

PREFACE

The 15th International Scientific Conference of Civil and Environmental Engineering for the PhD. students and young scientists - Young Scientists 2023 (YS23) under auspices of

- prof. Dušan Katunský, the dean of the Civil Engineering Faculty of the Technical University of Košice, Slovak Republic,
- Ing. Andrej Doležal, the Minister of Transport of the Slovak Republic,
- Mgr. Ján Horecký, the Minister of Education, Science, Research and Sport of the Slovak Republic,
- Ján Budaj, the Minister of Environment of the Slovak Republic, and
- Ing. Martin Hypký, MBA, the Head of Authority for Spatial Planning and Construction of the Slovak Republic,

was held in High Tatras, Slovakia on 29th - 31th March 2023. The traditional meeting of PhD. students, their supervisors and young scientists working in the field of civil and environmental engineering was organised by the Faculty of Civil Engineering, the Technical University of Košice, Slovakia.

The Young Scientist 2023 offered an international platform for the dissemination of the original research results. It provides a pleasant environment to present a new, great ideas of young researchers and discovered advances in the field of civil and environmental engineering and related interdisciplinary topics. The conference provided an opportunity for PhD. students and young researchers to discussed scientific topics and research results, to share their knowledge and experiences, to collaborate in innovative designs and proposals.

The Conference assembled more than sixty-five delegates including PhD. students and other representatives from the universities.

The scientific contributions involved a wide range of research fields:

- Building Information Modeling
- Building Physics and Services
- Construction Economics, Marketing and Management
- Construction Technology, Organization and Management
- Environmental Engineering
- Indoor Environment
- Hydrotechnical Engineering
- Innovations in Construction Design and Technology
- Material Engineering and Recycling
- Statics, Dynamics and Modeling
- Structural Engineering and Bridges
- Sustainable Architecture and Energy Efficiency
- Sustainable Civil and Environmental Engineering
- Sustainable Water Management
- Transport and Geotechnical Engineering
- Urban Engineering

Forty-five contributions have been selected to be published in the volume of MATEC Web of Conferences. The organizing committee appreciates the

enormous work of the both the editorial board and reviewers in the preparation of this volume. Many thanks also to all authors for their flexibility and meeting deadlines.



Issue editors
Peter Mésároš
Vinayakam Jothiprakash
Kamila Kotrasová
Martina Zeleňáková