



AUSTRALASIAN
BUILDING
SIMULATION

15-16 November 2017
MELBOURNE



Preliminary Program – Day 1



8.30–9.00	Registration	
9.00–9.15	Welcome by AIRAH and IBPSA Plenary Room – Meeting Room 105 and 106	
9.15–10.00	Keynote speaker: Charles S. Barnaby (United States of America) Modelling building services equipment: getting beyond ratings and default curves	
10.00-10.30	MORNING TEA	
SESSION	Plenary Room - Meeting rooms 105 and 106	Breakout room – Meeting room 104
10.30-10.55	Measurement and prediction of heat transfer and mass flow of a ventilated façade Sergio Tarantino, Stud.AIRAH, Stanford University (United States of America) Paper 050	Decarbonising the Australian housing stock for climate change John Shiel, University of Newcastle Paper 086
10.55-11.20	Comfort versus energy saving; the effect of building parameters on heating and cooling in Australian climates Mark Goldsworthy, CSIRO Paper 014	Renovating a pre-1980's weatherboard home; what about condensation? Mark Dewsbury, M.AIRAH, University of Tasmania Paper 060
11.20-11.45	Roof, walls and floor insulation study for the National Construction Code 2019 update Hongsen Zhang, M.AIRAH Energy Action Paper 064	A design tool for off-grid housing in Australia Zhengen Ren, CSIRO Paper 002
11.45-12.10	Glazing studies for the National Construction Code 2019 George Wang, Energy Action Paper 063	Differences in energy demands of the housing units in multi-family residential buildings Jea Eun Sung, Ajou University (South Korea) Paper 052





Preliminary Program – Day 1



12.10-13.15	LUNCH	
13.15-13.40	Rain intrusion behind insulated modules attached to façades of old buildings. A probabilistic modelling approach Carl-Eric Hagentoft, Chalmers University of Technology (Sweden) Paper 001	Thermal bridging - calculations and impact Erica Kenna, M.AIRAH, Energy Action Paper 062
13.40-14.05	Seasonal energy deficit of solar net-zero energy buildings in cold, high-latitude climates Brandon Wilbur, Ryerson University (Canada) Paper 083	Advances in CFD modelling for data centre optimisation Warwick Stannus, M.AIRAH, AG Coombs and Neil Silke, Data Centre CFD Paper 018
14.05-14.30	The influence of thermochronic glazing parameters on energy saving and comfort criteria using moment-independent measure Arthur Ah-Nieme, Stud.AIRAH, University of La Reunion (France) Paper 077	Technical feasibility of data centre heat recovery in a community energy network Adreon Murphy, Ryerson University (Canada) Paper 074
14.30-14.55	Exploring climate change and weather impacts on building design Roger Cladingboel, M.AIRAH, IES Non-technical paper presentation	Numerical modelling method for the design of data centre cooling Amin Azarmi, M.AIRAH, Aurecon Paper 042





Preliminary Program – Day 1



14.55–15.30	AFTERNOON TEA	
15.30-15.55	Australian Building Codes Board Workshop	
15.55-16.20		
16.20-16.45		
16.45-17.00	Conference Day 1 Close	
(1700 – 1900) Conference Cocktail Function		





Preliminary Program – Day 2



8.30–9.00	Registration	
9.00–9.15	Plenary room – Meeting rooms 105 and 106 Welcome by AIRAH and IBPSA	
9.15–10.00	Keynote speaker: Robert Cohen, Verco, (United Kingdom) Towards nearly zero-energy buildings – the role of simulation in the UK: past, present and future	
10.00-10.30	MORNING TEA	
SESSION	Plenary room - Meeting rooms 105 and 106	Breakout room – Meeting room 104
10.30-10.55	How HVAC designers and energy modellers should be preparing for a world with cheap, renewable energy Andrew Corney, Affil.AIRAH, Sefaria (United Kingdom) Non-technical paper presentation	Performance prediction of an air source heat pump water heater in Canadian conditions Alan Fung, Ryerson University (Canada) Paper 005
10.55-11.20	How do early phase performance modelling results compare to detailed methods? Priya Gandhi and Matt Sykes, Jacobs Paper 041	Simulating the effect of a building fire on ventilation systems Ulf Johansson, RED Fire Engineers Paper 006
11.20-11.45	Predicting peak demand in buildings under extreme conditions using a hybrid modelling approach Hao Huang, Buildings Alive Paper 043	Energy modelling of a gas-fired absorption heat pump in a residential home for cold climate using TRNSYS Kajen Ethirveerasigham, Ryerson University (Canada) Paper 045
11.45-12.10	From BIM (Building Information Modelling) to BEM (Building Energy Modelling): a collaborative approach Emma Heffernan, University of Wollongong Paper 033	A computational fluid dynamics micro-model parametric study assessing optimum riblet geometry for use in cooling coils James Paton, AECOM Paper 026



Preliminary Program – Day 2



12.10-13.15	LUNCH	
13.15-13.40	Modelling for potential increases in lighting power density stringency in Section J6 of the NCC Cynthia Jolley-Rogers, Energy Action Paper 071	Global optimisation of chiller sequencing and load balancing using shuffled complex evolution Iain Stewart, ClimateWorks Australia Paper 009
13.40-14.05	Practical modelling application - ICC Sydney Ken Thomson, M.AIRAH, BSA and Mei McNamara, Spotless Facility Management Paper 020	A comparison of fume cupboard exhaust plumes using CFD Michael Bonshek, AECOM and Nicki Parker, M.AIRAH, Norman, Disney & Young Paper 012
14.05-14.30	Building tuning using simulation – a practical case study Matt Webb, M.AIRAH, Umow Lai Paper 004	Energy performance assessment of existing buildings according to data availability Kyung-Hwa Cho, Ajou University (South Korea) Paper 058
14.30-14.55	Building performance improvements from NCC 2019 Paul Bannister, F.AIRAH, Energy Action Paper 061	Modelling constructions with phase change materials in dynamic building simulation programs Jorgen M. Schultz, Steensen Varming (Denmark) Paper 047





Preliminary Program – Day 2



14.55-15.30	AFTERNOON TEA	
15.30-15.55	Bridging simulation and real-world performance - case studies in building refurbishment projects Noni Nuriani, Norman, Disney & Young Non-technical paper presentation	Building energy optimisation using artificial neural network and ant colony optimisation Keivan Bamdad, Queensland University of Technology Paper 021
15.55-16.20	Workshop - BIM to BEM – dream or nightmare?	Spatial consideration in modelling assumptions for manual lighting control in offices Astrid Roetzel, Deakin University Paper 007
16.20-16.45		Comparison of building energy codes in Australia, United States and China for Australian commercial building energy conservation Yunlong Ma, Stud.AIRAH, Queensland University of Technology Paper 040
16.45-17.00	Conference day 2 close	



(17.00 – 18.00) Cocktail Function