# Jour 1 Défis

## Ouverture
Human and Automated Intelligence in Comfort Provisioning  
*Raymond J. Cole*

## Session 1.1 Occupants

### PRÉSENTATIONS ORALES

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1</td>
<td>Buildings Don’t Use Energy: People Do</td>
<td>Kathryn B. Janda</td>
</tr>
<tr>
<td>1.1.2</td>
<td>New Expectations in Delivering Sustainable Building: From Occupant to Inhabitant</td>
<td>Zosia Brown, Raymond J. Cole, Meg O’Shea, John Robinson</td>
</tr>
<tr>
<td>1.1.3</td>
<td>Retrofitting Homes for Better Energy Performance: The Occupant’s Perspective</td>
<td>Paula San Payo Cadima</td>
</tr>
<tr>
<td>1.1.4</td>
<td>“Passive” Building Design and Active Inhabitants: The Potential of Frugal Hedonism?</td>
<td>Deborah White</td>
</tr>
<tr>
<td>1.1.5</td>
<td>Low Energy Architecture / Low Energy Living: Strategies for Passive Design at the Urban and Building Scales</td>
<td>Lisa D. Iulo</td>
</tr>
<tr>
<td>1.1.6</td>
<td>Optimising Life Cycle Energy Performance of Housing: The Value of Occupancy Control</td>
<td>Patxi Hernandez, Paul Kenny</td>
</tr>
<tr>
<td>1.1.7</td>
<td>Passive Low Energy Housing: Paradox of Behaviors</td>
<td>Thomas A. Gentry</td>
</tr>
<tr>
<td>1.1.8</td>
<td>A Time Use Survey Derived Integrative Human-Physical Household System Energy Performance Model</td>
<td>Yun-Shang Chiou</td>
</tr>
<tr>
<td>1.1.9</td>
<td>Four Years In</td>
<td>Four Years Out: Two University Buildings 2000-2008</td>
</tr>
<tr>
<td>1.1.10</td>
<td>Energy and Comfort Performance Evaluation after Renovation of an Office Building</td>
<td>Virginie Renzi, Françoise Burgun</td>
</tr>
<tr>
<td>1.1.11</td>
<td>North House: Developing Intelligent Building Technology and User Interface in Energy Independent Domestic Environments</td>
<td>Kathy Velikov, Lyn Bartram</td>
</tr>
</tbody>
</table>
PRÉSENTATIONS AFFICHES

1.1.12 The Architect’s Convictions & the Client’s Perspectives: A Case Study on Non-Technical Barriers
Luiz Paulo Coelho de Almerida Reis, Alosio Leoni Schmid

1.1.13 Energy Consumption in Office Buildings: Analysis of the influence of Architectural and Occupational Parameters
Leandra Beggiato Porto do Nascimento, Miriam Jeronimo Barbarosa

1.1.14 Comfort Delivery on Demand: An Adaptive Approach to Comfort Systems in Dwellings
Noortje Alders, Stanley Kurvers, Hans Cauberg

1.1.15 The Impact of Occupants’ Behavior on Electric Light Usage: A Case Study of Three Milwaukee, Wisconsin Nature Centers
Leyla Sanati, D. Michael Utzinger

1.1.16 Thermal performance and the Inhabitants’ Response: The Case of the Pulapa in Colima, Mexico
Adolfo Gomez-Amador, Armando Alcantara, Alicia Delgado

1.1.17 Retrofit of Bungalow Houses in Quebec to Improve Energy Efficiency and Thermal Comfort
Jean-Philippe Saucier, Marie-Claude Dubois

1.1.18 The Effect of Technological User Control Systems on Occupants of Sustainable Energy Homes The BASF House, Nottingham, UK
N. Hormazabal, M. Gillott, G. Guzman, G. Revell

1.1.19 Control System for Energy Reduction in Vacant Environments
Filbert Musau

Session 1.2 Communautés

PRÉSENTATIONS ORALES

1.2.1 Quadruple the Potential: Scaling the Energy Supply
Rob Roggema, Luke Middleton, Andy Van Den Dobbelsteen

1.2.2 Productive Urbanisms: From Runways to Greenways: Reykjavik Masterplan
Mason White, Lola Sheppard

1.2.3 The Nature | People Spectrum: Linking Experiences with Settings and Activities
Sue Donaldson

1.2.4 Morphometric Integrators of a Sustainable City
Luc Adolphe

1.2.5 Proposal of Indicators Dedicated to the Analysis of Contribution of Urban Projects to Urban Heat Island
Athamena Khaled, Musy Marjorie, Bouyer Julien

1.2.6 Causes of Urban Heat Island in Singapore: An Investigation Using Computational Fluid Dynamics
1.2.7 Sky View Factor Analysis of Street Canyons and its Implication for Urban Heat Island Intensity: A GIS-based Methodology Applied in Hong Kong
Liang Chen, Edward Ng

1.2.8 Air Ventilation Assessment System for High Density City: An Experience from Hong Kong
Edward Ng

1.2.9 An Outdoor Thermal Comfort Index for the Subtropics
Leonardo Marques Monteiro, Marcia Peinado Alucci

1.2.10 Microclimatic Performance of Urban Developments: A Simplified Analysis and Representation Technique
André Potvin, Claude Demers, Marie-Pierre Paré

1.2.11 Outdoor Elements Providing Urban Comfort: The Role of Fountains in the Soundscape
Catherine Semidor, Flora Venot-Gbedji

1.2.12 Green Walls: An Environmental Alternative for the City
Veronica Henriques Ardila, M. C. Giraldo Restrepo, L. F. Echeverri Montoya, O. E. Cano Sepulveda, A. C. Restrepo Acosta

1.2.13 Sustainable Urban Block Design Through Passive Architecture: A Tool that Uses Urban Geometry Optimization to Compute Energy Savings
Eugenio Morello, Virginia Gori, Carla Balocco, Carlo Ratti

1.2.14 Analytical Methods to Enhance Passive Urban Design
Alexej Goehring

1.2.15 Towards “Energy Efficient Cities”: Optimising the Energy, Energy and Resource Efficiency of the Demand and Supply Side on Settlement and Community Level
Christina Sager, Dawit Negash

1.2.16 Onsite Energy Yield and Demand in the Urban Built Form: Balancing Yield and Demand to Achieve Zero Carbon Communities
Ian Hamilton, Michael Davies, Philip Steadman

1.2.17 Modelling Domestic Stock Energy Use and Heat-related Health Risk: A GIS-based Bottom-up Modelling Approach
Anna Mavrogianni, Michael Davies, Zaid Chalabi, Paul Wilkinson, Maria Kolokotroni

PRÉSENTATIONS AFFICHES

1.2.18 Outdoor Thermal Comfort in the Hot arid Climate: The Effect of Socio-Economic Background and Cultural Differences
Faisal Aljawabra, Marialena Nikolopoulou

1.2.19 Development and Validation of a U-BIM Model For Mitigation of the Urban Heat Island Effect
Anupam Jain, Karen Kensek, Thomas Spiegelhalter, Marc Schiler, Farnoush Banaei-Kashani, Douglas Noble

1.2.20 Applying Numerical Simulation for Wind Availability: Studies of Urban Morphology for Urban Planning in Hong Kong
Law Pui Yin Kathy, Yiu Kam Po Vince, Ng Yan Yung Edward

1.2.21 Solar Energy Potential of Clusters on Sloped Terrains
Patricia Veloso Da Veiga, Mohamed Gadi

1.2.22 Residential Cluster, Ahmedabad: Housing based on the Traditional Pols
Kanika Agarwal

1.2.23 The Users’ Perspectives of Performance of Courtyard House Type in the UK
Goh, Ai Tee, Sibley, Magda

1.2.24 Sustainability Principles for the Urban Environmental Rehabilitation: The Case of the City of Manaus, Amazonas, Brazil
Vanessa V. Guilhon, Renan Leite, Marta Bustos Romero

1.2.18 Outdoor Thermal Comfort in the Hot arid Climate: The Effect of Socio-Economic Background and Cultural Differences
Faisal Aljawabra, Marialena Nikolopoulou

1.2.19 Development and Validation of a U-BIM Model For Mitigation of the Urban Heat Island Effect
Anupam Jain, Karen Kensek, Thomas Spiegelhalter, Marc Schiler, Farnoush Banaei-Kashani, Douglas Noble

1.2.20 Applying Numerical Simulation for Wind Availability: Studies of Urban Morphology for Urban Planning in Hong Kong
Law Pui Yin Kathy, Yiu Kam Po Vince, Ng Yan Yung Edward

Session 1.3 Éducation

PRÉSENTATIONS ORALES

1.3.1 Crystallized Pedagogy: Architecture as a Medium for Sustainability Education
Erik Bonnett, Victor W. Olgyay

1.3.2 Teaching Sustainable Strategies in Architecture: Learning from the Global Perspective
Jörg Rügemer

1.3.3 Transparencies: Reflections on the Evolution: Recurrences and Alternatives under an Environmental Perspective
Silvia Morel Correa

1.3.4 The Society of Building Science Educators’ Carbon Neutral Design Project: The CND
Building Case Study Protocols
James H. Wasley, Michael Utzinger

1.3.5 Carbon Footprinting: A Classroom Exercise
Harvey Bryan, Maria Grimm

1.3.6 Integrated Luminous and Thermal Design: A Cold Climate Approach to Zero-Energy Carbon-Neutral Design Education
Mary Guzowski, Loren Abraham

1.3.7 Carbon-Neutral McCall: Developing a Zero Energy Campus in McCall, Idaho
Frank Jacobus, Keith Bickford

1.3.8 USA Today: Being and Becoming – Sustainable Architecture in the USA
Ulrike Heine

1.3.9 A Student-centred POE Approach to Provide Evidence-based Feedback on the Sustainability Performance of Buildings
Rajat Gupta, Smita Chandiwala

PRÉSENTATIONS AFFICHES

1.3.10 Catharine Beecher's Home Designs and Environmental Control Concepts
Caroline Morais, Raymond Clark, Robert J. Krawczyk, Harry F. Mallgrave

1.3.11 Designs on the Planet: A Workshop Series on Architectural Education and the Challenges of Climate Change
Fionn Stevenson, Andrew Roberts, Sergio Almonte

Jour 2 Stratégies

Ouverture Pleasure and Performance
G.Z. Brown

Ouverture Move from Buildings to Communities for the Future of Sustainable Design
Peter Busby

Session 2.1 Éclairage naturel

PRÉSENTATIONS ORALES

2.1.1 Daylight and the Occupant: Visual and Physio-Psychological Well-Being in Built Environments
Sergio Almonte

2.1.2 A Study of Luminance Distribution Patterns and Occupant Preference in Daylit Offices
Kevin Van Den Wymelenberg, Mehlika Inanici

2.1.3 A Data Collection Method for Long-Term Field Studies of Visual Comfort in Real-World Daylit Office Environments
Denis Fan, Birgit Painter, John Mardaljevic
2.1.4 Sky Obstruction and Daylight: Using the Preferable Sky Window to Urban Daylight Analyses  
*Fernando O. Pereira, Solange M. Leder, Leticia N. Moraes, Cecilia Lenzi*

2.1.5 A First Application of the Lightsolve Approach: Pre-Design of the New Belgian VELUX Headquarters  
*Coralie Cauwerts, Magali Bodart, Marilyne Andersen*

2.1.6 The Model of DSE User Acceptability and Performance: Derivation of New Lighting Recommendation for the Classroom of the Future  
*Thartinee Ramasoot, Steve Fotios*

2.1.7 Towards an Occupant Based Conceptual Model: Case of the Natural Luminous Ambience  
*Azeddine Belakehal, Amar Bennadji, Kheira Tabet Aoul*

2.1.8 Digital Photography, a Tool for Lighting Research: High Resolution Sampling of Spherical Luminance Maps with Digital Photographic Technologies Applied to Diffuseness Descriptors  
*Miguel Santa Clara*

2.1.9 Daylit Classrooms at 47N, 117W: Insights from Occupation  
*Judy Theodorson*

2.1.10 The Relationship Between Inner Space Features And Daylighting Internally Reflected Component  
*Pereira F.O.R., Fonseca R., Claro A.*

2.1.11 Examples of Glare Remediation Techniques: Four Buildings  
*Marc Schiler*

2.1.12 Colorfulness and Reflectivity in Daylit Spaces  
*Esther Hagenlocher*

2.1.13 Improving Daylighting Performance of Mirrored Light Pipes: Passive vs. Active Collection Systems  
*Garcia Hansen, V., Edmonds, I., Bell, J.M.*

2.1.14 Environmental Shade for Protection from UVR: A Design & Teaching Resource  
*Christina Mackay*

### PRÉSENTATIONS AFFICHES

2.1.15 Daylit Spaces and Comfortable Occupants: A Variety of Luminous Ambiences in Support of a Diversity of Individuals  
*Catherine Dubois, Claude M.H. Demers, André Potvin*

2.1.16 Perceptual Interactions Between Light And Architecture: A Graphical Vocabulary Using Models and Photographs  
*Karole Biron, Claude M.H. Demers*

2.1.17 Active Participation in Passive Solar Design: The Poetics of Sustainability  
*Susan Melsop*

2.1.18 The Art of Brightness and Darkness: A Critical Investigation on Daylighting Quality
Wing Lam Lo, Koen Steemers

2.1.19 Daylight Prediction in Atrium Buildings: Measurement, Theoretical Analysis and Simulation
Jiangtao Du, Steve Sharples

2.1.20 Comparative Daylight Glare Analysis Between Measured and Computer Simulation Predictions
Marisela Mendoza

2.1.21 Simulating Complex Window Systems using BSDF Data
Maria Konstantoglou, Jacob C. Jonsson, Eleonor Lee

Session 2.2 Chauffage et refroidissement passifs

PRÉSENTATIONS ORALES

2.2.1 Solar Buildings Research Network Demonstration Projects: Towards Net Zero Energy Consumption
Andreas K Athienitis, José A Candanedo, Brendan O’Neill

2.2.2 Performance of Low-Energy Homes During Power Interruptions: Moderating the Impact of Sustained Energy Interruptions
Russell C. Richam, Adam M. Kirsh, Kim D. Pressnail

2.2.3 Application of Predictive Control Strategies in a Net Zero Energy Solar House
José A. Candanedo, Andreas K. Athienitis

2.2.4 Experiences from New Swedish Passive House Projects
Ulla Janson

2.2.5 Energy Efficiency of Buildings with a Solar Space: Two Case Studies from the Anatolian Plateau
Soofia T. Elias-Özkan, Françoise Summers, Özün Taner

2.2.6 Passive Heating: Performance of Different Facade Types
Jessica Verdonschot, Wim Zeiler, Gert Boxem

2.2.7 Learning from the Past: Environmental Aspects of the Traditional Settlements of Mt Verno, Greece
Aineias Oikonomou, Flora Bougiatioti

2.2.8 Using the Landscape for Passive Cooling and Bioclimatic Control: Applications for Higher Density and Larger Scale
Steven A. Sandifer

2.2.9 Chhaya 2.0: Using a Dynamic Balance Point to Extend the Passive Season
Vikram Sami, Victor Olgyay

2.2.10 Air Movement Preference and Thermal Comfort: A Survey in Classrooms During Summer Season in Brazil
Christhina Candido, Richard De Dear, Roberto Lamberts, Leonardo Bittencourt

2.2.11 Formulating an Alternative Methodology for Singapore’s Envelope Thermal Transfer
Value Calculation: Accounting for Non-Conventional Shading Strategies
Clarice Fong, Wu Xuchao, Ery Djunaedy

2.2.12 Exterior Louvers as a Passive Cooling Strategy in a Residential Building: Computational Fluid Dynamics and Building Energy Simulation Modelling
Abel Tablada, Jan Carmeliet, Martine Baelmans, Dirk Saelens

2.2.13 Low-cost, Passively-Cooled Medicine Warehouses for Hot Climates: A Design and Construction Manual
Gian Luca Brunetti

2.2.14 Social Housing in Costa Rica’s Warm Humid Climate: Strategies & Considerations for Passive Design
Michael Smith-Masis

2.2.15 Analysis of Night Ventilation Potential for Residential Buildings in Hot-Humid Climate of Malaysia
Doris Toe Hooi Chyee, Tetsu Kubota

2.2.16 Underground Passenger Comfort: Rethinking the Current Thermal and Lighting Standards
Krista Murray Raines

2.2.17 Low Cost Green Roofs for Cooling: Experimental Series in a Hot and Dry Climate
Pablo La Roche

2.2.18 Green Roof Performance: Passive Design Implications in Los Angeles, California
Miriam Figueroa, Marc Schiler

2.2.19 Displacement Ventilation and Passive Cooling Strategies
Paul Carew, Bernard Bekker

2.2.20 Effect of Evaporative Cooling Techniques by Spraying Mist Water on Energy Saving in Apartment House
Daisuke Narumi, Kentaro Shigematsu, Yoshiyuki Shimoda

PRÉSENTATIONS AFFICHES

2.2.21 Environmental Retrofit: Energy Upgrades of Urban Dwellings
Jorge Rodriguez Alvarez

2.2.22 Improvement of Energy Performances of Existing Buildings in Suburban Settlements
Aleksandra Krsic-Furundzic, Vesna Kosoric

2.2.23 Improvement of Energy Performances of Dwelling Housing in Belgrade
Tatjana Kosic, Aleksandra Krsic-Furundzic, Aleksandar Rajcic, Dusko Maksimovic

2.2.24 Perception of Thermal Comfort for Naturally Ventilated High School Classrooms in San Rafael, California
Gwenedd Murray

Gangrong Lei

2.2.26 The Impact of Balconies on Wind Induced Ventilation of Single-sided Naturally
Ventilated Multi-storey Apartment
M.F. Mohamed, D. Prasad., S. King, K. Hirota

2.2.27 Designing the Malqaf for Summer Cooling in Low-Rise Housing, an Experimental Study
Shady Attia, André De Herde

2.2.28 Thermal Response of Dwellings in Northwest Mexico: Applying Passive Design Strategies
O.A. Preciado Perez, S. A. Fotios

2.2.29 Comparison of the Effects of Various Countermeasures on Energy Consumption in a Residential Building
Takahiro Uemoto, Daisuke Narumi, Yoshiyuki Shimoda

2.2.30 Innovative Systems for Energy Efficient Building Envelopes: Applications at Middle Latitudes (temperate/mesothermal climates)
Monica Rossi

2.2.31 Indoor Climate Control Effect of AAC Panel Heat Capacity: Experimental Rooms and Simulations with Three Structural Materials
Yuko Tsukiyama, Nobuyuki Sunaga, Akiko Suzuki, Tamaki Fukazawa, Yosuke Chiba

2.2.32 Potential of Indirect Evaporative Passive Cooling with Embedded Tubes in a Humid Tropical Climate: Applications in a Typical Hot Humid Climate
Jose Roberto Garcia Chavez, Baruch Givoni, Oscar Viveros

2.2.33 Alternating, Decentralized, Regenerative Ventilation System
Andras Csiha

2.2.34 Study on Reusing Abandoned Chimneys as Solar Chimneys to Induce Breeze in Residential Areas
Azuka Takayama, Koichi Asano, Shigemitsu Shuchi, Kenichi Hasegawa

2.2.35 Bioclimatic Strategies for Seaside Resorts on Greek Islands
Maria Ampatzi

2.2.36 Towards Environmental - Responsive Electronics Megastores: A Case Study in Markopoulo, Greece
Leonidas Beis

2.2.37 Green Walls: Environmental Quality in Buildings
Denise Damas de Oliveira Morelli, Lucila Chabel Labaki

Session 2.3 Évaluation post-occupationnelle

PRÉSENTATIONS ORALES

2.3.1 Architectural Pride and Environmental Prejudice: The Effect of Personal Status, Historical Value, and Indoor Décor on Occupants Indoor Environmental Quality in Offices
Ihab Elzeyadi

2.3.2 Sustainability & Satisfaction: Findings from Field Studies of Office Buildings in the UK and India
Shweta Manchanda, Koen Steemers
2.3.3 Occupant Satisfaction in Post-Refurbishment of Historic Buildings: Baroque Case Studies in Valletta, Malta
Vincent M. Buhagiar

2.3.4 (Re)developing for Environmental Performance: Learning from the Occupants’ Perspective
Leena Thomas

2.3.5 What Can Buildings Tell Us, What Can We Tell Back
Simos Yannas

2.3.6 The ROSE of Environmental Satisfaction and Adaptability: Intolerance, comfort and pleasantness in architecture
Claude MH Demers, André Potvin

2.3.7 Examining the Interrelationships of Microclimate, Construction Performance and User Behaviour, to Inform Design Strategies
Mary Hancock, Fionn Stevenson

2.3.8 Long Term Monitoring of Window Opening Behaviour: Investigation of Drivers for Behaviour in Danish Dwellings
Rune Vinther Andersen, Jorn Toftum, Bjarne W. Olesen

2.3.9 Thermal Performance Evaluation of Low Cost Housing in Santa Maria, Brazil
Giane De Campos Grigolletti, Renata Rotta, Sâmila Müller

2.3.10 Comfort Temperatures Inside Low-Cost Housing: Six Warm Climate Cities in Mexico
Gomez-Azpeitia, G., Bojorquez, G., Ruiz, P., Romero, R., Ochoa, J., Perez, M., Resendiz, O., Llamas, A.

2.3.11 Adaptive Thermal Comfort for Buildings in Portugal based on Occupants’ Thermal Perception
Matias L., Almeida S., Pina Santos C., Rebelo M., Correia Guedes M.

2.3.12 Adaptive Thermal Comfort in Warm Dry Climate: Economical Dwellings in Mexico
Marincic, I., Ochoa J.M., Alpuche, M.G., Gomez-Azpeitia, G.

2.3.13 Thermal Analysis of a Naturally Ventilated Building an Adaptive Comfort Algorithm: A case study of Miele Corporate Headquarters, Johannesburg, Gauteng
C G Joubert

2.3.14 Analyses of IEQ and User Satisfaction in 20 Office Buildings: Significant Findings to Impact Future Design Standards and Guidelines
Joonho Choi, Vivian Loftness, Azizan Aziz

2.3.15 Occupant Satisfaction with the Acoustical Environment: “Green” Office Buildings Before and After Treatment
Murray Hodgson

2.3.16 Post-Occupancy Evaluation: Three Schools from Greater Toronto
Vera Straka, Mila Aleksic

2.3.17 Air Temperature and CO₂ Variations in a Naturally Ventilated Classroom under a Nordic Climate
Silvestre Celis Mercier, André Potvin, Michel Tardif
2.3.18 The Vernacular Dwellings of Mount Pelion in Greece: A Migratory Living Pattern
Natalia Sakarello-Tousi, Benson Lau

2.3.19 Post-Occupancy Evaluation Study of an Educational Building in Mexico: Occupant’s Perception vs. Occupancy Survey
Mundo, J., Valerdi, M., Sosa, J., Arenalde, B.

2.3.20 Field and Semi-Field Surveys on Thermal-Environment Experience and Its Associated Acquired Cognition by Family Members, Parents and Children
Nobue Suzuki, Masanori Shukuya

2.3.21 Thermal Comfort and Occupant Perception in Dwellings for the Low-Income Sector in Hot Climates of Mexico

2.3.22 Evaluation of the Environmental Comfort Conditions in a large Apartment Building: The COPAN Case Study, São Paulo, Brazil
Walter Jose Ferreira Galvao, Sheila Walbe Ornstein

2.3.23 Green Space Influence on Thermal Comfort: Contrasting Approaches in the Assessment of Conditions in Bragança (Portugal)
Arthur Gonçalves, Antonio Ribeiro, Luis Nunes, Filipe Maia, E Manuel Feliciano

2.3.24 Hammâms of North Africa: An Architectural Study of Sustainability Concepts in a Historical Traditional Building
Fodil Fadli, Magda Sibley

Jour 3 Intégration

Ouverture The Integrated Design Process Leading to the New Manitoba Hydro Headquarter
Bruce Kuwabara, Thomas Auer, Glen Kyym, Tom Gouldsborough

Session 3.1 Processus de design

PRÉSENTATIONS ORALES

3.1.1 Integrated Design Process: from Analysis/Synthesis to Conjecture/Analysis
Maureen Trebilcock

3.1.2 Barriers to Zero Energy Construction (ZEC) Technically Possible: Why Not Succeed Yet?
Gaby Abdalla, Ger Maas, Jules Huyghe

3.1.3 The Sacred Cow
Alexandros N. Tombazis

3.1.4 Adaptive and Interactive Metrics: A Hidden Opportunity in Design-for-Sustainability
Robert J. Koester, Sandeep Arora

3.1.5 The Development of a Tool for Sustainable Building Design: Facilitates Investigation of
the Creative Space
_Hanne Tine Hansen, Mary-Ann Knudstrup_

3.1.6 The Choice of Materials in Architecture: How Ecology Influences our Cognitive and Cultural Schemas
_Nathalie Tornay, Frédéric Bonneaud, Luc Adolphe_

3.1.7 The First “Comfort Houses” in Denmark: Experiences of Different Design Processes
_Camilla Brunsgaard, Mary-Ann Knudstrup, Per Heiselberg_

3.1.8 New Conceptual Model for Improving Design Team Performance
_Alan Harries_

**PRÉSENTATIONS AFFICHES**

3.1.9 Envelope Design, Energy Consumption and Thermal Performance: A Case Study at UFRN Campus, Brazil
_Raoni Venancio, Aldomar Pedrini_

3.1.10 An Evolutionary Architecture: Adapted, Interactive, and Effectively Integrated Design
_Sandeep Arora, Shweta Saxena_

3.1.11 Sustainability as Driver of Architectural Practices: San Francisco Federal Building Case
_Maria Gabriela Zapata Poveda_

---

**Session 3.2 Outils de certification**

**PRÉSENTATIONS ORALES**

3.2.1 International Applications of Building Certification Methods: A Comparison of BREEAM and LEED
_Angela Rivera_

3.2.2 The Morphological Diagram: A comprehensive toll for design and analysis in Architecture
_Claudia Naves David Amorim_

3.2.3 POE, EMS, and Building Energy Performance Certificate Implementation at USC, L.A.
_Thomas Spiegelhalter_

3.2.4 Open Stadium Design Aspects for Cold Climates
_Agota Szucs, Francis Allard, Sophie Moreau_

3.2.5 A Two Stories Office Building Designed for the Southern Brazilian Climate
_Marianne Costella_

3.2.6 Energy Conservation Improvement of the Existing Building Park, Constraints and Challenges: Case of Granite Traditional Constructions in the United Kingdom
_Bennajdi Amar, Scott Jonathan and Taylor Bruce_

**PRÉSENTATIONS AFFICHES**

3.2.7 “Think Globally, Act Locally”: A Regionalistic Approach to the Selection of Building Materials in Greece
3.2.8 Sizzling Green: Integrated Design Process for Greener Institutional Kitchens
Judhajit Chakraborty, Phillip H. Bahr

3.2.9 Proposal for an energy-environmental retrofit and planning procedure for historical centres by means of an energy analysis on a technological scale
Maria Cristina Forlani, Fabrizio Chella

Session 3.3 Matériaux, assemblages and systèmes innovants

PRÉSENTATIONS ORALES

3.3.1 Climate Controls in a Historic House Museum in the Tropics: A case study of collection care and human comfort
Shin Maekawa, Claudia Carvalho, Franciza Toledo, Vincent Beltran

3.3.2 Hybrid Ventilation Systems and High Performance Buildings
D. Michael Utzinger

3.3.3 Fine-Wire Heat Exchanger Works at Very Low Temperature
Jon Kristinsson, Andy Van Den Dobbelsteen, Arjan Van Timmeren

3.3.4 Thermal Energy Storage and the Passive House Standard: How PCM Incorporated Into Wallboard Can Aid Thermal Comfort
Shane Colclough, Philip Griffiths, Stefan Gschwander

3.3.5 The Carriage House: Renewable Resource Integration of Energy and Water in a Cold Climate
Martin R. Yoklic, Stefanie Vaughan Gerstle

3.3.6 The Informed Application of Building-Integrated Wind Power
John Breshears, Craig Briscoe

PRÉSENTATIONS AFFICHES

3.3.7 Embodied energy in Wall Subsystems of More Sustainable Buildings
Miguel Alosyio Sattler, Eugenia Aumond Kuhn, Danielle Tubino Pante De Souza

3.3.8 CO₂ Emission by Different Building Materials for Walls; Case: Housing in Colima, Mexico
Gabriel Gomez-Azpeitia, Victor Arvizu, Pablo Arena

3.3.9 Life Cycle Energy Analysis of Thermal Insulation: Agricultural waste materials in Thailand
Satta Panyakaew, Steve Fotios
Day 1  Challenges

Keynote  Human and Automated Intelligence in Comfort Provisioning  
*Raymond J. Cole*

Session 1.1  Occupants

ORAL PAPERS

1.1.1  Buildings Don’t Use Energy: People Do  
*Kathryn B. Janda*

1.1.2  New Expectations in Delivering Sustainable Building: From Occupant to Inhabitant  
*Zosia Brown, Raymond J. Cole, Meg O’Shea, John Robinson*

1.1.3  Retrofitting Homes for Better Energy Performance: The Occupant’s Perspective  
*Paula San Payo Cadima*

1.1.4  “Passive” Building Design and Active Inhabitants: The Potential of Frugal Hedonism?  
*Deborah White*

1.1.5  Low Energy Architecture / Low Energy Living: Strategies for Passive Design at the Urban and Building Scales  
*Lisa D. Iulo*

1.1.6  Optimising Life Cycle Energy Performance of Housing: The Value of Occupancy Control  
*Patxi Hernandez, Paul Kenny*

1.1.7  Passive Low Energy Housing: Paradox of Behaviors  
*Thomas A. Gentry*

1.1.8  A Time Use Survey Derived Integrative Human-Physical Household System Energy Performance Model  
*Yun-Shang Chiou*

1.1.9  Four Years In | Four Years Out: Two University Buildings 2000-2008  
*Jenny Lovell*

1.1.10  Energy and Comfort Performance Evaluation after Renovation of an Office Building  
*Virginie Renzi, Françoise Burgun*

1.1.11  North House: Developing Intelligent Building Technology and User Interface in Energy Independent Domestic Environments  
*Kathy Velikov, Lyn Bartram*
POSTER PAPERS

1.1.12 The Architect’s Convictions & the Client’s Perspectives: A Case Study on Non-Technical Barriers
Luiz Paulo Coelho de Almerida Reis, Alosio Leoni Schmid

1.1.13 Energy Consumption in Office Buildings: Analysis of the influence of Architectural and Occupational Parameters
Leandra Beggiato Porto do Nascimento, Miriam Jeronimo Barbarosa

1.1.14 Comfort Delivery on Demand: An Adaptive Approach to Comfort Systems in Dwellings
Noortje Alders, Stanley Kurvers, Hans Cauberg

1.1.15 The Impact of Occupants’ Behavior on Electric Light Usage: A Case Study of Three Milwaukee, Wisconsin Nature Centers
Leyla Sanati, D. Michael Utzinger

1.1.16 Thermal performance and the Inhabitants’ Response: The Case of the Palapa in Colima, Mexico
Adolfo Gomez-Amador, Armando Alcantara, Alicia Delgado

1.1.17 Retrofit of Bungalow Houses in Quebec to Improve Energy Efficiency and Thermal Comfort
Jean-Philippe Saucier, Marie-Claude Dubois

1.1.18 The Effect of Technological User Control Systems on Occupants of Sustainable Energy Homes The BASF House, Nottingham, UK
N. Hormazabal, M. Gillott, G. Guzman, G. Revell

1.1.19 Control System for Energy Reduction in Vacant Environments
Filbert Musau

Session 1.2 Communities

ORAL PAPERS

1.2.1 Quadruple the Potential: Scaling the Energy Supply
Rob Roggema, Luke Middleton, Andy Van Den Dobbelsteen

1.2.2 Productive Urbanisms: From Runways to Greenways: Reykjavik Masterplan
Mason White, Lola Sheppard

1.2.3 The Nature | People Spectrum: Linking Experiences with Settings and Activities
Sue Donaldson

1.2.4 Morphometric Integrators of a Sustainable City
Luc Adolphe

1.2.5 Proposal of Indicators Dedicated to the Analysis of Contribution of Urban Projects to Urban Heat Island
Athamena Khaled, Musy Marjorie, Bouyer Julien

1.2.6 Causes of Urban Heat Island in Singapore: An Investigation Using Computational Fluid Dynamics
Rajagopalan Priyadarsini, Wong Nyuk Hien
1.2.7 Sky View Factor Analysis of Street Canyons and its Implication for Urban Heat Island Intensity: A GIS-based Methodology Applied in Hong Kong
Liang Chen, Edward Ng

1.2.8 Air Ventilation Assessment System for High Density City: An Experience from Hong Kong
Edward Ng

1.2.9 An Outdoor Thermal Comfort Index for the Subtropics
Leonardo Marques Monteiro, Marcia Peinado Alucci

1.2.10 Microclimatic Performance of Urban Developments: A Simplified Analysis and Representation Technique
André Potvin, Claude Demers, Marie-Pierre Paré

1.2.11 Outdoor Elements Providing Urban Comfort: The Role of Fountains in the Soundscape
Catherine Semidor, Flora Venot-Gbedji

1.2.12 Green Walls: An Environmental Alternative for the City
Veronica Henrques Ardila, M. C. Giraldo Restrepo, L. F. Echeverri Montoya, O. E. Cano Sepulveda, A. C. Restrepo Acosta

1.2.13 Sustainable Urban Block Design Through Passive Architecture: A Tool that Uses Urban Geometry Optimization to Compute Energy Savings
Eugenio Morello, Virginia Gori, Carla Balocco, Carlo Ratti

1.2.14 Analytical Methods to Enhance Passive Urban Design
Alexej Goehring

1.2.15 Towards “Energy Efficient Cities”: Optimising the Energy, Energy and Resource Efficiency of the Demand and Supply Side on Settlement and Community Level
Christina Sager, Dawit Negash

1.2.16 Onsite Energy Yield and Demand in the Urban Built Form: Balancing Yield and Demand to Achieve Zero Carbon Communities
Ian Hamilton, Michael Davies, Philip Steadman

1.2.17 Modelling Domestic Stock Energy Use and Heat-related Health Risk: A GIS-based Bottom-up Modelling Approach
Anna Mavrogianni, Michael Davies, Zaid Chalabi, Paul Wilkinson, Maria Kolokotroni

POSTER PAPERS

1.2.18 Outdoor Thermal Comfort in the Hot arid Climate: The Effect of Socio-Economic Background and Cultural Differences
Faisal Aljawabra, Marialena Nikolopoulou

1.2.19 Development and Validation of a U-BIM Model For Mitigation of the Urban Heat Island Effect
Anupam Jain, Karen Kensek, Thomas Spiegelhalter, Marc Schiler, Farnoush Banaei-Kashani, Douglas Noble

1.2.20 Applying Numerical Simulation for Wind Availability: Studies of Urban Morphology for Urban Planning in Hong Kong
Law Pui Yin Kathy, Yiu Kam Po Vince, Ng Yan Yung Edward
Solar Energy Potential of Clusters on Sloped Terrains  
*Patricia Veloso Da Veiga, Mohamed Gadi*

Residential Cluster, Ahmedabad: Housing based on the Traditional Pols  
*Kanika Agarwal*

The Users’ Perspectives of Performance of Courtyard House Type in the UK  
*Goh, Ai Tee, Sibley, Magda*

Sustainability Principles for the Urban Environmental Rehabilitation: The Case of the City of Manaus, Amazonas, Brazil  
*Vanessa V. Guilhon, Renan Leite, Marta Bustos Romero*

Outdoor Thermal Comfort in the Hot arid Climate: The Effect of Socio-Economic Background and Cultural Differences  
*Faisal Aljawabra, Marialena Nikolopoulou*

Development and Validation of a U-BIM Model For Mitigation of the Urban Heat Island Effect  
*Anupam Jain, Karen Kensek, Thomas Spiegelhalter, Marc Schiler, Farnoush Banaei-Kashani, Douglas Noble*

Applying Numerical Simulation for Wind Availability: Studies of Urban Morphology for Urban Planning in Hong Kong  
*Law Pui Yin Kathy, Yiu Kam Po Vince, Ng Yan Yung Edward*

Solar Energy Potential of Clusters on Sloped Terrains  
*Patricia Veloso Da Veiga, Mohamed Gadi*

Residential Cluster, Ahmedabad: Housing based on the Traditional Pols  
*Kanika Agarwal*

The Users’ Perspectives of Performance of Courtyard House Type in the UK  
*Goh, Ai Tee, Sibley, Magda*

Sustainability Principles for the Urban Environmental Rehabilitation: The Case of the City of Manaus, Amazonas, Brazil  
*Vanessa V. Guilhon, Renan Leite, Marta Bustos Romero*

**Session 1.3 Education**

**ORAL PAPERS**

1.3.1 Crystallized Pedagogy: Architecture as a Medium for Sustainability Education  
Erik Bonnett, Victor W. Olgyay

1.3.2 Teaching Sustainable Strategies in Architecture: Learning from the Global Perspective  
*Jörg Rügemer*

1.3.3 Transparencies: Reflections on the Evolution: Recurrences and Alternatives under an Environmental Perspective  
*Silvia Morel Correa*

1.3.4 The Society of Building Science Educators’ Carbon Neutral Design Project: The CND Building Case Study Protocols
James H. Wasley, Michael Utzinger

1.3.5  Carbon Footprinting: A Classroom Exercise
      Harvey Bryan, Maria Grimm

1.3.6  Integrated Luminous and Thermal Design: A Cold Climate Approach to Zero-Energy Carbon-Neutral Design Education
      Mary Gązowska, Loren Abraham

1.3.7  Carbon-Neutral McCall: Developing a Zero Energy Campus in McCall, Idaho
      Frank Jacobus, Keith Bickford

1.3.8  USA Today: Being and Becoming – Sustainable Architecture in the USA
      Ulrike Heine

1.3.9  A Student-centred POE Approach to Provide Evidence-based Feedback on the Sustainability Performance of Buildings
      Rajat Gupta, Smita Chandiwala

POSTER PAPERS

1.3.10 Catharine Beecher's Home Designs and Environmental Control Concepts
       Caroline Morais, Raymond Clark, Robert J. Krawczyk, Harry F. Mallgrave

1.3.11 Designs on the Planet: A Workshop Series on Architectural Education and the Challenges of Climate Change
       Fionn Stevenson, Andrew Roberts, Sergio Almonte

Day 2  Strategies

      Keynotes
      Pleasure and Performance
      G.Z. Brown

      Move from Buildings to Communities for the Future of Sustainable Design
      Peter Busby

Session 2.1  Daylighting

ORAL PAPERS

2.1.1  Daylight and the Occupant: Visual and Physio-Psychological Well-Being in Built Environments
       Sergio Almonte

2.1.2  A Study of Luminance Distribution Patterns and Occupant Preference in Daylit Offices
       Kevin Van Den Wymelenberg, Mehlika Inanici

2.1.3  A Data Collection Method for Long-Term Field Studies of Visual Comfort in Real-World Daylit Office Environments
       Denis Fan, Birgit Painter, John Mardaljevic

2.1.4  Sky Obstruction and Daylight: Using the Preferable Sky Window to Urban Daylight Analyses
A First Application of the Lightsolve Approach: Pre-Design of the New Belgian VELUX Headquarters
_Coralie Cauwerts, Magali Bodart, Marilyne Andersen_

The Model of DSE User Acceptability and Performance: Derivation of New Lighting Recommendation for the Classroom of the Future
_Tharinee Ramasoot, Steve Fotios_

Towards an Occupant Based Conceptual Model: Case of the Natural Luminous Ambience
_Azeddine Belakehal, Amar Bennadji, Kheira Tabet Aoul_

Digital Photography, a Tool for Lighting Research: High Resolution Sampling of Spherical Luminance Maps with Digital Photographic Technologies Applied to Diffuseness Descriptors
_Miguel Santa Clara_

Daylit Classrooms at 47N, 117W: Insights from Occupation
_Judy Theodorson_

The Relationship Between Inner Space Features And Daylighting Internally Reflected Component
_Pereira F.O.R., Fonseca R., Claro A._

Examples of Glare Remediation Techniques: Four Buildings
_Marc Schiler_

Colorfulness and Reflectivity in Daylit Spaces
_Esther Hagenlocher_

Improving Daylighting Performance of Mirrored Light Pipes: Passive vs. Active Collection Systems
_Garcia Hansen, V., Edmonds, I., Bell, J.M._

Environmental Shade for Protection from UVR: A Design & Teaching Resource
_Christina Mackay_

Daylit Spaces and Comfortable Occupants: A Variety of Luminous Ambiences in Support of a Diversity of Individuals
_Catherine Dubois, Claude M.H. Demers, André Potvin_

Perceptual Interactions Between Light And Architecture: A Graphical Vocabulary Using Models and Photographs
_Karole Biron, Claude M.H. Demers_

Active Participation in Passive Solar Design: The Poetics of Sustainability
_Susan Melsop_

The Art of Brightness and Darkness: A Critical Investigation on Daylighting Quality
_Wing Lam Lo, Koen Steemers_

Daylight Prediction in Atrium Buildings: Measurement, Theoretical Analysis and
Simulation
Jiangtao Du, Steve Sharples

2.1.20 Comparative Daylight Glare Analysis Between Measured and Computer Simulation Predictions
Marisela Mendoza

2.1.21 Simulating Complex Window Systems using BSDF Data
Maria Konstantoglou, Jacob C. Jonsson, Elenaor Lee

Session 2.2 Passive Heating and Cooling

ORAL PAPERS

2.2.1 Solar Buildings Research Network Demonstration Projects: Towards Net Zero Energy Consumption
Andreas K Athienitis, José A Candanedo, Brendan O’Neill

2.2.2 Performance of Low-Energy Homes During Power Interruptions: Moderating the Impact of Sustained Energy Interruptions
Russell C. Richam, Adam M. Kirsh, Kim D. Pressnail

2.2.3 Application of Predictive Control Strategies in a Net Zero Energy Solar House
José A. Candanedo, Andreas K. Athienitis

2.2.4 Experiences from New Swedish Passive House Projects
Ulla Janson

2.2.5 Energy Efficiency of Buildings with a Solar Space: Two Case Studies from the Anatolian Plateau
Soofia T. Elias-Özkan, Françoise Summers, Özün Taner

2.2.6 Passive Heating: Performance of Different Facade Types
Jessica Verdonschot, Wim Zeiler, Gert Boxem

2.2.7 Learning from the Past: Environmental Aspects of the Traditional Settlements of Mt Verno, Greece
Aineias Oikonomou, Flora Bougiatioti

2.2.8 Using the Landscape for Passive Cooling and Bioclimatic Control: Applications for Higher Density and Larger Scale
Steven A. Sandifer

2.2.9 Chhaya 2.0: Using a Dynamic Balance Point to Extend the Passive Season
Vikram Sami, Victor Olgyay

2.2.10 Air Movement Preference and Thermal Comfort: A Survey in Classrooms During Summer Season in Brazil
Christhina Candido, Richard De Dear, Roberto Lamberts, Leonardo Bittencourt

2.2.11 Formulating an Alternative Methodology for Singapore’s Envelope Thermal Transfer Value Calculation: Accounting for Non-Conventional Shading Strategies
Clarice Fong, Wu Xuchao, Ery Djunaedy
2.2.12 Exterior Louvers as a Passive Cooling Strategy in a Residential Building: Computational Fluid Dynamics and Building Energy Simulation Modelling
Abel Tablada, Jan Carmeliet, Martine Baelmans, Dirk Saelens

2.2.13 Low-cost, Passively-Cooled Medicine Warehouses for Hot Climates: A Design and Construction Manual
Gian Luca Brunetti

2.2.14 Social Housing in Costa Rica’s Warm Humid Climate: Strategies & Considerations for Passive Design
Michael Smith-Masis

2.2.15 Analysis of Night Ventilation Potential for Residential Buildings in Hot-Humid Climate of Malaysia
Doris Toe Hooi Chyee, Tetsu Kubota

2.2.16 Underground Passenger Comfort: Rethinking the Current Thermal and Lighting Standards
Krista Murray Raines

2.2.17 Low Cost Green Roofs for Cooling: Experimental Series in a Hot and Dry Climate
Pablo La Roche

2.2.18 Green Roof Performance: Passive Design Implications in Los Angeles, California
Miriam Figueroa, Marc Schiler

2.2.19 Displacement Ventilation and Passive Cooling Strategies
Paul Carew, Bernard Bekker

2.2.20 Effect of Evaporative Cooling Techniques by Spraying Mist Waster on Energy Saving in Apartment House
Daisuke Narumi, Kentaro Shigematsu, Yoshiyuki Shimoda

POSTER PAPERS

2.2.21 Environmental Retrofit: Energy Upgrades of Urban Dwellings
Jorge Rodriguez Alvarez

2.2.22 Improvement of Energy Performances of Existing Buildings in Suburban Settlements
Aleksandra Krstic-Furundzic, Vesna Kosoric

2.2.23 Improvement of Energy Performances of Dwelling Housing in Belgrade
Tatjana Kosic, Aleksandra Krstic-Furundzic, Aleksandar Rajcic, Dusko Maksimovic

2.2.24 Perception of Thermal Comfort for Naturally Ventilated High School Classrooms in San Rafael, California
Gwenedd Murray

Gangrong Lei

2.2.26 The Impact of Balconies on Wind Induced Ventilation of Single-sided Naturally Ventilated Multi-storey Apartment
M.F. Mohamed, D. Prasad., S. King, K. Hirota
2.2.27 Designing the Malqaf for Summer Cooling in Low-Rise Housing, an Experimental Study
Shady Attia, André De Herde

2.2.28 Thermal Response of Dwellings in Northwest Mexico: Applying Passive Design Strategies
O.A. Preciado Perez, S. A. Fotios

2.2.29 Comparison of the Effects of Various Countermeasures on Energy Consumption in a Residential Building
Takahiro Uemoto, Daisuke Narumi, Yoshiyuki Shimoda

2.2.30 Innovative Systems for Energy Efficient Building Envelopes: Applications at Middle Latitudes (temperate/mesothermal climates)
Monica Rossi

2.2.31 Indoor Climate Control Effect of AAC Panel Heat Capacity: Experimental Rooms and Simulations with Three Structural Materials
Yuko Tsukiyama, Nobuyuki Sunaga, Akiko Suzuki, Tamaki Fukazawa, Yosuke Chiba

2.2.32 Potential of Indirect Evaporative Passive Cooling with Embedded Tubes in a Humid Tropical Climate: Applications in a Typical Hot Humid Climate
Jose Roberto Garcia Chavez, Baruch Givoni, Oscar Viveros

2.2.33 Alternating, Decentralized, Regenerative Ventilation System
Andras Csiha

2.2.34 Study on Reusing Abandoned Chimneys as Solar Chimneys to Induce Breeze in Residential Areas
Azuka Takayama, Koichi Asano, Shigemitsu Shuchi, Kenichi Hasegawa

2.2.35 Bioclimatic Strategies for Seaside Resorts on Greek Islands
Maria Ampatzi

2.2.36 Towards Environmental - Responsive Electronics Megastores: A Case Study in Markopoulo, Greece
Leonidas Beis

2.2.37 Green Walls: Environmental Quality in Buildings
Denise Damas de Oliveira Morelli, Lucila Chabel Labaki

Session 2.3 Post-Occupancy Evaluation

ORAL PAPERS

2.3.1 Architectural Pride and Environmental Prejudice: The Effect of Personal Status, Historical Value, and Indoor Décor on Occupants Indoor Environmental Quality in Offices
Ihab Elzeyadi

2.3.2 Sustainability & Satisfaction: Findings from Field Studies of Office Buildings in the UK and India
Shweta Manchanda, Koen Steemers

2.3.3 Occupant Satisfaction in Post-Refurbishment of Historic Buildings: Baroque Case Studies in Valletta, Malta
Vincent M. Buhagiar
2.3.4 (Re)developing for Environmental Performance: Learning from the Occupants’ Perspective
Leena Thomas

2.3.5 What Can Buildings Tell Us, What Can We Tell Back
Simos Yannas

2.3.6 The ROSE of Environmental Satisfaction and Adaptability: Intolerance, comfort and pleasantness in architecture
Claude MH Demers, André Potvin

2.3.7 Examining the Interrelationships of Microclimate, Construction Performance and User Behaviour, to Inform Design Strategies
Mary Hancock, Fionn Stevenson

2.3.8 Long Term Monitoring of Window Opening Behaviour: Investigation of Drivers for Behaviour in Danish Dwellings
Rune Vinther Andersen, Jorn Toftum, Bjarne W. Olesen

2.3.9 Thermal Performance Evaluation of Low Cost Housing in Santa Maria, Brazil
Giane De Campos Grigoletti, Renata Rotta, Sâmila Müller

2.3.10 Comfort Temperatures Inside Low-Cost Housing: Six Warm Climate Cities in Mexico
Gomez-Azpeitia, G., Bojorquez, G., Ruiz, P., Romero, R., Ochoa, J., Perez, M., Resendiz, O., Llamas, A.

2.3.11 Adaptive Thermal Comfort for Buildings in Portugal based on Occupants’ Thermal Perception
Matias L., Almeida S., Pina Santos C., Rebelo M., Correia Guedes M.

2.3.12 Adaptive Thermal Comfort in Warm Dry Climate: Economical Dwellings in Mexico
Marincic, I., Ochoa J.M., Alpuche, M.G., Gomez-Azpeitia, G.

2.3.13 Thermal Analysis of a Naturally Ventilated Building an Adaptive Comfort Algorithm: A case study of Miele Corporate Headquarters, Johannesburg, Gauteng
C G Joubert

2.3.14 Analyses of IEQ and User Satisfaction in 20 Office Buildings: Significant Findings to Impact Future Design Standards and Guidelines
Joonho Choi, Vivian Loftness, Azizan Aziz

2.3.15 Occupant Satisfaction with the Acoustical Environment: “Green” Office Buildings Before and After Treatment
Murray Hodgson

2.3.16 Post-Occupancy Evaluation: Three Schools from Greater Toronto
Vera Straka, Mila Aleksic

2.3.17 Air Temperature and CO₂ Variations in a Naturally Ventilated Classroom under a Nordic Climate
Silvestre Celis Mercier, André Potvin, Michel Tardif

POSTER PAPERS

2.3.18 The Vernacular Dwellings of Mount Pelion in Greece: A Migratory Living Pattern
Natalia Sakarellou-Tousi, Benson Lau

2.3.19 Post-Occupancy Evaluation Study of an Educational Building in Mexico: Occupant’s Perception vs. Occupancy Survey
Mundo, J., Valerdi, M., Sosa, J., Arenalde, B.

2.3.20 Field and Semi-Field Surveys on Thermal-Environment Experience and Its Associated Acquired Cognition by Family Members, Parents and Children
Nobue Suzuki, Masanori Shukuya

2.3.21 Thermal Comfort and Occupant Perception in Dwellings for the Low-Income Sector in Hot Climates of Mexico

2.3.22 Evaluation of the Environmental Comfort Conditions in a large Apartment Building: The COPAN Case Study, São Paulo, Brazil
Walter Jose Ferreira Galvalo, Sheila Walbe Ornstein

2.3.23 Green Space Influence on Thermal Comfort: Contrasting Approaches in the Assessment of Conditions in Bragança (Portugal)
Arthur Gonçalves, Antonio Ribeiro, Luis Nunes, Filipe Maia, E Manuel Feliciano

2.3.24 Hammãms of North Africa: An Architectural Study of Sustainability Concepts in a Historical Traditional Building
Fodil Fadli, Magda Sibley

**Day 3 Integration**

**Keynote**
The Integrated Design Process Leading to the New Manitoba Hydro Headquarter
Bruce Kuwabara, Thomas Auer, Glen Kyym, Tom Gouldsborough

**Session 3.1 Design Process**

**ORAL PAPERS**

3.1.1 Integrated Design Process: from Analysis/Synthesis to Conjecture/Analysis
Maureen Trebilcock

3.1.2 Barriers to Zero Energy Construction (ZEC) Technically Possible: Why Not Succeed Yet?
Gaby Abdalla, Ger Maas, Jules Huyghe

3.1.3 The Sacred Cow
Alexandros N. Tombazis

3.1.4 Adaptive and Interactive Metrics: A Hidden Opportunity in Design-for-Sustainability
Robert J. Koester, Sandeep Arora

3.1.5 The Development of a Tool for Sustainable Building Design: Facilitates Investigation of the Creative Space
Hanne Tine Hansen, Mary-Ann Knudstrup

3.1.6 The Choice of Materials in Architecture: How Ecology Influences our Cognitive and Cultural Schemas?
Nathalie Tornay, Frédéric Bonneaud, Luc Adolphe

3.1.7 The First “Comfort Houses” in Denmark: Experiences of Different Design Processes
Camilla Brunsgaard, Mary-Ann Knudstrup, Per Heiselberg

3.1.8 New Conceptual Model for Improving Design Team Performance
Alan Harries

POSTER PAPERS

3.1.9 Envelope Design, Energy Consumption and Thermal Performance: A Case Study at UFRN Campus, Brazil
Raoni Venancio, Aldomar Pedrini

3.1.10 An Evolutionary Architecture: Adapted, Interactive, and Effectively Integrated Design
Sandeep Arora, Shweta Saxena

3.1.11 Sustainability as Driver of Architectural Practices: San Francisco Federal Building Case
Maria Gabriela Zapata Poveda

Session 3.2 Certification Tools

ORAL PAPERS

3.2.1 International Applications of Building Certification Methods: A Comparison of BREEAM and LEED
Angela Rivera

3.2.2 The Morphological Diagram: A comprehensive toll for design and analysis in Architecture
Claudia Naves David Amorim

3.2.3 POE, EMS, and Building Energy Performance Certificate Implementation at USC, L.A.
Thomas Spiegelhalter

3.2.4 Open Stadium Design Aspects for Cold Climates
Agota Szucs, Francis Allard, Sophie Moreau

3.2.5 A Two Stories Office Building Designed for the Southern Brazilian Climate
Marianne Costella

3.2.6 Energy Conservation Improvement of the Existing Building Park, Constraints and Challenges: Case of Granite Traditional Constructions in the United Kingdom
Bennajdi Amar, Scott Jonathan and Taylor Bruce

POSTER PAPERS

3.2.7 “Think Globally, Act Locally”: A Regionalistic Approach to the Selection of Building Materials in Greece
Flora Bougiatioti, Aineias Oikonomou, Evangelos Evangelinos

3.2.8 Sizzling Green: Integrated Design Process for Greener Institutional Kitchens
Judhajit Chakraborty, Phillip H. Bahr
3.2.9 Proposal for an energy-environmental retrofit and planning procedure for historical centres by means of an energy analysis on a technological scale
Maria Cristina Forlani, Fabrizio Chella

Session 3.3 Materials, Components and Innovative Systems

ORAL PAPERS

3.3.1 Climate Controls in a Historic House Museum in the Tropics: A case study of collection care and human comfort
Shin Maekawa, Claudia Carvalho, Franciza Toledo, Vincent Beltran

3.3.2 Hybrid Ventilation Systems and High Performance Buildings
D. Michael Utzinger

3.3.3 Fine-Wire Heat Exchanger Works at Very Low Temperature
Jon Kristinsson, Andy Van Den Dobbelsteen, Arjan Van Timmeren

3.3.4 Thermal Energy Storage and the Passive House Standard: How PCM Incorporated Into Wallboard Can Aid Thermal Comfort
Shane Colclough, Philip Griffiths, Stefan Gschwander

3.3.5 The Carriage House: Renewable Resource Integration of Energy and Water in a Cold Climate
Martin R. Yoklic, Stefanie Vaughan Gerstle

3.3.6 The Informed Application of Building-Integrated Wind Power
John Breshears, Craig Briscoe

POSTER PAPERS

3.3.7 Embodied energy in Wall Subsystems of More Sustainable Buildings
Miguel Alosyio Sattler, Eugenia Aumond Kuhn, Danielle Tubino Pante De Souza

3.3.8 CO² Emission by Different Building Materials for Walls; Case: Housing in Colima, Mexico
Gabriel Gomez-Azpetitia, Victor Arvizu, Pablo Arena

3.3.9 Life Cycle Energy Analysis of Thermal Insulation: Agricultural waste materials in Thailand
Satta Panyakaew, Steve Fotios