





**20<sup>th</sup> Building Services Days**  
**Exhibition and DENZERO International Conference**  
**9-10 October, 2014**



**UNIVERSITY OF DEBRECEN**

**Conference patron:**

Prof. Dr. Zoltán SZILVÁSSY, Rector of University of Debrecen

**TECHNICAL PROGRAMME**

**Thursday, 9<sup>th</sup> of October 2014 (4028 Debrecen, Ótemető str. 2-4)**

8:30 – Exhibition opening (2<sup>nd</sup> floor) (open till 17:00)  
Prof. Dr. István GAÁL, Vice Rector of UD  
Dr. Miklós CHAPPON, Honorary Associate Professor, University of Debrecen, President of Building Service Engineering Branch, Hungarian Chamber of Engineers

**Exhibition visiting is free of charge.**

9:00 – 12:00 Plenary session

***Location: Faculty of Engineering, 4028 Debrecen, Otemeto u. 2-4.  
U.0.02 room***

Chairs: Dr. Ferenc KALMÁR, Vice Dean of UD Faculty of Engineering and  
Dr. habil Géza HUSI, Vice Dean of UD Faculty of Engineering

*Language: English/Hungarian with simultaneous translation*

9:00 – 9:05 Prof. Dr. István GAÁL, Vice Rector of UD  
*Welcoming words*

9:05 – 9:20 Dr. habil Edit SZÚCS, Dean of Faculty of Engineering  
*The role of UD Faculty of Engineering in the regional and national engineering education*

9:20 – 10:00 Prof. em. Dr. Dr. hc Derek J. CLEMENTS-CROOME  
University of Reading, UK  
*Sustainable intelligent liveable cities*

10:00 – 10:40 Prof. Dr. Hideki HASHIMOTO  
Chuo University, Japan  
*Adjustment of Human Position Sense and it's applications*

- 10:40 – 11:00 COFFEE BREAK
- 11:00 – 11:20 Prof. Dr. András NÁBRÁDI, Vice Rector of UD  
*New teaching methods and experiences in the Faculty of Economics and Business of the University of Debrecen*
- 11:20 – 11:40 Prof. Dr. Mariann SOMOSI, Dean  
Faculty of Economics, University of Miskolc  
Dr. habil Edit SZÜCS, Dean  
Faculty of Engineering, University of Debrecen  
*Comparison of students competency measurements at the University of Debrecen and University of Miskolc*
- 11:40 – 12:00 Tamás KORMÁNY, Director General  
Kontroll Holding Zrt  
*“Say the truth, not only the real”, other  
What the message of European statistics of ISO 9001 is?*
- 12:00 – 14:00 LUNCH
- 15:00 – 17:00 ROUND TABLE of Hungarian Coordination Society  
of HVAC Engineers  
*Language: Hungarian*
- 15:00 – 15:20 Dr. László KAJTÁR, deputy Head of Department  
BUTE, Department of Building Service and Process Engineering  
*Conformation to the expectation of European Union (IAQ, ventilation vs energy)*
- 15:20 – 15:40 Comments, remarks
- 15:40 – 16:00 Attila ZOLTÁN, president  
Hungarian Coordination Society of HVAC Engineers  
*Cooperation in European projects (energy efficiency, renewable energy courses, qualifies, monitoring)*
- 16:00 – 16:20 Comments, remarks
- 16:20 – 16:40 Gábor MÓCZÁR, vice president  
Hungarian Coordination Society of HVAC Engineers  
*Energy refurbishments, subsidies (gas equipments, problems and opportunities 2014-2020)*
- 16:40 – 17:00 Comments, remarks
- 19:00 – 20:00 Concert of Lyra Symphony Orchestra of Debrecen  
CONSERVATORY OF UD (Egyetem tér 1)
- 20:00 – 23:00 Conference Dinner (based on invitation)  
University of Debrecen, main building AULA (Egyetem tér 1)  
Welcoming words: Prof. Dr. András NÁBRÁDI, Vice Rector of UD

10<sup>th</sup> of October 2014

## Sustainable energy by optimal integration of renewable energy sources

**TÁMOP-4.2.2.A-11/1/KONV-2012-0041**

*Location: Faculty of Engineering, 4028 Debrecen, Óttemető u. 2-4.*

**ROOM: U.0.02**

### SESSION 1

Chair: Dr. Ferenc KALMÁR, University of Debrecen

*Language: English/Hungarian with simultaneous translation*

9:00 – 9:10 Dr. Ferenc KALMÁR, Dr. György CSOMÓS  
University of Debrecen  
*TÁMOP-4.2.2.A-11/1/KONV-2012-0041, DENZERO project*

9:10 – 10:00 Prof. Dr. Bjarne W. OLESEN, Fellow ASHRAE  
International Centre for Indoor Environment and Energy  
Department of Civil Engineering, Technical University of Denmark  
*Applications of embedded Radiant Heating and Cooling in Buildings*

10:00 – 10:15 Dr. Gábor KOZMA  
University of Debrecen  
*Social embeddedness of energy-efficient building methods in the Northern Great Plain Region*

10:15 – 10:30 Dr. Roman RABENSEIFER  
Slovak University of Technology  
*Low-Emissivity Layers in Glazing Systems and their Effects*

10:30 – 11:10 COFFEE BREAK

### SESSION 2

Chair: Dr. Ákos LAKATOS, University of Debrecen

*Language: English/Hungarian with simultaneous translation*

11:00 – 11:15 Dr. Franco COREN  
Istituto Nazionale di Oceanografia e di Geofisica Sperimentale  
*Mobile Low Cost Thermal System for Mapping*

- 11:15 – 11:30 Dr. Sándor SZEGEDI  
University of Debrecen  
*Effects of Macrosynoptic Weather Types on Development of Thermal Excess in Suburban Areas of Debrecen*
- 11:30 – 11:45 Dr. Szilárd SZABÓ  
University of Debrecen  
*LiDAR Based Assessment of Roofs – Perspectives for Solar Energy*
- 11:45 – 12:00 Dr. Gergely SZABÓ  
University of Debrecen  
*Preliminary Results on the Determination of Solar Energy Potential using LiDAR Technology*
- 12:00 – 13:00 LUNCH

### SESSION 3

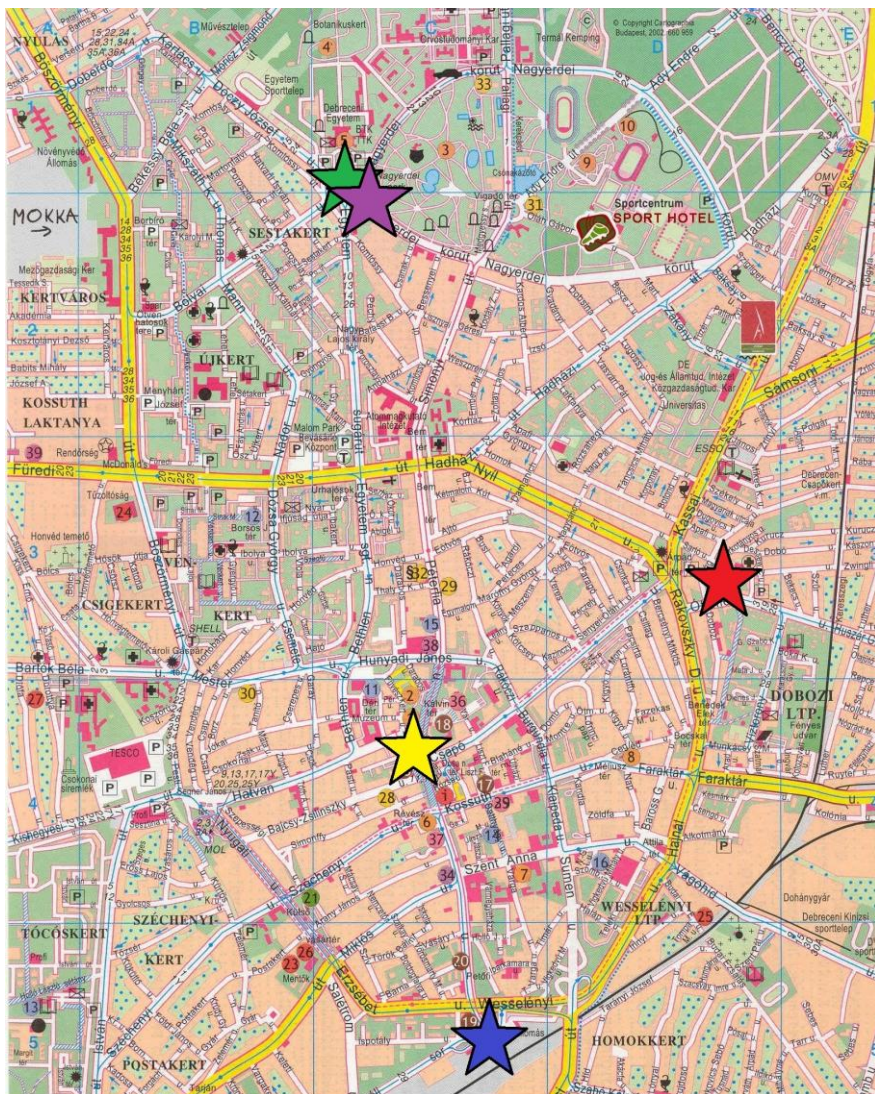
Chair: Dr. György SZABÓ, University of Debrecen  
*Language: English/Hungarian with simultaneous translation*

- 13:00 – 13:15 Sándor HÁMORI  
University of Debrecen  
*The Effect of the Hydraulic Balancing on the Energy Demand of a Refurbished Building*
- 13:15 – 13:30 Tamás BUDAY  
University of Debrecen  
*Annual Pattern of the Coefficient of Performance Considering Several Heat Pump Types and its Environmental Consequences*
- 13:30 – 13:45 Dr. Péter SZEMES  
University of Debrecen  
*Recent Research Results of Advanced Building Automation*
- 13:45 – 14:00 Dr. Árpád CSÍK  
Széchenyi István University, Győr  
*Machine Based Optimization of Building Refurbishments: a Comparative Case Study*
- 14:00 – 14:30 COFFEE BREAK

## SESSION 4

Chair: Dr. Árpád CSÍK, Széchenyi István University, Győr  
*Language: English/Hungarian with simultaneous translation*

- 14:30 – 14:45 Dr. Andrea MATKÓ  
University of Debrecen  
*Building Energetics Program (Software)*
- 14:45 – 15:00 Dr. Norbert BOROS  
University of Debrecen  
*Greywater Treatment and Reuse Possibilities in Households*
- 15:00 – 15:15 Gabriella ANTAL, Erika KURUCZ, Prof. Dr. Miklós G. FÁRI  
University of Debrecen  
*Requirements, Results and Problems of Large-Scale in Vitro Biomass Plant Propagation*
- 15:15 – 15:30 Dr. Orsolya BÁNYAI  
University of Debrecen  
*The Main Results of a Legal Research on Sustainable Energy Law*



 RAILWAY STATION  
NAGYÁLLOMÁS

 UNIVERSITY OF DEBRECEN  
(MAIN BUILDING)  
DEBRECENI EGYETEM  
(FŐÉPÜLET)

 MAIN SQUARE (CITY CENTRE)  
FŐTÉR (KOSSUTH TÉR)

 FACULTY OF ENGINEERING, UD  
DE MŰSZAKI KAR

 CONSERVATORY OF UD  
DE ZENEMŰVÉSZETI KAR