effects of HVAC systems, modeled in Modelica, and their local and supervisory control loops, modeled in MATLAB/Simulink, Modelica or Ptolemy.

The BACnet interface that is currently under development will allow testing supervisory control sequences using an EnergyPlus or Modelica model to assess the energy and comfort performance of different supervisory control algorithms. It will also allow formal verification of control sequences before deployment to a building.

Please see **http://simulationresearch.lbl.gov/bcvtb** for further information or contact Michael Wetter (**mwetter@lbl.gov**) or Philip Haves (**phaves@lbl.gov**).

Building Energy Tools Directory

Dru Crawley, DOE

The web-based Building Energy Tools Directory at **http://buildingtools.energy.gov** (**NEW URL!**) contains information on more than 375 building-related software tools from more than 20 countries around the world. Haven't visited lately? In the past six months, more than 25 new tools have been added, including AWDABPT, Benchmata, Cepenergy Management Software for Buildings, COMSOL, CPF Tools, E.A.S.Y., eQUEST, Frame Simulator, GLHEPRO, Home Energy Tune-uP, HomeEnergySuite, ID-Spec Large, Louver Shading, Maintenance Edge, MC4Suite 2009, Panel Shading, PHPP, Polysun, Popolo Utility Load Calculation, PUtility Psychrometric, SunTools, TOP Energy, United Resources Group Lighting Conservation, UNorm, USai, and UtilityTrac.

For each tool in the directory, a short description is provided along with information about technical expertise required, users, audience, input, output, validation, computer platforms, programming language, strengths, weaknesses, technical contact, availability and cost. A link is also provided for directly translating the web pages into more than 8 languages.

If you know of a tool (yours?) that is not in the directory, please send the information detailed above to **http://buildingtools.energy.gov/submit.cfm** or in an email message to Dru Crawley at **Drury.Crawley@ee.doe.gov**.

EnergyPlus version 4.0 available October 2009

Dru Crawley, DOE

The latest release of the EnergyPlus building energy simulation program, Version 4.0, became available in early October. A few key new features include:

- an energy management system with EnergyPlus runtime language
- large horizontal openings added to Airflow Network
- plant and condenser loops merged
- walk-in refrigeration units
- refrigeration cascade condenser
- refrigeration secondary loop; evaporative fluid cooler
- zone water-to-air heat pump; zone air dehumidifier; plant pressure drop
- 2009 ASHRAE design conditions added to weather files
- window glazing system that can be defined by U-factor, solar heat gain coefficient (SHGC), and visible transmittance (VT)
- simple definition of underground walls and floors with C and F factors for code compliance
- source sink simulation and variable thermal conductivity property added to conduction finite difference model
- infiltration, mixing, and ventilation air flow rates may be reported using standard density or current density
- a GUI-based IDFConverter utility for transitioning input files, including converting a list of files from any older version to any newer version
- weather converter to calculate solar radiation from available data, and
- two new application guides: Energy Management System Application Guide and Using EnergyPlus for Compliance.

We have updated and extended capabilities throughout the existing building envelope, daylighting, and HVAC equipment and systems portions of the program, along with many other enhancements and speed improvements. More information on these and other new features is available on the EnergyPlus web site: **www.energyplus.gov**. EnergyPlus v4.0 has been tested on both Windows 7 and Mac OSX Snow Leopard.

The OpenStudio plugin for Google SketchUp has also been updated to work with EnergyPlus V4.0. Both EnergyPlus v4.0 and the OpenStudio plugin are available for download at no cost from the EnergyPlus web site: **www.energyplus.gov**.

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 *ibpsa*NEWS, 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 is available from their websites:

	**IBPSA Australasia**	contact: **Paul Bannister**
	**IBPSA Brazil**	**Nathan Mendes**
	**IBPSA Canada**	**Jeff Blake**
	**IBPSA China**	**Da Yan**
	**IBPSA Czech Republic**	**Martin Bartak**
	**IBPSA England**	**Malcolm Cook**
	**IBPSA France**	**Etienne Wurtz**
	**IBPSA Germany**	**Christoph van Treeck**
	**IBPSA India**	**Rajan Rawal**
	**IBPSA Japan**	**Harunori Yoshida**
	**IBPSA Netherlands + Flanders**	**Wim Plokker**
	**IBPSA Poland**	**Dariusz Heim**
	**IBPSA Scotland (no web site yet)**	**Lori McElroy**
	**IBPSA Slovakia (no web site yet)**	**Jozef Hraska**
	**IBPSA Spain**	**David Garcia**
	**IBPSA Switzerland**	**Gerhard Zweifel**
	**IBPSA UAE**	**Khaled Al-Sallal**
	**IBPSA USA**	**Charles "Chip" Barnaby**

IBPSA-Australasia

Paul Bannister

IBPSA Australasia is working with AIRAH (the Australian Institute of Refrigeration Air-conditioning and Heating) to create and present a series of seminars on the practical use of simulation in a consulting environment. The intention is to present four seminars, the first being a stream of introductory talks at the 2010 ARBS (Air conditioning, Refrigeration & Building Services) Conference in Sydney, 12-14 April 2010 (**www.arbs.com.au**), and the remainder being a series of day-long professional development seminars to be held over the next 18 months to 2 years.

The seminar series responds to the rapid uptake of simulation in the Australian consulting community, which has led to a proliferation of inexperienced simulators in the market. The aim is to provide a general training in the principles of good simulation rather than training in any particular package. A secondary aim is to increase the level of engagement of IBPSA with the consulting community with a view to driving a good consultant attendance at the Building Simulation 2011 Conference in Wellington, New Zealand.

IBPSA-Brazil

Nathan Mendes

IBPSA-Brazil has been working on the consolidation of the use of simulation countrywide, thanks to the Brazilian Building Energy Efficiency Regulation code, which has started labelling buildings on a voluntary basis.

During the last national meeting on Thermal Comfort in the Built Environment (ENCAC 2009, **www.encac2009.ufrn.br**), which took place in Natal on 16-18 September 2009, many simulation papers were presented in various sessions such as energy efficiency, ventilation, thermal performance and daylighting. On September the 17th, an IBPSA meeting was held to discuss what is needed in terms of national R&D funding and what our challenges are for the next few years.

The Canadian chapter of the International Building Performance Simulation Association

La Section canadienne de l' International Building Performance Simulation Association

IBPSA-Canada

Jeff Blake

IBPSA-Canada Student Travel Awards

IBPSA-Canada awarded travel grants to three students to attend the Building Simulation 2009 Conference held in Glasgow last July:

- Lukas Swan, PhD student at Dalhousie University, Halifax, Nova Scotia
- Simon Chapuis, MASc student at École Polytechnique de Montréal, Montréal, Québec
- William O'Brien, PhD student at Concordia University, Montréal, Québec

IBPSA-Canada will be sponsoring up to three Canadian students to travel to Winnipeg, Manitoba in May 2010 to attend the eSim2010 Conference. Please visit **www.esim.ca** for more information on applying.

eSim 2010

IBPSA-Canada's biennial conference, eSim, brings together professionals, academics and students interested in building performance simulation issues and applications. The 2010 conference is hosted by Manitoba Hydro, in collaboration with the National Research Council of Canada, and will be held in Winnipeg, Canada on May 19 and 20, 2010 (pre-conference and post-conference workshops on May 18 and 21, 2010).

There is more information about eSim 2010, including the conference themes, on **page 33**. For additional information and the latest news, please visit **www.eSim.ca**.

IBPSA-Germany+Austria

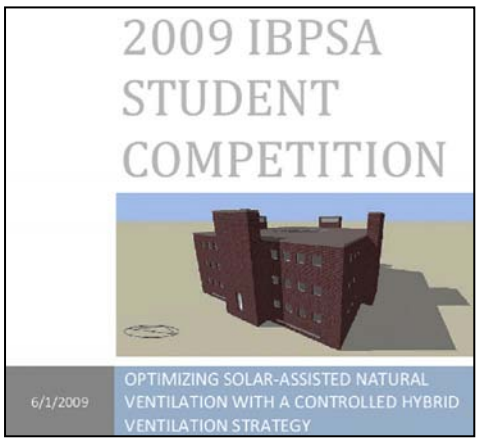
Bob Martens

IBPSA-Germany-Austria's 3rd biennial BauSIM conference will be held in Vienna, Austria on September 22-24, 2010 at the Vienna University of Technology, hosted by the Department of Building Physics and Building Ecology. BauSIM 2010's main theme will be "Building Performance Simulation in a Changing Environment".

There is more information about BauSIM 2010, including the conference themes, on **page 34**. For additional information and the latest news, please visit **http://bausim2010.ibpsa-germany.org**.

IBPSA-England

Malcolm Cook



During the first half of 2009, IBPSA-England ran a Student Modelling Competition culminating in the presentation of awards at the Building Simulation conference in Glasgow in July. This is the first time the competition was held and was intended to facilitate wider participation in the conference and to provide a competitive forum for student members of the building simulation community.

The task set was to use computer simulation to devise a control system for a three-storey, open plan office building located in the centre of Glasgow. The competition generated greater interest than expected: some students entered as part of a class group while others took on the task alone. We received expressions of interest from 36 students from which 26 students took part, making up entries from Australia, China, Finland, UK and USA. The six submissions received comprised three group entries and three individual entries.

The winner in the individual category was Muhammad Hamdy Hassan of Helsinki University of Technology (Finland) and the group award went to Georgia Institute of Technology (USA). Winners were asked to prepare a poster for presentation at the conference. This provided a valuable forum for discussion amongst entrants and may be extended to include all entrants in future.

We were pleasantly surprised by the very high quality of the entries. Clearly, students had invested a great deal of time into their submissions which made them a joy to read. We also received encouraging feedback from the participants:

> *"It encouraged me to learn about natural ventilation … I wish to thank all who organised the forum"*

> *"… participating in this competition opened my eyes [to] the field of hybrid ventilation control …"*

Muhammad Hamdy Hassan (centre), winner of the individual category of Student Modelling Competition, with Malcolm Cook (left), Chairman of IBPSA-England

Following the success of this first competition, it is planned to make this a regular activity during the run-up to the biennial conference. IBPSA-England would like to thank all those students who participated in the competition and hope that all competitors gained something valuable from the experience.

IBPSA-USA

Shanta Tucker

The IBPSA-USA chapter is active and expects to grow in membership this year. Following the SIMBUILD 2008 conference in Berkeley, California, several regional chapters have formed to support local activities in the simulation and modeling community. This attracted new membership and support for the organization. IBPSA-USA created a regional affiliate protocol for establishing these new chapters and welcomes New York City, Houston and Portland. The membership of IBPSA-USA has grown to 152 voting members and our list-serv now has over 390 addresses.

Most recently, IBPSA-USA gathered in parallel with the ASHRAE summer conference in Louisville, Kentucky, in June, for a lively brainstorm and dinner meeting. Approximately 40 members participated in a discussion about what comprises the body of knowledge of an energy modeler. Notes from this meeting are available upon request from Shanta Tucker (**shanta.tucker@atelierten.com**). Following at the dinner meeting, the group welcomed Professor Curtis Pedersen who lectured on the history of simulation, "Building Simulation: Where Has it Been, Where is it Going?". For those who missed it, the presentation will be posted on the IBPSA-USA website shortly.

Lively discussion at the IBPSA-USA summer meeting in Louisville

Other recent activities include:

- IBPSA-USA Meeting: January 2009, Chicago, IL
  Guest Speaker: Jeff Boyer, Smith-Hill Architecture
- IBPSA-USA Meeting: June 2008, Salt Lake City, UT
  Guest Speaker: Bill Bordass
- SimBuild 2008 Conference:
  July 30 - Aug 1, 2008, Berkeley, CA

Upcoming events include chapter meetings in Orlando, FL in January 2010, in Albuquerque in June 2010 and SIMBUILD 2010 next August. SIMBUILD 2010 is chaired by Michael Bobker, Senior Fellow at the CUNY Institute for Urban Systems. Keep tuned to the IBPSA-USA website and list-serv for details, dates, calls for papers, notices and confirmation that the event will be held in New York City. (**www.ibpsa.us**).

Ongoing activities include developing the basis for training courses on building simulation. In addition, ASHRAE is planning to offer certification in energy simulation; IBPSA-USA is represented on the committee developing the certification test (to be first offered in early 2010).

IBPSA Corporate Members

Gold Corporate Members

	US - DOE United States Department of Energy www.energy.gov 1985-2011
	ESRU (Energy Systems Research Unit) University of Strathclyde www.esru.strath.ac.uk 2009-2011
	SUST www.sust.org 2009-2011

Corporate Members

	ARUP www.arup.com 2009-2011
	Bentley Hevacomp www.bentley.com/en-US/Products/Building+Analysis+and+Design/Hevacomp.htm 2009-2011
	BRE www.bre.co.uk 2009-2011
	DesignBuilder www.designbuilder.co.uk 2009-2011

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Corporate Members (continued)

EDSL Tas	**Environmental Design Solutions** www.edsl.net 2009-2011
EQUA SIMULATION TECHNOLOGY GROUP	**EQUA Simulation Technology Group** www.equa.se 2009-2011
ies INTEGRATED ENVIRONMENTAL SOLUTIONS	**Integrated Environmental Solutions** www.iesve.com 2009-2011
vabi software	**VABI** www.vabi.nl 2009-2011

Full details of corporate membership are given on page 28.

IBPSA Central contacts

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Email: **veronica.soebarto@adelaide.edu.au**

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Eindhoven University of Technology, Netherlands

IBPSA Secretary and Regional Affiliate Liaison

Drury Crawley
US Department of Energy, USA

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Ian Beausoleil-Morrison chair and contact for information about IBPSA Building Simulation conferences
Members: Michel Bernier, Jan Hensen, Roberto Lamberts, Jeff Spitler (future conference location coordinator), Yingxin Zhu

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Website committee

Roberto Lamberts chair
Members: Chip Barnaby, Dru Crawley, Karel Kabele, Christoph van Treeck

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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.

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Email: **k.sallal@uaeu.ac.ae**

IBPSA-USA Representative
Charles "Chip" Barnaby (Wrightsoft Corporation, USA)
Email: **cbarnaby@wrightsoft.com**

Past Presidents of IBPSA:
1987-1991 (5 years) Ed Sowell, USA
1992-1993 (2 years) Dan Seth, Canada
1994-1997 (4 years) Joe Clarke, Scotland
1998-1999 (2 years) Larry Degelman, USA
2000-2001 (2 years) Roger Pelletret, France
2002-2005 (4 years) Jeff Spitler, USA

A current "official" list of contacts and affiliate information is continually updated on the IBPSA web site. Inquiries regarding additional affiliate information should be directed to the IBPSA web chair, Roberto Lamberts, or to the Regional Affiliate Liaison, Dru Crawley.

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.

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