



## Program

# 5<sup>th</sup> International BUILDAIR-Symposium „Building and Ductwork Air-tightness“

former „European BlowerDoor-Symposium“

## October 21– 22, 2010

Danish Technical University  
Copenhagen/Kgs. Lyngby, Denmark  
with accompanying trade exhibition



### Organisers

Energy and Environmental Center Deister GmbH (eu[z]) in cooperation with the Danish Technical University, the Danish Society of Engineers and KLIMASKAERM

### Coordination and Conference secretariat

If you would have any further questions, please contact the conference secretariat:

Energy and Environmental Center Deister GmbH, Sabine Schneider, Zum Energie- und Umweltzentrum 1, D-31832 Springe, Germany  
Tel. +49 5044 975-20, Fax +49 5044 975-66, e-mail: bildung@e-u-z.de, www.buldair.eu

### Organisation of the accompanying trade exhibition

Should you require application documents, want to register for the exhibition, or have any questions, please contact: Margareta Hollmann, Fon: +49 5044 975-22, e-mail: hollmann@e-u-z.de

### Booking of accommodation

A contingent of rooms has been reserved for conference participants and accompanying persons. For further information please consult the participants' section on our web site www.buldair.eu.

### Registration/back office

To register, please return the attached registration form by fax: +49 (0) 50 44 975 66 or by mail: Energie- und Umweltzentrum am Deister, Sabine Schneider, Zum Energie- und Umweltzentrum 1, D-31832 Springe, GERMANY

### Terms of registration/fees

	by September 24, 2010	later
Conference fee (both days)	449 €	499 €
Conference fee (both days) including Conference dinner on 21. Oktober	489 €	539 €
Conference fee (one day)	299 €	339 €
Conference fee speakers (both days)	249 €	
Conference fee students* (both days)	249 €	279 €

Prices do not include accommodation and are subject to 19% VAT. **The early bird fee only applies if registration and payment have been made before September 24, 2010.** Fees cover: attendance of all the sessions; welcoming coffee, lunches and breaks throughout the conference; the transcript of the conference/CD.

**Deadline for registration is October 14, 2010.**

\* Only for full-time students who are not older than 27 or PhD students with a valid student ID – this does not cover the transcript of the conference.

Once you have registered, you will receive a confirmation of your registration, a map along with directions to find the Symposium venue, and the invoice. Cancellation of registration has to be submitted in writing. We will charge an administrative fee of 70.00 € (incl. VAT) if cancellation is made up to 21 days prior to the Symposium, date as postmarked. After that date, or if you are unable to attend the Symposium, we will charge the full amount as specified in your invoice. Prior consultation provided, you may suggest an alternative participant. In case the Symposium has to be cancelled for extraordinary reasons, we will inform you immediately. In that event, we are only obliged to refund any participation fees you may have paid before that date.

We reserve the right to change the list of speakers and/or the program in exceptional cases. In any case, the liability is limited to the participation fee.

## Registration by fax

+49(0)5044 975-66

Please fill in the form with block letters, or tick boxes. Please use a separate form for each participant (copy if necessary).

**I would like to register for the 5<sup>th</sup> International BUILDAIR-Symposium, Danish Technical University, 2800 Kgs. Lyngby/Copenhagen, Denmark. This registration is binding.**

Please tick!

- Participation on **October 21–22, 2010**
- Participation **only on October 21, 2010**
- Participation **only on October 22, 2010**
- Evening programme on October 21, 2010**
- Regular rate
- Early booking rate (only applies if registration and payment have been made before September 24, 2010)
- Student rate (only with copy of a valid student ID)
- I will arrive on October 20, 2010 and would like to take part in the get-together evening starting at 8 p.m.**

Madam  Sir

Surname/Name

Company/Institute

Street/P.O. Box

Country/Postal Code

Phone/Fax

Email

VAT-ID-No.

- I am interested in the pre-Symposium get-together on the evening of October 20, 2010. Please send me some additional information to my above-mentioned e-mail address.
- I am interested in the evening program on October 21, 2010. Please send me some additional information to my above-mentioned e-mail address.

**I explicitly accept the terms of registration.**

City/Date

Signature

# 5<sup>th</sup> International BUILDAIR Symposium

## „Building and Ductwork Air tightness“

The growing interest in highly energy-efficient buildings requires an intensive analysis of the factors impacting energy efficiency like construction materials and technologies, measuring and calculation methods, the legal requirements, building and modernization costs, indoor hygiene, as well as other aesthetic and social aspects.

Important challenges that need to be met are to implement the level of air tightness necessary for highly energy-efficient buildings across the different climatic conditions in Europe, to ensure long-term air tightness of the building envelope, and to establish quality assurance as common practice. At the same time we need ventilation concepts for highly energy-efficient and thus airtight buildings that not only guarantee hygienic air change and sufficient air humidity, but also protection against excessive humidity and mould formation and a minimization of pollutant concentration.

The 5<sup>th</sup> International BUILDAIR Symposium on air tightness of buildings and ventilation systems this year combines contributions from science, academia and research with a lot of applied user knowledge and intensive discussion amongst the participants, for example at an open-space workshop and dedicated networking room.

At the BUILDAIR Symposium, builders and contractors, energy consultants, researchers, developers and planners, as well as quality managers will engage in lively discussions on current issues in the field and receive compact information, tips, and insider knowledge from experts for experts in the field. It is this interactive approach that characterizes the conference: Questions can be clarified immediately in direct interaction with the approximately 30 highly competent speakers. Make use of our international expert forum to engage in a dialogue with experts in the field, from business and research. Attending our conference will offer you direct added value.

### Conference program

#### Thursday, October 21, 2010

10:00	<b>Opening session BUILDAIR:</b> Welcome and opening address
10:20	<b>DTU's work on air tightness related issues</b> Prof. Carsten Rode
10:50	<b>Statistical examination about the correlation between intended building quality and measured air tightness of the building envelope</b> Prof. Thomas Bednar
	<b>Poster Session 1</b>
11:20	<b>Natural ventilation in energy efficient buildings by wind, solar radiation and in- and outdoor temperature difference</b> S. Olof Hägerstedt
11:23	<b>Energy performance of natural ventilation combined with mechanical ventilation in residential buildings</b> Peter Foldbjerg
11:26	<b>Importance of a proper applied airflow in the facade air gaps when moisture and temperature are calculated in wood framed walls</b> S. Olof Hägerstedt
11:29	<b>New rapid method for assessment of fungal exposure in indoor air</b> Morten Reeslev
11:32	<b>Mould and health problems in buildings</b> Peter Thompson
11:35	<b>BlowerDoor test of the first passive house in China</b> Michael Meyer-Olbersleben
11:40	Coffee break and exhibition visit
	<b>Session 1: Ventilation</b>
12:10	<b>Performance assessment of residential demand controlled exhaust ventilation strategies</b> Jelle Laverge
12:30	<b>Mixed convection cooling in an enclosure with different inlet and outlet configurations</b> Marc Delghust
	<b>Poster Session 2</b>
12:50	<b>Airtightness assessment of newly build single family houses in Belgium</b> Jelle Laverge
12:53	<b>How to motivate employees to achieve good air tightness</b> Karl Andreassen
12:56	<b>Experience with big buildings air-tightness measurements</b> Daniela Hrossova

12:59	<b>The role of infiltration in energy-efficient office buildings in Norway</b> Matthias Haase
	<b>Exhibitor lectures</b>
13:02	<b>More than 20 years of practical experience in air tight building in Switzerland</b> S. Schwaab, J. Wollnow
13:07	<b>How to seal junctions between window frames and wall frames?</b> Stefan Tenbuß
13:12	<b>Local ventilation concept for energetic refurbishment</b> Peter Moser
13:17	<b>Residual moisture of the floor screed, drynes and non-destructive humidity measurement</b> Walter Denzel
13:25	Lunch break and exhibition visit
14:55	<b>Guided tour DTU laboratory / open space workshops</b>
	<b>Session 2: Air tightness measurement in cold climates</b>
15:55	<b>Peoples experience of the indoor climate in wind exposed apartments</b> Brigitta Nordquist
16:15	<b>Practical experiences and challenges in airtightness measurements of wood-framed houses in Norway</b> Magnus Vagen
16:35	<b>Air Tightness and Energy Performance of an Arctic Low-Energy House</b> Prof. Carsten Rode
16:55	Coffee break and exhibition visit
	<b>Session 3: Air tightness: quality control and construction</b>
17:25	<b>Critical humidity management in constructions with increased insulation thickness</b> Lothar Moll
17:45	<b>Air permeability requirements for air barrier materials in passive houses</b> Jelle Langmans
18:05	<b>Typical problems in constructions recognized with infrared camera and blower-door test</b> Daniela Hrossova
18:25	End of day program

## Friday, October 22, 2010

Session 4: Large Buildings	
9:00	<b>The BlowerDoor measuring method "Bestimmung der Fugendurchlässigkeit von Fenstern und Fugen" used for decision of large buildings air tightness</b> Lars Due / Stefanie Rolfmeier ?
9:20	<b>Air leakage measurement test configuration for large buildings</b> Collin Genge
9:40	<b>Pressure distribution and Nachströmwege bei BlowerDoor Messungen</b> Paul Simons
10:00	Coffee break and exhibition visit
Session 5: Air tightness measurement	
10:30	<b>A round-robin Test of Czech airtightness test providers</b> Jiri Novac
10:50	<b>Experiences in air permeability round-robin tests in Germany by FLiB e.V.</b> Stefanie Rolfmeier
11:10	<b>Open Space Workshop</b>
12:10	Lunch break and exhibition visit
Session 6: Durability of sealings and special measurements	
13:40	<b>DIN 4108T11 Test procedure concerning the ageing resistance of sealings</b> Prof. Thomas Ackermann
14:10	<b>Air leakage field studies of indoor security used in renovated basement floor and slab on contaminated ground</b> Walter Sebastian
14:40	<b>Duct leakage measurement in residential buildings</b> Collin Genge
15:10	Coffee break and exhibition visit
Session 7: Measuring of windows	
15:40	<b>Thermography of windows</b> Rene Ostergaard
16:10	<b>Field Determination of Water Penetration of Windows using Blower-door and Infrared Camera</b> Walter Sebastian
16:40	<b>Last Words – End of conference</b>

## Dates

The Conference will start on Thursday, October 21, 2010 at 10 a.m. and will end on Friday, October 22, 2010 at about 5 p.m. A welcoming reception is planned for Wednesday evening, October 20. Conference dinner is foreseen for October 21. Excursions and a relaxed get-together program are planned for October 23, 2010. For more information please refer to [www.buildair.eu](http://www.buildair.eu).

## Venue

Danish Technical University, The Oticon Hall, Anker Engelunds Vej 1, 101E, DK-2800 Kgs. Lyngby, Copenhagen, Denmark. Directions to the venue will be sent to you with your invoice.

## Conference record

All accepted abstracts will be included in the printed Conference Proceedings in German and English. Full papers or PowerPoint presentations will be made available on the conference CD.

## Languages

Simultaneous interpretation will be provided for the complete conference in Danish, English and German.

## List of speakers

**Ackermann, Prof. Thomas**, Bielefeld, D • **Andreassen, Karl**, Give, DK • **Bednar, Prof. Dr. Thomas**, Wien, A • **Due, Lars**, Boeslunde, DK • **Foldbjerg, Peter**, Hørsholm, DK • **Genge, Colin**, Vancouver, CDN • **Delghust, Marc**, Gent, B • **Denzel, Walter**, Börtlingen, D • **Haase, Matthias**, Trondheim, N • **Hägerstedt, S. Olof**, Lund, S • **Hrossova, Daniela**, Prag, CZ • **Labat, Matthieu**, Villeurbanne, F • **Langmans, Jelle**, Heverlee, B • **Laverge, Jelle**, Gent, B • **Meyer-Olbersleben, Michael**, Lüneburg, D • **Moll, Lothar**, Schwetzingen, D • **Moser, Peter**, Löberschütz, D • **Nordquist, Birgitta**, Lund, S • **Novac, Jiri**, Prague, CZ • **Ostergaard, René**, Aarhus, DK • **Rode, Prof. Carsten**, Kgs. Lyngby, DK • **Rolfmeier, Stefanie**, Springe, D • **Sebastian, Walter**, Hoersholm, DK • **Simons, Paul**, Springe, D • **Tenbuß, Stefan**, Köln, D • **Thompson, Peter**, Hoersholm, DK • **Vagen, Magnus**, Trondheim, N • **Wollnow, Jörg**, Ruswil, CH