



**Slovak Society of Environmental Technology (SSTP)**

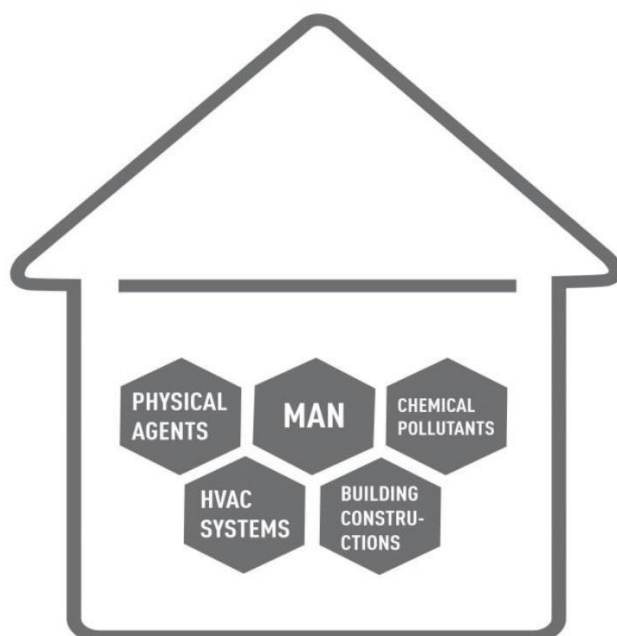
**Association of Slovak Scientific and Technological Societies (ZSVTS)**

**Association of Energy Engineers: AEE Student Chapter - STU Bratislava, Slovakia**

**Slovak University of Technology in Bratislava, Faculty of Civil Engineering**

Invite you to 30th annual and 10th International conference

## **INDOOR CLIMATE OF BUILDINGS 2019**



## **ENERGY MANAGEMENT FOR BETTER INDOOR ENVIRONMENT**

---

**8. - 11. December 2019**

Nový Smokovec – Hotel ATRIUM \*\*\*, Slovakia

(SSTP 1927)

Dear Madam, Dear Sir,

It is my pleasure to invite you to the Indoor Climate of Buildings (ICB) 2019 conference. ICB 2019 is the 30th annual and 10th International conference organized by the Slovak Society of Environmental Technology (SSTP), held in Slovakia.

The conference will examine thermal comfort, indoor air quality, ventilation, exposure and related environmental health concerns associated with building design, construction, retrofit and operation, energy efficiency of buildings. It is a forum mainly for PhD. students and young researchers, to give them chance to gain new knowledge, exchange ideas and contacts for future collaboration with their other international fellows.

The Conference program will be based on keynote presentations given by international speaker and peer reviewed paper and extended abstract presentations of young researchers. The topics of the Conference will cover the following areas:

- Indoor air quality and health
- Indoor climate and comfort of buildings
- Indoor built environment and evaluation
- Energy efficiency and management of Buildings
- Energy Performance of HVAC-R systems
- Outdoor Environment and Renewable Energy

#### International Scientific Committee:

Budiaková Mária, *Slovakia*  
Holcátová Ivana, *Czechia*  
Kabele Karel *Czechia*  
Krajčík Michal, *Slovakia*  
Magyar Zoltán, *Hungary*

Petráš Dušan, *Slovakia*  
Piecková Elena, *Slovakia*  
Skotnicová Iveta, *Czechia*  
Stutterecker Werner, *Austria*  
Šikula Ondřej, *Czechia*

#### Conference Steering Committee:

**Dušan Petráš** - President ICB  
Slovak University of Technology in  
Bratislava  
Faculty of Civil Engineering  
Radlinského 11, 813 68 Bratislava  
[dusan.petras@stuba.sk](mailto:dusan.petras@stuba.sk)

**Imrich Sánka** – Coordinator  
Slovak University of Technology in  
Bratislava  
Faculty of Civil Engineering  
Radlinského 11, 813 68 Bratislava  
[icb.conference@gmail.com](mailto:icb.conference@gmail.com)

#### Organizing committee:

**Zuzana Švecová**  
SSTP, Kocel'ova 15  
815 94 Bratislava  
[sstp@sstp.sk](mailto:sstp@sstp.sk)  
[www.sstp.sk](http://www.sstp.sk)  
**Jana Polakovičová**  
SSTP, Kocel'ova 15  
815 94 Bratislava  
[sstp@zsvts.sk](mailto:sstp@zsvts.sk)

[www.sstp.sk](http://www.sstp.sk)

## **8. XII. 2019    Sunday**

---

15:00 - 19:00	Registration
17:00 - 17:30	Opening
17:30 - 19:00	Plenary session I.
19:00 - 23:00	Welcome Reception

## **9. XII. 2019    Monday**

---

8:30 – 18:00	Registration
9:00 – 10:00	Plenary session II.
10:00 – 10:30	Coffee Break
10:30 – 12:30	I. Session: Indoor air quality and health
12:30 – 13:30	Lunch break
13:30 – 15:30	II. Session: Indoor climate and comfort of buildings
15:30 – 16:00	Tea Break
16:00 – 18:00	III. Session: Indoor built environment and evaluation

## **10. XII. 2016    Tuesday**

---

8:30 – 18:00	Registration
9:00 – 10:00	Plenary session III.
10:00 – 10:30	Coffee Break
10:30 – 12:30	IV. Session: Energy efficiency of Buildings
12:30 – 13:30	Lunch break
13:30 – 15:30	V. Session: Energy Performance of HVAC-R systems
15:30 – 16:00	Tea Break
16:00 – 18:00	VI. Session: Outdoor Environment and Renewable Energy
18:00 – 19:00	AEE-SK Student Chapter meeting

## **11. XII. 2016    Wednesday**

---

9:00 - 12:00	Young scientists' workshop
--------------	----------------------------

## 8. XII. 2019 Sunday

---

15:00 - 19:00 Registration

17:00 - 17:30 Opening

### 30 years of ICB conference

Petráš D.: Slovak University of Technology in Bratislava, Faculty of Civil Engineering

### 17:30 – 19:00 PLENARY SESSION I.

Chairman: Petráš D., Sánka I.

1. **REHVA activities for indoor environment quality and energy conservation in Europe**  
Hovorka F.: Federation of European Heating, Ventilation and Air Conditioning Associations

2. **Smart HVAC systems for friendly indoor environment**  
Kabele K.: Czech Technical University in Prague, Faculty of Civil Engineering

19:00 – 22:00 Welcome Reception

## 9. XII. 2019 Monday

---

8:30 - 18:00 Registration

### 9:00 – 10:00 PLENARY SESSION II.

Chairman: Kabele K., Rodková C.

1. **Healthy children in healthy buildings?**  
Holcátová I.: Charles University, Second Faculty of Medicine, Prague
2. **Can we get fungal infection in the indoor environment?**  
Piecková E., Kolláriková Z., Globanová M.: Slovak Medical University, Bratislava

10:00 – 10:30 Coffee break

### 10:30 – 12:30 I. Session: INDOOR AIR QUALITY AND HEALTH

Chairman: Holcátová I., Junasová B.

1. **Overview of organic compounds occurrence in indoor environment**  
Harčárová K., Vilčeková S., Krídlová Burdová E.: Technical University of Košice
2. **Analysis of Indoor Air Quality and Thermal Environment in Classrooms with Different Ventilation Systems**

Skotnicová I., Rodková C., Chudíková B.: VSB-Technical University of Ostrava

**3. Thermal comfort and indoor air quality in the Library of the Faculty of Civil Engineering STU**

Junasová B.: Slovak University of Technology in Bratislava

**4. Indoor Air quality evaluation of family house**

Sánka I.: Slovak University of Technology in Bratislava

**5. Production of Pollutants from Organic Litter for Dairy Cow**

Lendelová.: SPU Nitra

**12:30 – 13:30            Lunch break**

**13:30 – 15:30            II. Session: INDOOR CLIMATE AND COMFORT OF BUILDINGS**

Chairman: Piecková E., Horák O.

**1. Analysis of thermal comfort in modern big university lecture hall**

Budiaková M.: Slovak University of Technology in Bratislava

**2. Analysis of thermal comfort experienced in research laboratories**

Roskotova K., Adamovsky D.: Czech technical university in Prague

**3. Assessment of Daylight and Sunlight in Buildings according New Czech European Standard ČSN EN 17037**

Skotnicová I., Rodková C.: VSB-Technical University of Ostrava

**4. Testing of Pilot Buildings by SRI Method**

Horák O., Kabele K.: Czech technical university in Prague

**5. Thermal Comfort by Operation of Wall Radiant Cooling System**

Šimko M.: Slovak University of Technology in Bratislava

**15:30 – 16:00            Tea break**

**16:00 – 18:00            III. Session: INDOOR BUILT ENVIRONMENT AND EVALUATION**

Chairman: Budiaková M., Čákyova K.

**1. Influence of Sustainable Aspects on Assessment of Internal Building Environment**

Jurča J., Horák P.: Brno University of Technology

**2. Influence of temperature and relative humidity of air on dehumidification capacity of water wall**

Čákyova K., Vranay F., Vranayová Z.: Technical University of Košice

**3. Influence of thermal response of heating systems on energy consumption and indoor climate of the building**

Oravec J., Šíkula O., Nováková I.: Brno University of Technology

**4. Solar radiation as a building control parameter – A comparison of measured and predicted values**

Plank H., Klanatsky P., Veynandt F., Stelzer R., Traunmüller W.: Forschung Burgenland GmbH, Research Centre Pinkafeld

**5. Development of an innovative blind control strategy to increase the thermal comfort of an office building**

Klanatsky P., Plank H., Heschl Ch.: Forschung Burgenland GmbH, Research Centre Pinkafeld

**6. Primary and recycled materials from LCA analysis**

Moňoková A., Tomková Ž., Vilčeková S.: Technical University of Košice

**19:00 – 20:30          Dinner**

## **10. XII. 2016    Tuesday**

---

**8:30 - 9:00          Registration**

**9:00 – 10:00          PLENARY SESSION III.**

Chairman: Krajčík M., Kudiváni L.

**1. Combined labelling of buildings**

Magyar Z.: Budapest University of Technology and Economics, Budapest

**2. RENOVACTICE – Project for Healthy Single-family Buildings**

Bukolská K.: Velux s.r.o.

**10:00 – 10:30 Coffee break**

**10:30 – 12:30          IV. Session: ENERGY EFFICIENCY AND MANAGEMENT OF BUILDINGS**

Chairman: Magyar Z., Zechner L.

**1. Heat pumps - the energy system of tomorrow?**

Stutterecker W.: Forschung Burgenland GmbH, Research Centre Pinkafeld

**2. Simulation study of a low-temperature heat radiator / heat pump system**

Zechner L.: Forschung Burgenland GmbH, Research Centre Pinkafeld

**3. Field measurement of a low-temperature heat radiator / heat pump system**

Schoberer T.: Forschung Burgenland GmbH, Research Centre Pinkafeld

**4. Calculation of Energy Performance of Building Using BIM**

Kudiváni L., Krajčík M., Petráš D.: Slovak University of Technology in Bratislava

**5. Analysis of non-invasive temperature sensors in terms of heat metering**

Seidl Ch.: Forschung Burgenland GmbH, Research Centre Pinkafeld

**6. The application of radiant wall cooling in new and existing buildings**

Krajčík M.: Slovak University of Technology in Bratislava

12:30 – 13:30      Lunch break

**13:30 – 15:30      V. Session: OUTDOOR ENVIRONMENT AND RENEWABLE ENERGY**

Chairman: Stutterecker W., Blasinski P.

1. **Installation and arrangement of branch pipes from the point of view of hygiene of potable water**  
Juhošová D., Peráčková J.: Slovak University of Technology in Bratislava
2. **Rekuperation of waste water heat produced by public pools**  
Predajnianska A., Takács J.: Slovak University of Technology in Bratislava
3. **Streamlining the operation of a heat source through renewable energy sources**  
Mudrá M.: Slovak University of Technology in Bratislava
4. **Utilization of Geothermal Energy in Heating Systems**  
Gažíková S., Takács J.: Slovak University of Technology in Bratislava
5. **Preparation of Construction Models for Compact Heat Station Using RES**  
Kubica M.: Slovak University of Technology in Bratislava

15:30 – 16:00      Tea break

**16:00 – 18:00      VI. Session: ENERGY PERFORMANCE OF HVAC-R SYSTEMS**

Chairman: Skotnicová I., Mazanec V

1. **Evaluation of ventilation system of big lecture hall in terms of CO2 load**  
Budiaková M.: Slovak University of Technology in Bratislava
2. **Evaluation of energy sources and their operation on the indoor climate and energy performance of a building**  
Šikula O., Nováková I., Oravec J.: Brno University of Technology
3. **The impact of Energy performance contracting measures on the quality of indoor environment of building**  
Gombošová V.: Slovak University of Technology in Bratislava
4. **Design and comparison of personalized ventilation systems**  
Mazanec V., Kabele K.: Czech Technical University in Prague
5. **Assessment of building retrofit measures: a case study with limited retrofit budget**  
Weyr J.: FH Burgenland GmbH, Research Centre Pinkafeld, Brno University of Technology
6. **Innovative technologies of EC fans 19 - Inovačné technológie EC ventilátorov 19**  
Baník I.: ebm-papst CZ s.r.o.

18:00 – 19:00      AEE-SK Student Chapter meeting

19:00 – 20:30      Dinner

**11. XII. 2016      Wednesday**

---

**9:00 – 11:00**

## YOUNG SCIENTISTS WORKSHOP

The closing program of the conference will be a workshop for PhD. students and young researchers. We would like to ask all the student participants to prepare a 5-7 minute presentation about their earlier or currently ongoing research projects.

The goal of the workshop is to get together and share research ideas, various physical and subjective methodologies in conducting research and introducing different data analyses and simulation methods among the participants.

This unique opportunity will allow the students to get feedback on their work from their other international fellows and plenary speakers. This brain storming session may also contribute to smooth and more efficient processing of the knowledge and research in their future work. Stay tuned and please join the event!





## VIP guest and plenary speaker

---

### Frank Hovorka

President - Federation of European Heating, Ventilation and Air Conditioning Associations



Frank Hovorka started his career in 1990 in construction field. A couple of years later, he joined the French construction group VINCI. He worked on different operational positions on construction sites. Based in Eastern Europe (mainly in the Czech Republic and Hungary) he worked with a team specialized in offices, retail and hotel buildings.

In 1997, he joined the French state owned group « Caisse des Dépôts et Consignations » to work as the technical director of the property management subsidiary based in Prague (Czech Republic). He also participated at that time in the creation of the facility management subsidiary company as a financial manager.

In 2000, he came back to France in order to work for EMGP as an operational manager. EMGP is a REIT company that owns more than 400 000 m<sup>2</sup> of commercial asset, and plots to develop of other 1 million m<sup>2</sup> in the north of Paris.

He participated in the development of several commercial buildings during these last years focusing on sustainable development (offices, data center, TV studios ) and a project of 40 000 m<sup>2</sup> of green shopping mall..

In 2005 he achieved the first office building certified as a « green building » by Certivea (French green building council).

In January 2007, he joined the international real estate department of Icade (real estate integrated developer) as head of development for commercial buildings, especially in Germany. In Munich, he achieved an office building of 20 000 m<sup>2</sup> with the gold certification by DGNB (German green building council).

He is also involved in research projects for net zero energy buildings and financial indicators for the green value (UNEP FI).

Since September 2010 he's working for the "Caisse des depots" group in charge of the real estate sustainable development policy.

## REGISTRATION FEE PAYMENT

---

### REGISTRATION FEES:

• ICB Regular participant	85,00	+ 20%	VAT =	102,00 €
• ICB Reduced fee participant (Member of SSTP, SKSI)	75,00	+ 20%	VAT =	90,00 €
• Student - Presenter	75,00	+ 20%	VAT =	90,00 €
• Proceedings book	25,00	+ 20%	VAT =	30,00 €
• Proceedings on USB	15,00	+ 20%	VAT =	18,00 €
• Proceedings on CD	12,50	+ 20%	VAT =	15,00 €
• Presenting company – Diamond partner	1250,00	+ 20%	VAT =	1500,00 €
• Presenting company – Main Partner	600,00	+ 20%	VAT =	720,00 €
• Presenting company	300,00	+ 20%	VAT =	360,00 €
• Special requirements	individual offer at: sstp@zsvts.sk			

### REGISTRATION INCLUDES:

- Access to Sessions
- Breaks
- Welcome Reception
- Conference Slovak Dinner

### WIRE TRANSFER INFORMATION

Registration fees must be paid in EUR by wire transfer to:

SSTP, Kocel'ova 15  
815 94 Bratislava, Slovakia  
Company ID: 00896918  
Tax ID: SK2021491241

**Account NO.:** 1307192857/ 0200

**Variable symbol:** 28 + your company ID

**Details of payment:** Name of company / Forename and Surname of participant\*

**IBAN:** SK67 0200 0000 0013 0719 2857

**SWIFT/BIC:** SUBASKBX

\*The participant's name should be clearly legible otherwise the payment cannot be identified.

All payments made by bank transfer must be net of all bank charges. The payer pays the bank charges of their bank, and the beneficiary pays the charges of their bank, if any.

The invoice will be sent after the conference.

The refundation of the registration fee is not possible.

If you should be prevented from attending, you will be given the opportunity to send a colleague in your place.

## VENUE:



8. - 11. December 2019, Hotel ATRIUM, Nový Smokovec – High Tatras.

**Conference dates:** Sunday -Wednesday, 8. – 11. December 2019

**Accommodation:** Hotel ATRIUM\*\*\*, Nový Smokovec – High Tatras.

Conference prices for accommodation:

- Double room per night 64,00 €
- Single room per night 53,00 €

The price of accommodation includes:

- Continental breakfast in value of 12€ per person
- Parking
- WiFi access in the hotel area
- Free entry to hotels Vital World

**Local tax** must be paid at the check-in – 1 €/person/day.

Accommodation is paid by participant of conference and it is not included in registration fees. Accommodation must be paid in EUR by credit card or cash in the hotel.

The programme and registration form can be found on the webpage [www.sstp.sk](http://www.sstp.sk).

More information is provided by the organisation guarantor

- [Imrich Sánka \(ENG/HU/SK/CZ\)](#)
- [Jana Polakovičová \(SK/CZ\)](#)

Please send the registration form to the following e-mail address: [sstp@zsvts.sk](mailto:sstp@zsvts.sk)

**The deadline for applications is 2.12 2019**

Contact address:

SSTP, Kocel'ova 15

815 94 Bratislava, Slovakia

[icb.conference@gmail.com](mailto:icb.conference@gmail.com)

or

[sstp@zsvts.sk](mailto:sstp@zsvts.sk)

Diamond partner:



---

Main partners:



---

Cooperating organization:



---

Professional consultancy in building energy sector:

„Žiť energiou“



EURÓPSKA ÚNIA  
Európsky fond  
regionálneho rozvoja

---

Medial partners:



www.energie-portal.sk



www.tzb-info.cz