

International Conference on Safety Design and Construction of Underground Structures



Czech Technical University in Prague
Faculty of Civil Engineering | technologie.fsv.cvut.cz

11th - 13th April, 2016

The International Conference on Safety Design and Construction of Underground Structures (SDeCUS 2016) is a conference intended to be a forum for researchers in all related fields, in addition to those listed under the conference topics, as well as case studies describing practical experiences. The conference is aimed on Safety in construction have the highest priority in the engineering of a underground structures and have to be fully integrated into the every stage of activities like design, construction and exploitation. This theme is of a great importance for researching a new more safety technology development.

Topics include risk analysis and risk management, rock and mining engineering, explosive engineering, seismicity and geomechanics, underground structures and excavations, safety material engineering, integrated safety design process, natural disaster management, emergency response, critical infrastructure protection, public safety and security, transportation safety and security, modelling and experiments, hardened structures (chambers), earthquakes

We thank the generous support by Czech Technical University in Prague for making the SDeCUS 2016 possible, Willenberg Foundation for their enthusiasm and help with the organization of the conference and we thank the office of the Trans Tech Publications Inc. for assistance with editorial matters.

Vladimir Křístek

Alexander Kravcov



Day One

11th April 2016

09.30	Registration
10.00	Opening
Keynote Session <i>Chair: Pavel Svoboda, Czech Technical University in Prague, Czech Republic, Faculty of Civil Engineering</i>	
10:30	Jan Pruška Czech Technical University in Prague, Czech Republic
11:00	Contact Laser-Ultrasonic Evaluation of Residual Stress Alexander A. Karabutov <i>International Laser Center of M.V. Lomonosov Moscow State University, Russia</i>
11:20	Features of numerical modeling in situ stress state massive of rocky and issues of verification of the data Elena Cherepetskaya <i>The National University of Science and Technology MISiS, Laser ultrasonic nondestructive testing Lab, Russia</i>
11:40	Coffee break
12:00	Aaron Mc Daid Arup Gulf Ltd., Dubai, United Arab Emirates
12:20	Protective Structure Design against Airblast Effect Jiří Štoller, Petr Dvořák <i>University of Defence, Czech Republic</i>
12:40	Assessment of Factors Affecting the Final Value of «volume loss» by TBM tunneling Alexey A. Skvortsov, Elena B. Cherepetskaya <i>The National University of Science and Technology "MISIS", Russia</i>
13:00	Lunch
Information concerning the technical visit on 13th April 2016	

Day Two

12th April 2016

09.30	Registration
10.00	Opening
Technological development <i>Chair: Vladimir Křistek</i> <i>Czech Technical University in Prague, Czech Republic, Faculty of Civil Engineering</i>	
10:30	New system of ice wall strength increase Ibragim Palankoev <i>President of Joint-Stock Company UMC "SouzSpecStroy", Russia</i>
11:00	Load of AAFA concrete specimens from explosion of steam-air mixture Rostislav Šulc <i>Czech Technical University in Prague, Czech Republic</i>
11:20	Scientific Principles for Shaping Underground Infrastructure of Megacities Boris A. Kartoziya <i>Underground Space Development Department, Mining Institute, National University of Science and Technology (MISIS), Moscow, Russia</i>
11:40	Application of stay cable systems in large-span underground construction Anton V. Oborin <i>Underground Space Development Department, Mining Institute, National University of Science and Technology (MISIS), Moscow, Russia</i>
12:00	Coffee break
New technologies <i>Chair: Andrey Korchak</i> <i>Czech Technical University in Prague, Czech Republic, Faculty of Civil Engineering</i>	
12:30	Basic Directions of Improving the Durability of the Sewage Collector Lining Elena Kulikova <i>Department of Construction of underground structures and mining enterprises, Mining Institute, National University of Science and Technology (MISIS), Moscow, Russia</i>
12:50	Mathematical model of the painting robot Michal Bruzl, Vyacheslav Usmanov <i>Czech Technical University in Prague, Czech Republic</i>
13:10	Study of Effects of Weathering Factors on Internal Structure of Rocks by Laser Ultrasonic Spectroscopy Alexander A. Karabutov, Yulia G. Sokolovskaya <i>International Laser Center of M.V.Lomonosov Moscow State University, Moscow, Russia</i>

13:30	Improving the efficiency of artificial groundfreezing in urban underground construction by using solid carbon dioxide Schuplik Mikhail <i>Department of Construction of underground structures and mining enterprises, Mining Institute, National University of Science and Technology (MISIS), Moscow, Russia</i>
13:40	Lunch
15:00 Discussion Forum <i>Czech Technical University in Prague, Czech Republic, Faculty of Civil Engineering</i>	
18:00	Banquet