

Tuesday

Session IV

	<i>Practices A</i> Water Resistive Barriers Chair: Rick Duncan	<i>Principles B</i> Boundary Conditions Chair: Sam Glass
8:30 a.m. to 10:00	<p>90 – Ernst Jan de Place Hansen Timber Frame Walls: Feasible With a Damaged Vapour Barrier?</p> <p>145 – Marcus Jablonka Innovative Passive Ventilation Water Resistive Barriers - How They Work?</p> <p>159 – Theresa Weston Evaluation of Cladding and Water Resistive Barrier Performance in Hot-Humid Climates Using a Real-Weather, Real-Time Test Facility</p> <p>191 – Mark Williams Evaluating Performance of “Next Generation” Water Resistive Barrier Materials Using Simple Ponding Tests</p>	<p>42 – Hans Bagge Indoor Hygrothermal Conditions in Multi-family Dwellings – Measurements and Analysis</p> <p>111 – Petter Wallentén The Treatment of Long Wave Radiation and Precipitation in Climate Files for Building Physics Simulations</p> <p>133 – Florian Antretter Interior Temperature and Relative Humidity Distributions in Mixed and Cold Climate as Building Simulation Boundary Conditions</p> <p>210 – Mikael Salonvaara Effect of Selected Weather Year for Hygrothermal Analyses</p>

Session V

	<i>Practices A</i> Low Energy Homes I Chair: Jeff Christian	<i>Principles B</i> Walls I Chair: John Scott
10:30 a.m. to 12:00	<p>50 – Dane Christensen Thermal Impact of Fasteners in High-Performance Wood-Framed Walls</p> <p>51 – Andreas Holm Innovative Concepts for a set of Net-Zero Energy Houses in the Middle East (Dubai)</p> <p>53 – Louise Goldberg A Prototype Universal Building Envelope Hygrothermal Performance Standard for Successful Net-Zero Energy Building Design</p>	<p>129 – Sam Yuan The Hygrothermal Performance of Wood Framed Wall Systems Using Spray Polyurethane Foam Insulations and a Smart Vapor Retarder in the Pacific Northwest</p> <p>196 – Kaushik Biswas Steady-State Thermal Performance Evaluation of Steel-Framed Wall Assembly with Local Foam Insulation</p> <p>227 – Wahid Maref Benchmarking 3D Thermal Model Against Field Measurement on the Thermal Response of an Insulating Concrete Form (ICF) Wall in Cold Climate</p>

Tuesday

Session VI

1:30 p.m. to 3:00 p.m.	Practices A Low Energy Homes II Chair: Mark Lawton	Principles B Walls II Chair: Paul Francisco
	108 – Eva-Lotta W. Kurkinen Low-Energy House with Heat Storage in the Ground Using Solar Collectors	43 – João Delgado Numerical Simulation of Exterior Condensations on Façades: The Undercooling Phenomenon
	214 – Jeffrey Christian The TVA Dollar a Day Energy Cost 235 m ² Research Home	49 – Craig Drumheller Effect of Cladding Systems on Moisture Performance of Wood-Framed Walls in a Mixed-Humid Climate
	193 – John Sherwin Performance of Four Near Zero Energy Homes: Lessons Learned	72 – Tadiwos Zerihun Desta Experimental and Numerical Analysis of Heat, Air and Moisture Transfer in a Light Weight Building Wall

Session VII

3:30 p.m. to 5:00 p.m.	Practices A Building Retrofit / Whole Building I Chair: Marcus Bianchi	Principles B Low Energy Homes Chair: Andreas Holm
	7 – Torben Valdbjørn Rasmussen Post-insulation of Existing Buildings Constructed Between 1850 and 1920	61 – Thomas Bednar Performance and Experiences with Austrian Demonstration Projects for Lowest Energy Houses (Passive Houses) in Social Housing
	8 – Erin Elizabeth Dixon NTED™: An Innovative Design Using Nested Thermal Envelopes To Achieve Significant Reductions In Energy Use	199 – Jan Kośny Dynamic Thermally—Disconnected Building Envelopes – A New Paradigm for Walls and Roofs in Low Energy Buildings
	56 – Graham Finch The Path Towards Net Zero High-Rise Residential Buildings: Lessons Learned from Current Practice	205 – John Broniek Detailed Modeling Study on How Different Assemblies Affect Comfort Conditions in Zero Energy House Designs