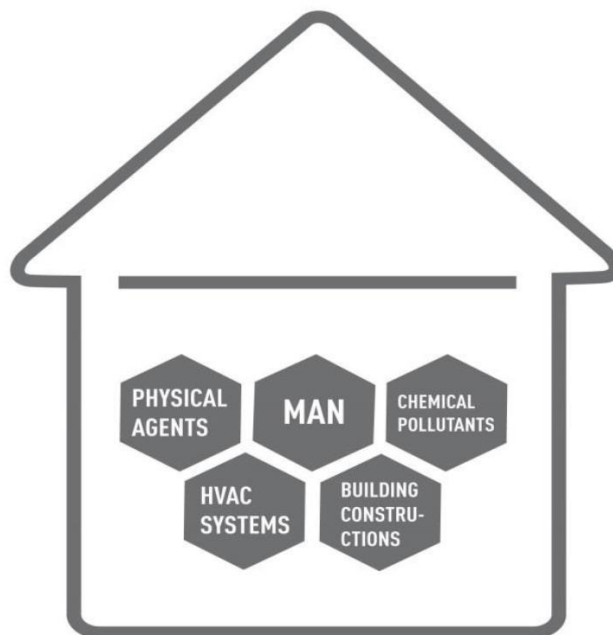




Slovak Society of  
Environmental Technology (SSTP)  
Association of Slovak Scientific and Technological Societies (ZSVTS)  
Association of Energy Engineers: AEE Student Chapter - STU Bratislava, Slovakia  
Slovak Chamber of Civil Engineers  
Slovak University of Technology in Bratislava, Faculty of Civil Engineering

Invite you to 33th annual and 11th International conference

## INDOOR CLIMATE OF BUILDINGS 2022



## HEALTHY BUILT ENVIRONMENT AND ENERGY SECURITY

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**4. - 6. December 2022**

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

Dear Madam, Dear Sir,

It is my pleasure to invite you to the Indoor Climate of Buildings (ICB) 2022 conference. ICB 2022 is the 33th annual and 11th 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*  
Kabele Karel *Czechia*  
Krajčík Michal, *Slovakia*  
Petráš Dušan, *Slovakia*

Piecková Elena, *Slovakia*  
Stutterecker Werner, *Austria*  
Jiří Hirš, *Czechia*

#### **Professional guarantor of the conference:**

**Dušan Petráš** - prezident 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)

**Barbora Junasová** – Slovakian 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:**

**Jana Lehotová Nôtová**  
SSTP, Kocel'ova 15  
815 94 Bratislava  
[konferencie@sstp.sk](mailto:konferencie@sstp.sk)

#### **Proceeding editor:**

**Zuzana Švecová**  
SSTP, Kocel'ova 15  
815 94 Bratislava  
[ssstp@sstp.sk](mailto:ssstp@sstp.sk)

## **4. 12. 2022    Sunday**

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

## **5. 12. 2022    Monday**

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- 08:30 – 18:00    Registration
- 09:00 – 10:00    Plenary session II.
- 10:00 – 10:30    Coffee Break
- 10:30 – 12:00    I. Session: Indoor air quality and health
- 12:00 – 13:30    Lunch break
- 13:30 – 15:00    II. Session: Indoor climate and comfort of buildings
- 15:00 – 15:30    Tea Break
- 15:30 – 17:00    III. Session: Indoor built environment and evaluation

## **6. 12. 2022    Tuesday**

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- 08:30 – 18:00    Registration
- 09:00 – 10:30    IV. Session: Energy efficiency of Buildings
- 10:30 – 11:00    Coffee break
- 11:00 – 12:30    V. Session: Outdoor environment and renewable energy
- 12:30 – 13:30    Lunch Break

## 4. 12. 2022 Sunday

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15:00 - 19:00 Registration

17:00 - 17:30 Opening

17:30 – 19:00 **PLENARY SESSION I.**

Chairman: Petráš D., Junasová B.

1. **Energy performance and comfort of intelligent buildings - where is the limit of automation of building management processes**

Kabele K.: Czech Technical University in Prague, Faculty of Civil Engineering

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

Wargocki P., Wei W., Mandin C.: DTU Denmark

3. **Renoactive – Velux project**

Predajnianska A., Petráš D., Szánka I.: Slovak University of Technology in Bratislava, Faculty of Civil Engineering

19:00 – 22:00 Welcome Reception

## 5. 12. 2022 Monday

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8:30 - 18:00 Registration

9:00 – 10:00 **PLENARY SESSION II.**

Chairman: Kabele K., Mudrá M.

1. **Smart regions**

Hirš J.: Brno University of Technology

2. **Breathable composition of fungal bioaerosol in historic places - calculations and ill health potential**

Piecková E., Lehotská R.: Slovak Medical University, Bratislava

10:00 – 10:30 Coffee break

10:30 – 12:00 **I. Session: INDOOR AIR QUALITY AND HEALTH**

Chairman: Piecková E., Budajová J.

1. **Monitoring of indoor environmental quality in three certified buildings**

Budajová J., Harčárová K., Vilčeková S., Krídlová Burdová E.: Technical University of Košice

2. **Analysis of Indoor Air Quality in a pre-school education facility in the summer and winter period**

Stiborová P., Baďurová A.: VSB-Technical University of Ostrava

3. **Analysis of indoor climate in in flat in new residential building**

Budiaková M.: Slovak University of Technology in Bratislava

4. **Calculation of air change rate by tracer gas**

Štefanič P.: Slovak University of Technology in Bratislava

12:00 – 13:30 Lunch break

**13:30 – 15:00**    **II. Session: INDOOR CLIMATE AND COMFORT OF BUILDINGS**

Chairman: Budiaková.M., Fadrný O.

- 1. Analysis of thermal comfort in modern big university lecture hall**  
Budiaková M.: Slovak University of Technology in Bratislava
- 2. Evaluation of new construction and technological solutions for farms in relation to the quality of the environment**  
Lendelová J., Karandušová I., Balková M., Žitňák M., Gálik R.: Faculty of Engineering, Slovak University of Agriculture in Nitra
- 3. Requierements for the indoor air quality of residential buildings and buildings used for animal husbandry and vegetable cultivation**  
Állóová V.: Slovak University of Technology in Bratislava
- 4. Assessment of the quality of the indoor environment in flats after complex renovation of the building**  
Strenk T.: Slovak University of Technology in Bratislava
- 5. Analysis of daylight in a multi-storey office building in different geographical conditions of the Czech Republic and**  
Fadrný O., Skotnicová I., Kolarčík V.: VSB - Technical University of Ostrava

**15:00 – 15:30**    **Coffee break**

**15:30 – 17:00**    **III. Session: INDOOR BUILT ENVIRONMENT AND EVALUATION**

Chairman: Šimko M., Knut P.

- 1. Field laboratory for simultaneous of radiant floor, ceiling, and wall system**  
Šimko M, Petráš D., Szabó D., Krajčík M.: Slovak University of Technology in Bratislava
- 2. Parametric study of fragments using ATO in buildings**  
Mučková V., Kalús D.: Slovak University of Technology in Bratislava
- 3. Adapting the construction of radiant systems for building reconstructions**  
Junasová B., Krajčík M.: Slovak University of Technology in Bratislava
- 4. Analysis of the current state of green facades**  
Knut P., Kocúrková M., Kapalo P., Vranayová Z.: Technical University of Košice
- 5. Calculation method of the radiant panel with phase change material**  
Švarcová E., Petráš D.: Slovak University of Technology in Bratislava

**17:00 – 18:00**    **CORPORATE LECTURES**

**19:00 – 22:00**    **Dinner**

## 6. 12. 2022 Tuesday

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8:30 - 9:00 Registration

9:00 – 10:30 **IV. Session: ENERGY EFFICIENCY OF BUILDINGS**

Chairman: Stutterecker W., Horák O.

- 1. Identification of performance gaps from heat pump systems in real operation environment based on model-based data analysis**  
Stelzer R.: Forschung Burgenland GmbH, Research Centre Pinkafeld
- 2. Effects of feed-in power limitations on the annual energy yield of residential photovoltaic systems**  
Kirchknopf N., Krammer M., Wenig F.: Forschung Burgenland GmbH, Research Centre Pinkafeld
- 3. Analysis of Frosting in Heat Recovery Exchanger**  
Svodobová A., Adamovsky D.: Czech technical university in Prague
- 4. Operational building energy performance**  
Horák O., Kabele K.: Czech technical university in Prague
- 5. Energy efficient fuel cells – A possibility for the future building**  
Seidl Ch.: Forschung Burgenland GmbH, Research Centre Pinkafeld
- 6. Energy ventilation concept for an apartment building with the application of heat recovery elements using two ventilation system alternatives, Case Study**  
Straková Z.: Slovak University of Technology in Bratislava

10:30 – 11:00 Coffee break

11:00 – 12:30 **V. Session: OUTDOOR ENVIRONMENT AND RENEWABLE ENERGY**

Chairman: Predajnianska A.

- 1. Simulation of pressure resistance of odor traps**  
Sokol M., Peráčková J.: Slovak University of Technology in Bratislava
- 2. Overview of wastewater cooling options**  
Predajnianska A., Takács J.: Slovak University of Technology in Bratislava
- 3. The impact of heat source renovation on apartment buildings**  
Mudrá M.: Slovak University of Technology in Bratislava
- 4. Heat recovery from sewage systems in buildings**  
Hrnčárová L., Peráčková J.: Slovak University of Technology in Bratislava
- 5. The New Test Cells for Experimental Research of Advanced Facades**  
Dankova A., Bielek B., Szabo D., Kaníková K.: Slovak University of Technology in Bratislava
- 6. Effect of Indoor Climate parameters on Thermal comfort and energy need for heating: a brief review**  
Kudriashov V., Krajčík M.: Slovak University of Technology in Bratislava

12:30 – 13:30 Lunch break

13:30 – 14:00 Closing

# REGISTRATION FEE PAYMENT

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## 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 €
• Presenting company – Diamond partner	1000,00	+ 20% VAT =	1200,00 €
• Presenting company – Main Partner	600,00	+ 20% VAT =	720,00 €
• Presenting company	400,00	+ 20% VAT =	480,00 €
• Special requirements	individual offer at: konferencie@sstp.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, Kocelova 15  
815 94 Bratislava, Slovakia  
Company ID: 00896918  
Tax ID: SK2021491241

**Account NO.:** 1307192857/ 0200

**Variable symbol:** 21 + 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 have to 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:



4. - 6. December 2022, Hotel ATRIUM, Nový Smokovec – High Tatras.

**Conference dates:** Sunday - Tuesday, 4. – 6. December 2022

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

Conference prices for accommodation:

- Double room per night 84,00 €
- Single room per night 73,00 €

The price of accommodation includes:

- Continental breakfast
- Parking
- WiFi access in the hotel area
- Free entry to hotels Vital World

**Local tax** must be paid at the check-in – 1,5 €/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

- [Ing. Barbora Junasová \(ENG/ES/SK/CZ\)](#)
- [Jana Lehotová Nôtová \(SK/CZ\)](#)

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

**The deadline for applications is 30.11. 2022**

Contact address:  
SSTP, Koceľova 15  
815 94 Bratislava, Slovakia  
[icb.conference@gmail.com](mailto:icb.conference@gmail.com)

or

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



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Diamond partner:



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Main partners:



**FENIX**



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Exhibition partners:



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Cooperating organization:

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Professional consultancy in building energy sector:

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Medial partners:

