

4th International Academic Conference on Research in Engineering and Technology



18–20 September 2025

Prague, Czech Republic



www.retconf.org



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Conference Abstract Book

The abstracts of the presentations can be found in the online conference Abstract Book.

All abstracts will be available in the abstract book starting from the inaugural day of the Conference. Visit the following link to access the abstracts, or scan the QR code

<https://www.dpublication.com/proceeding/4th-retconf>



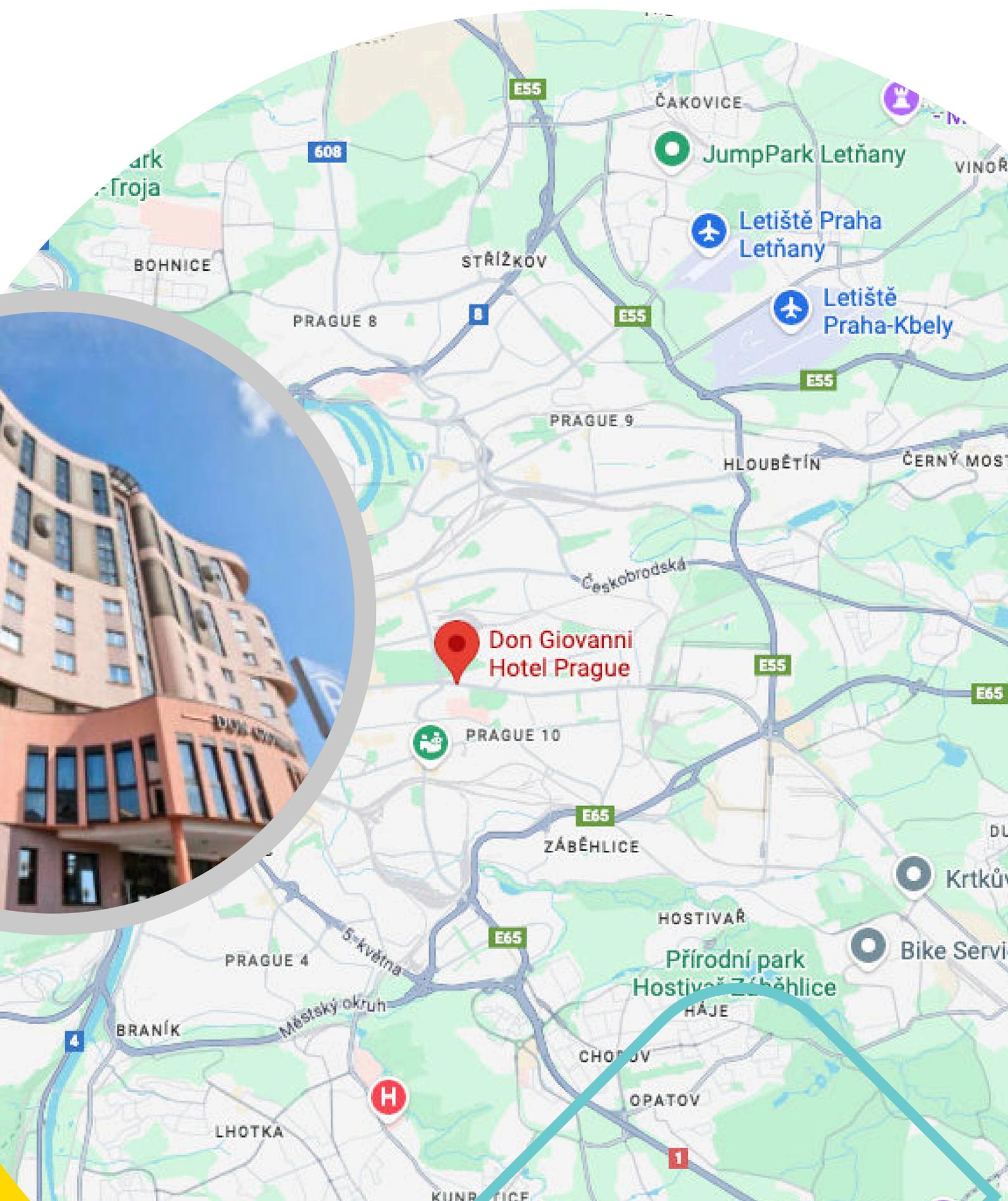
Prague, the capital of the Czech Republic, represents one of the most historically and culturally significant urban centers in Central Europe. With its origins tracing back over a millennium, the city has served as a political, economic, and intellectual hub throughout various periods of European history. Its urban landscape reflects a remarkable continuity of architectural development, encompassing Romanesque, Gothic, Renaissance, Baroque, and modernist influences, which together illustrate the city's dynamic historical trajectory. Landmarks such as Prague Castle, the Charles Bridge, and the Old Town Square not only embody architectural achievement but also symbolize Prague's role in shaping regional identity and cultural heritage. Today, the city continues to function as a prominent academic and research destination, hosting numerous universities, research institutes, and international conferences that contribute to global scholarly exchange.

Conference Venue

Don Giovanni Hotel Prague

Address:

Vinohradská 157a, 130 20 Prague, Czech Republic



1st Day

Oral Presentations

Thursday | 18 Sep 2025

08:30 – 09:00

REGISTRATION & WELCOME

We are excited to welcome you to the much-awaited Oral Session at the **RETCONF** conference, featuring distinguished speakers from various fields who will present their knowledge and perspectives on a range of topics. Conference check-in will be available from **08:30** to **09:00 Prague, Czech Republic** local time

Business, Urban & Social Sustainability

09:00 – 09:15

Dr. Gretta Mohan – Ireland

Examining consumers' perceptions of business sustainability performance.

09:15 – 09:30

Prof. Dr. Kitapatr Dhabhalabutr – Thailand

Khon Kaen: A New Urban Frontiers of Sustainable Development for a National Model of Medium-size City Development.

09:30 – 09:45

Peiyao Shen – UK

Architectural Cannibalization.

09:45 – 10:00

Yanlin Bao – UK

The Latent Walk of the Deep Landscaper: Exploring Stylistic Diversity in Machine-Generated Plans.

1st Day

Oral Presentations

Thursday | 18 Sep 2025

Sustainable Materials & Cement Innovations

10:00 – 10:15

Esraa Alali- Kuwait

Sustainable Cement Mortars: Evaluating Volcanic Ash and Nano-Silica as Partial OPC Replacements.

10:15 – 10:30

Dana Dashti- Kuwait

Assessment of Microstructural Characteristics in Cement Matrices with Volcanic Ash and Nano-Silica Substitutions.

10:30 – 11:00

Networking & Refreshments

11:00 – 11:15

Dr. Hussein Faisal Al-kroom- Jordan

Combination of waste glass and raw bentonite in the manufacturing of alkali activated mortar.

11:15 – 11:30

Dr. Samy Yousef- Lithuania

Environmental and techno-economic analysis of pyrolysis of wind turbine blade waste.

11:30 – 11:45

Mohammad Saad Nemshah- Saudi Arabia

Enhancing Energy Efficiency Through Geothermal Heat Pumps: A Performance Analysis Using the KTENG-7000GH Simulator.

1st Day

Oral Presentations

Thursday | 18 Sep 2025

AI, Modeling & Intelligent Systems

11:45 – 12:00

Prof. Dr. Samer Abu Ghazaleh – Jordan

Intelligent Transportation Systems (ITS) an issue from Amman City, Jordan.

12:00 – 12:15

Prof. Dr. Hind Mestouri – Morocco

A Convolutional Neural Network Approach to Real-Time Emotion Recognition from Voice and Facial Expressions.

12:15 – 12:30

Dr. Mir Jafar Sadegh Safari – Canada

Sustainable drought risk management via multi-scale drought modeling with multi-output artificial intelligence.

12:30 – 12:45

Mateusz Lerke – Poland

Prediction of energy consumption in Unmanned Aerial Vehicles (UAVs).

12:45 – 13:00

María Pazo Rodríguez – Spain

SARIMAX modeling of chlorophyll-a in As Conchas reservoir (Ourense, NW Spain).

13:00 – 14:00

Networking & Lunch Time

Renewable Energy & Energy Storage

1st Day

Oral Presentations

Thursday | 18 Sep 2025

14:00 – 14:15

Dr. Mingyue Selena Sheng – New Zealand

Unlocking Green Hydrogen Potential for Industrial Heat in New Zealand.

14:15 – 14:30

Abdalla Mohamed Ali Mohamed – China

Porous Graphitized Coal Anodes for Sodium-Ion Batteries via Flash Joule Heating and Catalytic Activation.

14:30 – 14:45

Damir Zuljevic – Germany

Innovative lithium recovery: a promising pathway from laboratory optimization to industrial feasibility.

14:45 – 15:00

Antoinette Ndongjie Akazoh – Cameroon

Building Resilient Supply Chains for Renewable Energy Access in Conflict-Affected Regions: A Sustainability Framework for Sub-Saharan Africa.

15:00 – 15:15

Dr. Paolo Finocchi – Italy

Application of SRI advanced evaluation on Auto-DAN Case study.

Environmental Chemistry & Electrochemistry

15:15 – 15:30

Anna Karólkowska – Poland

Capacitance-charge analysis in investigation of oxygen electrochemistry on platinum in alkaline environments.

15:30 – 15:45

Szymon Wysmulek – Poland

New impedance frequency characteristics – differential and relative impedance.

1st Day

Oral Presentations

Thursday | 18 Sep 2025

15:45 – 16:00

Anjali– India

Formation of Ethanolamine-Mediated Surfactant-Free Microemulsions Using Hydrophobic Deep Eutectic Solvents.

16:00 – 16:15

Prof. Dr. Najah Almhanna– Oman

Greenhouse Emission Reduction by Adsorption.

16:15 – 16:45

Networking & Refreshments

Waste Valorisation & Recycling

16:45 – 17:00

Dr. Nathalie Berezina– Sweden

Insect-Based Valorisation of Residual Plastics: Optimizing Galleria mellonella Larval Rearing for Circular Economy Applications.

17:00 – 17:15

Dr. Wei Fan– UK

Enhancing Recycling Efficiency for Fibre-based Composite Packaging.

17:15 – 17:30

Dr. Hamid Safarzadeh– Italy

Circular Compliance: Aligning EV Battery Waste Management with the EU Battery Regulation 2023/1542.

1st Day

Oral Presentations

Thursday | 18 Sep 2025

17:30 – 17:45

Mahdi Echajari– Hungary

Sustainable Wastewater Treatment at Sopron WWTP: A Life Cycle Assessment of Environmental and Energy Performance.

17:45 – 18:00

Prof. Dr. Mario Farrugia– Malta

Liquefied Petroleum Gas (LPG) Transferring Unit.

18:00 – 18:15

Guy paclair Djoken– USA

Making “Carbon footprint” the new “Calorie” for a Net Zero.

18:15 – 18:30

Networking & Closing Time

1st Day

Poster Presentations

Thursday | 18 Sep 2025

08:30 – 09:00

REGISTRATION & WELCOME

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Prof. Dr. Fikret Alic– Bosnia and Herzegovina

Uniform short-wave infrared heating of a thermo-accumulation rotating collector.

Ho Hsing–Chen– Taiwan

An analysis of the cell fission rate of *Scenedesmus obliquus* under different light frequencies..

Tamar Chezha– Georgia

Study on the Potential Use of Biopesticides in the Management of Blueberry (*Vaccinium corymbosum* L.) Diseases.

Mohammad Mataqi– Kuwait

Comparative Analysis of Air Pollution from Rubberized and Conventional Asphalt: A Case Study.

Prof. Dr. Strahinja Kovacevic– Serbia

RP-UHPLC Analysis of Novel Androstane-3-Oxime Isomers.

Dr. Milica Karadzic Banjac– Serbia

Classification of Different Classes of Pesticides Based on ADMET Properties.

2nd Day

Virtual Presentations

Friday | 19 Sep 2025

09:15 – 09:30

Sign-In & Welcome

We are thrilled to welcome all participants to **RETCONF!** We are delighted to offer a one-of-a-kind virtual experience, featuring a variety of sessions, engaging discussions, and valuable networking opportunities for those joining us from the comfort of their homes. Check-in will be available from **09:15** to **09:30** local time in **Prague, Czech Republic**.

Digitalization, Data, and Sustainable Innovation Across Industries

09:30 – 09:45

Sinem Şenol- Turkey

Integration of Smart Metering, IoT, and AI for Digital Transformation in Natural Gas Distribution Systems.

09:45 – 10:00

Christel Füllenbach- Germany

Transforming Maintenance in Underground Mining: A Maturity Model Approach to Digitalization and Automation.

10:00 – 10:15

Haesung Bae- USA

What are the Internal and External Applications of Conversational Data in Large Language Models?

10:15 – 10:30

Dr. Jonida Shehu- Albania

Sustainable Financial Risk Intelligence with SDG-Aligned Knowledge Graph.

10:30 – 10:45

Prof. Dr. Vinod Arya- USA

Effect of anisotropy on the creep failure of thick-walled cylinders

2nd Day

Virtual Presentations

Friday | 19 Sep 2025

10:45 – 11:00

Q & A- Break Time

Advanced Materials for Energy and Environmental Sustainability

11:00 – 11:15

Dr. Beiyong Zhou- China

Fabricating Luminescent Ceramics Derived from Mesoporous Powders by Spark Plasma Sintering.

11:15 – 11:30

Ashish Chopade- India

Wastewater Treatment by Advanced Oxidation Process (Hydrodynamic Cavitation).

11:30 – 11:45

Prof. Dr. Joseph Teye Ignatius Buerthey- Australia

Harnessing the prospects and managing the challenges in the usage of bio-based green technology in Ghana: the case bamboo .

11:45 – 12:00

Dr. Amaha Kidanu Atsbeha- Ethiopia

Design of Wind-Solar Hybrid Energy System for Drip Irrigation Pumping Application in Tabia Smret Community Northern Ethiopia.

12:00 – 12:15

Q & A- Break Time

2nd Day

Virtual Presentations

Friday | 19 Sep 2025

Innovations in Construction Materials, Safety, and Sustainable Building Systems

12:15 – 12:30

Tuğba Özdemir Mazlum– Turkey

Influence of Activator-to-Binder Ratio on the Mechanical Properties of One-Part Geopolymer Concrete.

12:30 – 12:45

Abdul Hadi Mohamad Bashar Al Samawi– UK

A Comprehensive Review of Fire Risk Assessment in Multi-Purpose Buildings: Trends and Insights from 1994 to 2024.

12:45 – 13:00

Kishore Bandu– USA

AI-Optimised Green Roof Drainage Systems – Designing smart water retention systems for urban buildings.

13:00 – 13:15

Hemraj Parate– USA

Best Practices for Subcontractor Selection and Vendor Management in Highway Construction.

13:15 – 13:30

Jayson Cheng– USA

How do AI models efficiently use various algorithmic processes to predict fluctuations in the stock market?

13:30 – 13:45

Prof. Dr. Hamed Askar– Egypt

Flexural Characteristics of Post-tension HSRC Slabs with Opening under Distributed Load

13:45 – 14:00

Q & A– Closing Time

3rd Day

Walking City Tour Information

This tour is perfect for someone who firstly visit this city. We will feel the taste of Czech culture, traditions, history. Our tour will open for you the capital of this country and during 3 hours we will visit the best places of Prague. I promise you to help you to be oriented here like local and promise to start our tour with taste of famous "trdelnik" This tour will not be like long lecture, it will be like meeting with good friends. Don't miss and welcome to Prague!

We will visit:

- Wenceslas square
- Old city
- New city
- St. Vitus cathedral
- Powder tower
- Astronomical clock
- Charles bridge
- Vergin Mary before Tyn
- Island Campa



F.A.Q.

of the Conference

To give you as much information as possible, we provide you with the following frequently asked questions (FAQs) and answers.

Invoices or payment receipt. When will I receive my invoice/payment receipt?

01.

We send invoices to customers in the last week before the conference. (Invoices come with signature and stamp). If you do not receive an invoice, please contact us at the email address in your program.

When will you give us certificates?

02.

Listeners and Speakers will be awarded Certificates at the venue. The certificate of virtual attendees will be emailed after the conference.

Publication opportunities; Where and when will my paper be published?

03.

All Abstracts will be published in the Abstract Book (link in the program). Other publishing opportunities including conference Proceedings, peer-reviewed indexed journals, etc. will be announced by our colleagues a few weeks after the conference.

Virtual presentations. How can we join the Virtual sessions?

04.

We will send information to all conference participants in an email with simple and clear instructions. There is a link that will automatically connect you to the conference platform. *Please note there is no need to join the virtual session from the conference venue. You can join us anywhere & you just need a computer and internet.*

How long is a conference paper presentation for in-person or virtual delegates?

05.

In-person or virtual presenters will have 13 minutes for paper presentation, and then 2 minutes for Q&A.

Any other questions?

Or maybe you want to leave your feedback?

We look forward to your letter by the following email:

 www.retconf.org
 info@retconf.org



 www.steconf.org
 info@steconf.org