

CESBP-2010 CONFERENCE PROGRAM

General Outline

Sunday 12.09.2010	16:00 – 18:30	Registration	
	18:30 – 20:00	Welcome reception	
Monday 13.09.2010	8:00 - 9:00	Registration	
	9:00 - 9:40	Opening Ceremony	
	9:40 - 10:20	Plenary session 1	
	10:20 - 10:40	Coffee break	
	10:40 - 12:40	Session 1 (6)	Session 2 (6)
	12:40 - 13:40	Lunch	
	13:40 - 15:20	Session 3 (5)	Session 4 (4)
	15:20 - 15:40	Coffee break	
	15:40 – 17:20	Session 5 (5)	Session 6 (4)
	17:30-19:30	Excursion to the Old City of Cracow	
	20:00	Meeting of the CE SBP-2010 International Scientific Committee	
Tuesday 14.09.2010	9:00 - 9:40	Plenary session 2	
	9:40 - 11:00	Session 7 (3+1)	
	11:00 - 11:20	Coffee break	
	11:20 - 13:00	Session 8 (5)	Session 9 (5)
	13:00 - 14:00	Lunch	
	14:00 - 15:00	Session 10 (3)	Session 11 (3)
	15:00 - 15:20	Coffee break	
	15:20 - 16:20	Session 12 (3)	Session 13 (3)
	17:00 - 22:30	Excursion to the Wieliczka Salt Mine, Conference Dinner	
Wednesday 15.09.2010	9:00 - 11:00	Session 14 (6)	Session 15 (6)
	11:00 - 11:20	Coffee break	
	11:20 - 13:00	Session 16 (5)	Session 17 (4)
	13:00 - 13:40	Closing Ceremony	
	13:40 – 14:40	Lunch	

Monday, 13.09.2010

9:00 - 9:40: Opening Ceremony

9:40 - 10:20: Plenary session P1

chairperson: Robert Černý

Keynote lecture: Building Physics - the most farseeing science within the civil engineering
Peter Häupl

10:20 - 10:40: Coffee Break

10:40 - 12:40: Session 1: Hygric and thermal properties of building materials - part 1

Chairperson: Peter Matiasovsky

1.1. Methods to check reliability of material characteristics for use of models for a real time hygrothermal analysis

M. Bomberg, M. Pazera

1.2. Application of Transient Sorption Methods to evaluate moisture diffusion coefficients of building materials

J.M.P.Q. Delgado, N.M.M. Ramos, V.P. de Freitas

1.3. Hysteresis of moisture storage: from condensation potentials to sorption curve systems - an overview

M. Funk

1.4. Determination of relative permittivity-moisture content curves for lightweight carbonate plasters by TDR method from the aspect of probe placement way

M. Holúbek, P. Matiašovský

1.5. Water and heat transport parameters of materials involved in AAC-based building envelopes

M. Jerman, V. Kočí, J. Maděra, J. Výborný, R. Černý

1.6. A stochastic and systematic approach for determination of material properties

J.H. Zhao, R. Plagge, J. Grunewald

10:40 - 12:40: Session 2: Passive and low energy buildings

Chairperson: Hugo Hens

2.1. Cooling demand in office buildings according to Passivehouse standard: analysis of calculation methods

H. Breesch, B. Wauman, R. Klein, A. Versele

2.2. Passive buildings: are they really as sustainable as pretended

H. Hens

2.3. Hygroscopic Behaviour of Passive Houses: a Parameter Study

A. Korjenic, L. Teblich, T. Bednar

2.4. A comparative case study of passive and low-energy residential buildings

A. Mahdavi, E. M. Doppelbauer, C. Pröglhöf

2.5. Concepts for sustainable building technology

J. von Grabe, S. Gampfer, S. Winter, H. Kaufmann

2.6. Determination of boundary conditions for passive schools: impact on net energy demand for heating and cooling

B. Wauman, R. Klein, H. Breesch, S. Van Loon, R. Baetens, D. Saelens

12:40 - 13:40: Lunch

13:40 - 15:20: Session 3: Hygric and thermal properties of building materials - part 2

Chairperson: Mark Bomberg

3.1. Water vapour sorption hysteresis of autoclaved aerated concrete and burnt clay brick

O. Koronthalyova

3.2. Relationship between composition and transport properties of lightweight carbonate plasters

P. Matiasovsky, L. Bagel, O. Koronthalyova

3.3. Transport properties of crushed WEEE plastic waste composites

P. Matiasovsky, O. Koronthalyova

3.4. Transient method for determination of water vapour diffusion coefficient of building materials

R. Pernicová, M. Pavlíková, Z. Pavlík, L. Fiala, R. Černý

3.5. Hygric and thermal properties of renovation renders

E. Vejmelková, R. Černý, R. Sovják

13:40 - 15:00: Session 4: Lighting and Urban Physics

Chairperson: Ardeshir Mahdavi

4.1. Determination of daylight sources

S. Darula, R. Kittler

4.2. Predicting the deployment level of manually operated window shades in office buildings

A. Mahdavi, C. Pröglhöf

4.3. Wind field and driving rain intensity analysis in urban street canyons

G. Gao, J. Grunewald, Y.G. Xu

4.4. Wind boundary conditions in vicinity of inlet and outlet of ventilated, cavity walls

K. Klemm, D. Heim

15:20 - 15:40: Coffee Break

15:40 – 17:20: Session 5: Buildings and moisture

Chairperson: Hartwig Künzel

5.1. Hygrothermal performance of Portuguese classrooms: measurement and computer simulation

R. Almeida, V.P. de Freitas

5.2. Towards real word calibration of whole building simulation models – a baroque house demonstration project

C. Conrad, J. Grunewald

5.3. Moisture flow between indoor air and porous materials – simplified two parameters method and detailed TRYSYS simulation

M. Mijakowski, J. Kwiatkowski

5.4. Validation of a coupled BES-HAM model with experimental data

M. Steeman, A. Janssens, M. Van Belleghem, M. De Paepe

5.5. Coupled CFD-HAM model sensitivity for material properties and boundary conditions

M. Van Belleghem, A. Willockx, M. De Paepe, M. Steeman, A. Janssens

15:40 – 17:00: Session 6: Advanced wall technologies

Chairperson: Carl-Eric Hagentoft

6.1. Thermal behaviour and efficiency of ventilated double-skin façade in Polish climatic conditions

D. Heim, M. Janicki

6.2. Thermal balance of a wall with PCM-enhanced thermal insulation

E. Kossecka, J. Kośny

6.3. Numerical and experimental analysis of building envelopes containing blown fiberglass insulation thermally enhanced with Phase Change Material (PCM)

J. Kośny, D. Yarbrough, W. Miller, S. Shrestha, E. Kossecka, E. Lee

6.4. Thermal performance of VIP panels: Assessment of the edge effect by experimental and numerical analysis

N. Van Den Bossche, J. Moens, A. Janssens, E. Delvoye

17:30 – 19:30: Excursion to the Old City of Cracow

20:00: Meeting of the CESBP-2010 International Scientific Committee

Tuesday, 14.09.2010

9:00 - 9:40: Plenary session P2

chairperson: John Grunewald

Keynote lecture: Zero- and plusenergy buildings, do'nt forget economics and grid stability
Hugo Hens

9:40 - 11:00: Session 7: Durability – stress and deformation

Chairperson: Staf Roels

7.1. Moisture induced deformation of a free thin plate - Analytical solution for step-changes and periodic variations of the ambient humidity by volume

B. Adl Zarrabi, C.E. Hagentoft

7.2. Coupled salt and moisture transport in cement mortar – Modelling desorption isotherm using neural network

M. Koniorczyk, M. Wojciechowski

7.3. Modelling of autogenous hygro-thermal phenomena in massive concrete structures - a case study

M. Wyrzykowski, D. Gawin, F. Pesavento

7.4. Sponsor's presentation

11:00 - 11:20: Coffee Break

11:20 - 13:00: Session 8: Hygro-thermal simulations and measurements

Chairperson: Vasco de Freitas

8.1. Measurement of evaporation under controlled boundary conditions

G. Gärtner, J. Grunewald, R. Plagge

8.2. Mathematical models and computer codes for modelling heat and moisture transport in building materials: a comparison

V. Kočí, J. Maděra, M. Keppert, R. Černý

8.3. Numerical analysis of problems with discontinuities on material interfaces

J. Kruis, J. Maděra

8.4. Experimental determination of convective mass transfer coefficient

J. Kwiatkowski, M. Woloszyn, J.-J. Roux

8.5. Heat and moisture transfer processes modelling in walls made from autoclaved aerated concrete

M. Vilnitis, J. Noviks, B. Gaujena

11:20 - 13:00: Session 9: Indoor air quality and ventilation

Chairperson: Henk Schellen

9.1. Quasi-steady-state calculation method of temporary increased ventilation during daytime

K. Goethals, A. Janssens

9.2. Radon concentration in indoor air - A model development

B.P. Jelle, K. Noreng, T. Strand

9.3. Effect of ventilation strategy on indoor air relative humidity in naturally ventilated objects with various moisture buffer capacity

O. Koronthalyova

9.4. Energy saving potential and repercussions on indoor air quality of demand controlled residential ventilation strategies

J. Laverge, N. Van Den Bossche, A. Janssens

9.5. Displacement ventilation and Variable Air Volume (VAV) system in a historical museum

H. Schellen, M. van Aarle, E. Neuhaus, C. Pernot

13:00 - 14:00: Lunch

14:00 - 15:00: Session 10: Durability – salt transport

Chairperson: Dariusz Gawin

10.1. Chloride accumulation and transport in renovation plasters

L. Fiala, M. Pavlíková, Z. Pavlík, M. Keppert, R. Pernicová, J. Mihulka, H. Benešová, R. Černý

10.2. Salt transport and precipitation modeling in non-isothermal condition considering the kinetics of salt phase changes

M. Koniorczyk, D. Gawin

10.3. Salt transport in water-saturated and dry specimens of building materials

Z. Pavlík, M. Pavlíková, R. Černý

14:00 - 15:00: Session 11: Building enclosures – experimental tests

Chairperson: Jan Košny

11.1. Window-Wall Interface Details to Evaluate the Risk of Condensation on Box Windows

W. Maref, M. Armstrong, M.A. Lacasse, H. Elmahdy, R. Glazer, N. Van Den Bossche

11.2. Influence of cavity ventilation on the thermal and moisture performance of panel type rainscreen walls in the coastal climate of British Columbia

Y. Simpson, Hua Ge, P. Fazio

11.3. Airtightness of the window-wall interface in masonry brick walls

N. Van Den Bossche, J. Moens, A. Janssens, W. Huyghe, R. Sierens

15:00 - 15:20: Coffee Break

15:20 - 16:20: Session 12: Mould growth

Chairperson: Tomasz Kisilewicz

12.1. Evaluation of the mould risk inside a library by integral building simulations

Y. Kikkawa, M. Khalil, J. Grunewald

12.2. Prevention of mould growth in dwellings - Diagnostic and rehabilitation approaches

S. Korjenic, A. Kolbitsch

12.3. Concept of resistance in application to mould growth problems in buildings

K. Pietrzyk, I. Samuelson

15:20 - 16:20: Session 13: Building enclosures – laboratory and ‘in situ’ measurements

Chairperson: Jos van Schijndel

13.1. Thermal resistance of a wall determined in non-stationary boundary conditions

T. Kisilewicz

13.2. Evaluation of inverse modeling techniques as a tool for pinpointing moisture entering locations from inside surface moisture patterns

A.W.M. van Schijndel

13.3. Quality assurance through pulse phase thermography

F. U. Vogdt, M. Walsdorf-Maul, C. Maierhofer, M. Röllig, A. Walther

17:00 - 22:30: Excursion to the Wieliczka Salt Mine, Conference Dinner

Wednesday, 15.09.2010

9:00 - 11:00: Session 14: Buildings and energy

Chairperson: Elżbieta Kossecka

14.1. Comparison between simplified and dynamical calculation of highly glazed spaces

S. Leenknecht, D. Saelens

14.2. The evaluation of the energetic performance of buildings

L. Moga, I. Moga

14.3. On the application of calibrated simulation models in building systems control

K. Orehounig, C. Pröglhöf, M. Schuss, A. Mahdavi

14.4. Influence of thermal mass on accuracy of calculations of energy performance in Polish certification algorithm

A. Panek, J. Rucińska, P. Narowski

14.5. Analysis of the influence of multiple-skin facade models on the overall energy demand of office buildings

D. Saelens

14.6. Evaluation of simplified calculation method of heat exchange between building and ground

A. Staszczuk, J. Radon, A. Holm

9:00 - 11:00: Session 15: Wall retrofitting methods and systems

Chairperson: Aleksander Panek

15.1. External condensations on ETICS – Influence of nearby obstacles

E. Barreira, V.P. de Freitas

15.2. Retrofit cavity-wall insulation: performance analysis from in-situ measurements

M. Delghust, A. Janssens, J. Rummens

15.3. Mitigation of moisture-induced damage in a typical structure built in 1970's in Prague

J. Kočí, V. Kočí, J. Kšíkal, J. Maděra, R. Černý

15.4. Calculative investigations on the "Temperierung" wall heating system – Hygric and thermal aspects

M. Krus, R. Kilian

15.5. Potential risks when combining experienced retrofitting measures with newly developed techniques

S. Pallin

15.6. An experimental study of the hygric behaviour of different interior insulation systems

E. Vereecken, S. Roels

11:00 - 11:20: Coffee Break

11:20 - 13:00: Session 16: Building enclosures – experimental tests and simulations

Chairperson: Peter Häupl

16.1. The influence of air on the heat and moisture transport through a light weight building wall

T. Z. Desta, S. Roels

16.2. Comparative measurements of heat and moisture transport in wood based constructions

M. Joščák, P. Niemz, W. Sonderegger, R. Plagge

16.3. Hygrothermal consequences of rainwater leaks investigated for different wall structures with exterior insulation

H.M. Künzle, D. Zirkelbach, J. Radon

16.4. Laboratory and in situ evaluation of reflective foils in pitched roofs

S. Roels, M. Deurinck

16.5. Exterior or interior insulation for the basement with pressing water?

D. Zirkelbach, H. M. Künzle, C. Bludau

11:20 - 12:20: Session 17: Modelling of Indoor Air Quality

Chairperson: Jaroslav Krus

17.1. CLIMT - model and program for the prediction of the indoor air temperature and indoor air relative humidity

P. Häupl, A. Bishara, F. Hansel

17.2. Suitable algorithms for practical assessment of indoor climates in hospital wards

P. Freudenberg, J. Grunewald

17.3. Climate Analysis of a Cultural Heritage Building determined by measurements and hygrothermal building simulation – The King's House on the Schachen

R. Kilian, B. Wehle, K. Holl, J. Radon, A. Holm

17.4. The predictability of lumped indoor climate models, a case study

A.W.M. van Schijndel

13:00 - 13:40: Closing Ceremony