Programme

The Fifteenth International Conference on Computational Structures Technology

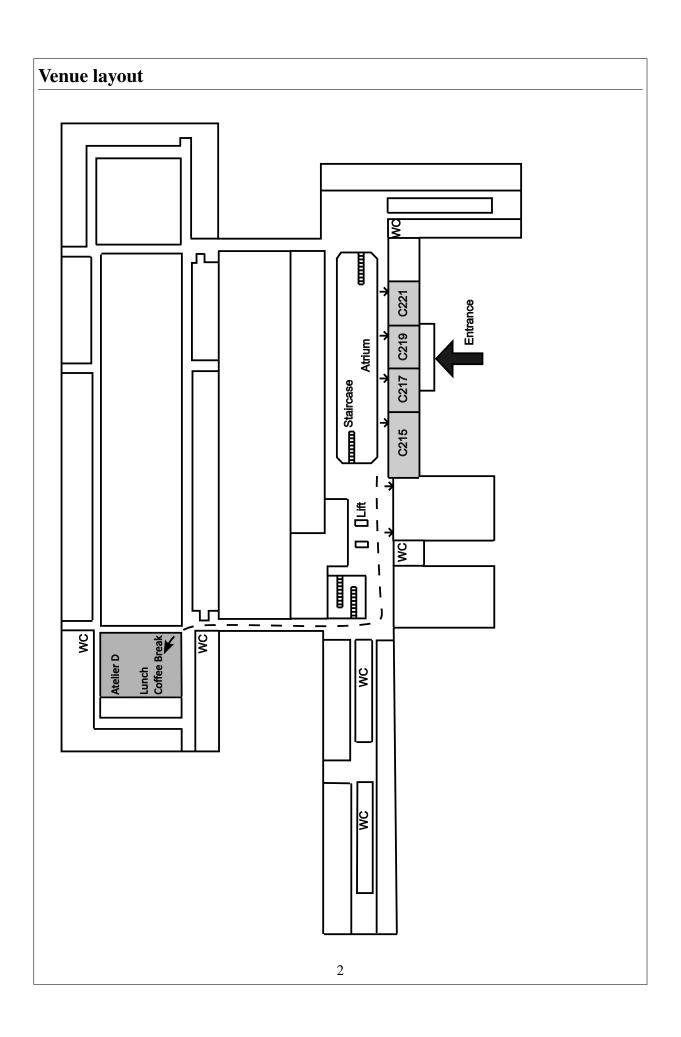
The Twelfth International Conference on Engineering Computational Technology



4-6 September 2024 Prague, Czech Republic

Organised in co-operation with the Faculty of Civil Engineering, Czech Technical University in Prague





How to find a paper in the conference proceedings	
The contributed papers are published in a summary volume with the full papers available as follows:	
Volume CST https://www.ctresources.info/ccc/pub.html?f=v9cst24 Proceedings of The Fifteenth International Conference on Computational Structures Technology P. Iványi, J. Kruis and B.H.V. Topping (Editors) Civil-Comp Press, 2024	gy
Volume ECT https://www.ctresources.info/ccc/pub.html?f=v8ect24 Proceedings of The Twelfth International Conference on Engineering Computational Technolo P. Iványi, J. Kruis and B.H.V. Topping (Editors) Civil-Comp Press, 2024	ogy
In this programme the letters immediately preceding a paper title refer to the volume identifier gi above. For example CST.2.2 refers to the second paper in the second section of Volume CST, <i>Proceedi of The Fifteenth International Conference on Computational Structures Technology</i> .	

A note for authors presenting papers and chairmen

All authors should meet at the front of the meeting room for their session at least 10 minutes before the session starts. Each contributed paper has been allocated 15 minutes for presentation and questions. Chairmen should indicate when 10 minutes have passed and again after 12 minutes that the presenter should immediately finish. Three minutes are available for questions and comments.

Authors are kindly asked to keep to the time allocated to them by the Chairmen. Authors are discouraged from using their own laptops for presentation unless absolutely necessary, in which case they should ensure that they can quickly and efficiently start their presentation when requested by the Chairmen.

Chairmen are requested to keep to the timetable. Changes to the programme will be indicated on the copies of the programme displayed on the conference timetable board and at the entrance to each of the rooms.

As a courtesy and in politeness to all speakers and other participants, please turn off your mobile phone whenever you enter any of the meeting and lecture rooms.

Computational Technology Resources

An online resource providing access to individual conference papers and book chapters from Civil-Comp Press and Saxe-Coburg Publications. More than 10000 papers and book chapters published since 1983. This is an online resource for academics and researchers using and developing Computational Technology in all fields of Science and Engineering.

www.CTResources.info

Journal special issue submission

For details of the format specification and procedures for submitting conference papers for possible publication in the journal special issues, instructions will be sent to the authors one month after the conference, but please start to prepare your paper without delay. The final deadline for special issue submission will be 5th January 2025.

Conference timetable summary

Day 1: Wednesday, 4th September 2024

14:00-18:00 Registration desk open

16:30-18:00 Conference opening, Opening plenary lectures

18:00-21:00 Welcome buffet

Day 2: Thursday, 5th September 2024

08:00-16:30 Registration desk open

09:00-10:30 Conference session

10:30-11:00 Coffee / Tea Break

11:00-13:00 Conference session

12:45-13:45 Lunch - admission by ticket

14:00-16:00 Conference session

16:00-16:30 Coffee / Tea Break

16:30-18:00 Conference session

19:00-22:00 Conference dinner, Paris Hotel - admission by ticket

Day 3: Friday, 6th September 2024

08:00-11:00 Registration desk open

09:00-10:30 Conference session

10:30-11:00 Coffee / Tea Break

11:00-13:00 Conference session

12:45-13:45 Lunch - admission by ticket

Conference timetable summary

Day 1, Wednesday, 4th September				
Time	Room C215			
16:30-18:00	Conference opening, Opening plenary lecture,			
	page 8			
18:00-21:00	Welcome buffet,			
	page 8			

Day 2, Thursday, 5th September			
Time	Room C215	Room C217	
09:00-10:30	Engineering Application of Metamaterials and their Design Methodologies	Structural Response to Dynamic Loadings: Modelling, Analysis and Mitigation	
	Discrete Element Methods page 9	Artificial Intelligence and Machine Learning page 10	
10:30-11:00	Coffee Break		
11:00-13:00	Reinforced Concrete Computational Modelling Reinforced Concrete Modelling: Applications and Studies Numerical Methods and Computational Techniques	Finite Element Biomechanics Parallel, Distributed and GPU Computing Advances in Structural and Multidisciplinary Optimization	
	page 11	page 12	
12:45-13:45	_ ~ ~	 nch	
14:00-16:00	New Trends in Structural Optimization and their Engineering Applications page 13	Advanced Analysis of Steel and Steel-Concrete Composite Struc- tures Advances in Safety Assessment through Numerical Analysis	
	2.00	page 14	
16:00-16:30		Break	
16:30-18:00	Form-Finding and Optimization of Lightweight and Cable-Supported Structures Dynamics and Stability of Thin Flexible Structures: Novel Compu- tationl Approaches	Fluid Flow Problems: Analysis and Simulation Image Processing page 16	
	page 15		

Conference timetable summary

Day 3, Friday, 6th September			
Time	Room 1	Room 2	
09:00-10:30	3D Printed Samples and Structures	Computational Structural Analysis	
	page 17	Numerical Methods and Computational Techniques	
		Timber Structures	
		page 18	
10:30-11:00	Coffee Break		
11:00-13:00	Innovative Methods for Structural	Classical and Numerical Methods	
	Design and Optimization	for Buckling, Free Vibration and	
	page 19	Response of Structures	
		Advances in Safety Assessment	
		through Numerical Analysis	
		page 20	
12:45-13:45	Lunch		

Day 1: Wednesday 4, September 2024: Room C215

16:30-18:00

Conference opening

Professor B.H.V. Topping University of Pécs Heriot-Watt Univerity, Edinburgh, Scotland

Professor J. Kruis Czech Technical University in Prague

Professor P. Iványi University of Pécs

Opening lecture

- **CST.1.1** MDO Tools in the Design and Deployment of Digital Twins: An Overview P. Hajela
- **ECT.1.1** Automated Machine Learning Workflows for Fusion Power Plant Design W. Smith, A.J. Barker, Z. Miao, O. Woolland, M. Omer and L. Margetts

18:00-21:00

Welcome buffet

09:00-10:15

Chaired by: Prof. José M. Benítez and Prof. Francisco J. Montáns

Engineering Application of Metamaterials and their Design Methodologies

organized by: Prof. José M. Benítez, Prof. Luis Saucedo-Mora and Prof. Francisco J. Montáns

- **CST.2.1** Computational Procedure for Finite Element Analysis of Functionally Graded Metamaterials V.H. Yanes Francisco and F.J. Montans Leal
- **CST.2.2** Damage-Based Criteria for the Combination of Offset Probabilistic Temporal Loads in Topological Optimization Designs
 - L. Irastorza-Valera, L. Saucedo-Mora, F. Chinesta and F.J. Montans Leal
- **CST.2.3** The Influence of Unit Cell Design on the Mechanical Properties of Ti6Al4V Lattice Structures Fabricated via Laser Powder Bed Fusion
 - M. Casata, D. Patil and D. Barba
- **CST.2.4** Correlating Porosity and Photodiode Response in LPBF Manufactured Samples using Spatial Statistics
 - T. Wilkinson, C. Churchman, D. Beer, B. Koe and D. Barba

Discrete Element Methods

CST.12.1 Equilibrium Analysis of 2D Complex Discrete Assemblies Modelled using Cracking Blocks with Non-Dilatant Interfaces

A. Iannuzzo, M. Herczeg, K. Bagi and E. Mousavian

10:30-11:00: Coffee Break

09:00-10:30

Chaired by: Prof. Prabhat Hajela and Dr. Jiping Bai

Structural Response to Dynamic Loadings: Modelling, Analysis and Mitigation

organized by: Dr. Pierfrancesco Cacciola, Prof. Bruno Brisegella and Prof. Alessandro Contento

- **ECT.3.1** Modelling Geotechnical Seismic Isolation Systems through the Preisach Formalism P. Cacciola, A. Contento and B. Briseghella
- **ECT.3.2** Investigating the Combined Effects of Temperature and Humidity on the Dynamic Properties of Concrete Beams
 - M. Chaabi, A. Lampropoulos, O. Tsioulou and P. Cacciola

Artificial Intelligence and Machine Learning

organized by: Prof. Prabhat Hajela

- **ECT.4.1** Stochastic Projection Based Gradient Free PINN for Reliability Analysis of System using PDEM
 - S. Das and S. Tesfamariam
- **ECT.4.2** Design of Tuneable Multifunctioning Metamaterial Absorbers using Progressive Neural Network Metaheuristics
 - T. Park, D. Noh, J. Park, J. Lee, S. Park, W. Choi and G. Noh
- **ECT.4.3** A Novel Reduced-Dimension Physics-Informed Neural Network: Application for Solving Initial Boundary Value Problems
 - J. Lee
- **ECT.4.4** Road Defect Detection Using Deep Learning

M. Nyathi, J. Bai and I. Wilson

10:30-11:00: Coffee Break

11:00-13:00

Chaired by: Prof. Rami Hawileh, Prof. J.-W. Hong and Dr. S. Czarnecki

Reinforced Concrete Computational Modelling

- **CST.14.1** Hardware Accelerated Python Based Finite Element Analysis of Reinforced Concrete Member
 - H. Chung and H.-G. Kwak
- **CST.14.2** Recent Trends in Using Artificial Intelligence in Evaluating Functional Properties of Industrial Concrete Floors
 - M. Moj, S. Czarnecki and Ł. Sadowski
- **CST.14.3** Blast Responses of a Reinforced Concrete Slab Using the Arbitrary Lagrangian-Eulerian Method
 - T.H. Lee, D. Park, Y. Choi, Y. Lee and J.-W. Hong

Reinforced Concrete Modelling: Applications and Studies

- **CST.15.1** Finite Element Analysis and Parametric Study of Fiber Reinforced Lightweight Hollow Core Slabs Under Flexure using ABAQUS
 - R. Hawileh, S. Sahoo and J. Abdalla
- **CST.15.2** Structural Behavior of Reinforced Concrete Beams Retrofitted with Carbon-Efficient Retrofitting Method
 - M.S. Kim, Y.S. Kim and Y.H. Lee
- **CST.15.3** A Newly Developed Sandwich BFRC Composite Beam at Elevated Temperatures C. Loo Chin Moy and Z. Zhang
- **CST.15.4** Models for Predicting Strength of Biaxially Loaded RC Columns Strengthened using NSM-CFRP Strips and Fabric
 - R. Abokwiek, J.A. Abdalla and R. Hawileh

Numerical Methods and Computational Techniques

- **CST.13.1** Performance Evaluation of Iterative Solvers for Vectorized Quasi-Static Heat Conduction in Peridynamics
 - S. Kim, S. Jin and J.-W. Hong

12:45-13:45: Lunch

11:00-13:00

Chaired by: Prof. David Herrero-Pérez and Dr. G. Gbikpi-Benissan

Finite Element Biomechanics

ECT.8.1 Effects of Head Morphology on Brain Strains Due to Impacts: A Numerical Approach K. Gupta, P. Pavan and U. Galvanetto

Parallel, Distributed and GPU Computing

- ECT.5.1 New Variant of the Semi-Monotonic Augmented Lagrangian Algorithm D. Horák, Z. Dostál, J. Kružík, A. Růžička and B. Halfarová
- **ECT.5.2** Optimized Parallel Software Architecture Design for Industrial Materials Sorting Systems H. Migallon, M. Martínez-Rach, O. López-Granado, C. Pérez-Vidal and R. Morales
- **ECT.5.3** Hybrid Synchronous-Asynchronous Parallel Computing G. Gbikpi-Benissan and F. Magoulès
- **ECT.5.4** GPU-Accelerated Iterative Refinement Based on Induced Dimension Reduction Y. Jiang, F. Magoulès, X. Wang and Q. Zou
- **ECT.5.5** A semi-explicit dynamic phase field model with domain decomposition based on dual partition super-elements

Y. Chen and B.A. Izzuddin

Advances in Structural and Multidisciplinary Optimization

organized by: Prof. J.F.A. Madeira and Prof. A.L. Araujo

- **ECT.2.1** PoliBrick: A Plug-In to Generate Stereotomy in Double Curvature Masonry Vaults N. Pingaro, M. Pourfouladi and G. Milani
- **ECT.2.2** Parallel Enclosed Hole Detection for Introducing Manufacturing Constraints in Topology Optimization

D. Herrero-Pérez

12:45-13:45: Lunch

14:00-16:15

Chaired by: Prof. Weisheng Zhang and Prof. Liang Meng

New Trends in Structural Optimization and their Engineering Applications

organized by: Prof. Weisheng Zhang, Prof. Liang Meng, Prof. Tong Gao and Prof. Zhenyu Liu

- **CST.3.1** Text-Guided Bio-Architectured Materials Library Building and Application to Structural Design
 - Y. Wang, W. Zhang, X. Guo and S.-K. Youn
- **CST.3.2** Topology Optimization Method for High-Aspect-Ratio Wing Considering Geometrical Non-linearity with Directional Length Scale Control
 - L. Song, Y. Li, Y. Huang, P. Fang, T. Gao and W. Zhang
- **CST.3.3** Comparative Analysis of Multi-Objective and Single-Objective Optimization Approaches in Structural Engineering
 - B. Miller and L. Ziemiański
- **CST.3.4** Uniform Multiple Laminates Interpolation Method for Angle Optimization of Double-Double Composite Laminates Based on Multi-Material Topology Optimization Strategy P. Fang, T. Gao, Y. Huang, P. Duysinx, W. Zhang and L. Song
- **CST.3.5** On the Design of Pressure-Resistant Torpedo Casing Based on the Buckling Mode Y. Wang, W. Zhu and L. Meng
- **CST.3.6** Optimization Design of a Multifunctional Support Bracket for Nuclear Power Plants D. Huo and L. Meng
- **CST.3.7** Topology Optimization of Lattice-Stiffener Hybrid Core for Composite Sandwich Panel Y. Huang, T. Gao, L. Song, Y. Li, P. Fang and W. Zhang
- **CST.3.8** Interactive Design Under the Multi-Framework of Topology Optimization with Human Intervention
 - X. Zhuang, W. Zhang, S.-K. Youn and X. Guo
- **CST.3.9** UPM Based Topology Optimisation of Nonlinear Materials
 - A. Alibakhshi, L. Saucedo-Mora, M.Á. Sanz Gomez, J.M. Benitez Baena and F.J. Montans Leal

16:00-16:30: Coffee Break

14:00-16:00

Chaired by: Prof. Cosmin Gruia Chiorean, Dr. Bartosz Sobczyk, Dr. Elena Miceli and Dr. Lenganji Simwanda

Advanced Analysis of Steel and Steel-Concrete Composite Structures

organized by: Prof. J.G. Santos da Silva and Prof. L.F. Costa Neves

- **CST.7.1** A Strain-Driven Moment-Curvature Analysis of Composite Cross-Sections Exposed to Fire C.G. Chiorean, L. Imre and R.A.M. Silveira
- **CST.7.2** Structural Response Analysis of Transmission Lines Steel Towers when Subjected to Nondeterministic Wind Loadings
 - M. Souza Rechtman and J.G. Santos Da Silva
- **CST.7.3** Objectivity and Consistency of the Cracking Response of RC Beams with Conventional Models L. Parente, D. Addessi, B.A. Izzuddin and E. Spacone
- **CST.7.4** Experimental and Numerical Analysis for the Purpose of Inter-Module Connection Response Validation
 - B. Sobczyk, M. Miśkiewicz, Ł. Pyrzowski, M. Rucka and B. Meronk
- **CST.7.5** Numerical and Experimental Tests of Steel-Concrete Composite Beam with an Innovative Connector Made of Corrugated Metal Sheet and Shot Nails
 - A. Derlatka, P. Lacki and P. Kania

Advances in Safety Assessment through Numerical Analysis

organized by: Prof. Paolo Castaldo, Dr. Diego Gino, Dr. Elena Miceli, Dr. Qianhu Yu and Dr. Lenganji Simwanda

- **CST.9.1** Automatic Remeshing Procedure for Limit Analysis with Unstructured Triangular Mesh Y. Hua and G. Milani
- **CST.9.2** Development of Strain-Based Approach for Safety Assessment of RC Systems using Non-Linear Numerical Methods
 - D. Gino, E. Miceli and P. Castaldo
- **CST.9.3** Resistance Model Uncertainty in Non-Linear Numerical Analyses of Ultra-High-Performance Reinforced Concrete Beams in Flexure
 - L. Simwanda and M. Sykora

16:00-16:30: Coffee Break

16:30-17:45

Chaired by: Prof. Yury Vetyukov, Dr. Jakob Scheidl, Prof. Alberto Martins and Prof. János Lógó

Dynamics and Stability of Thin Flexible Structures: Novel Computationl Approaches

organized by: Prof. Yury Vetyukov and Dr. Jakob Scheidl

- **CST.6.1** A Stationary Streamline Integration Algorithm for Elastic-Plastic Bending of an Axially Moving Beam
 - J. Scheidl
- **CST.6.2** Non-Material Finite Element Modelling of the Bending of a Rod, partially inserted in a Flexible Sleeve with Intrinsic Curvature
 - Y. Vetyukov

Form-Finding and Optimization of Lightweight and Cable-Supported Structures

organized by: Prof. Alberto Martins, Prof. Luis Simoes, Prof. Janos Lógó and Prof. Matteo Bruggi

- CST.5.1 Optimal Design of Lattice Domes by Means of a Constrained Force Density Method M. Bruggi, B. Tóth and J. Lógó
- **CST.5.2** Topology Optimization of a 6-DOF Arm-Z Modular Robotic Manipulator P. Tauzowski, B. Blachowski, E. Zawidzka, Ł. Jankowski and M. Zawidzki
- **CST.5.3** Seismic Design Optimization of Concrete Cable-Stayed Bridges with "H"-Shaped Towers A. Martins, L. Simões and J. Negrão

16:30-18:00

Chaired by: Prof. Ralf Deiterding and Prof. Marcin Kamiński

Fluid Flow Problems: Analysis and Simulation

- **ECT.6.1** Simulation of Passenger Car Aerodynamics in Overtaking Manoeuvres with an Adaptive Lattice Boltzmann Method
 - R. Deiterding, J. Harding and M. Grondeau
- **ECT.6.2** A Pure Lagrangian Formulation of a Hydroacoustic Fluid-Structure Problem for the Simulation of Underwater Transducers
 - A. Prieto and M. Benítez
- ECT.6.3 First Passage of Shannon Entropy Computations in Navier-Stokes Flow Problems
 - M. Kamiński

Image Processing

- ECT.7.1 Reinforcing Bar Segmentation from Depth-Camera-Captured Point Cloud Data
 - J.Y. Kang, J.S. Park and H.S. Park
- **ECT.7.2** Fuzzy Logic Method for Speckle Noise Reduction in Ultrasound Images and Its Parallel Implementation on Multi-Cores
 - J. Arnal and I. Mayzel
- **ECT.7.3** Path Planning of Inspection Robot Based on 3D Scanning Information of Transmission Tower Y. Jing and W. Zhang

9:00-10:45

Chaired by: Prof. Jaroslav Kruis

3D Printed Samples and Structures

organized by: Prof. Jaroslav Kruis

- **CST.10.1** Investigation of Beam Finite Element Models of Octet-Truss Unit Cell Using Homogenization S. Gholibeygi, H. Ergün and B. Ayhan
- **CST.10.2** Implicit and explicit Newmark method for discrete element method beam bound model R. Varga and M. Cermak
- **CST.10.3** Solving the Elasto-Plastic Behaviour of Two Bodies in Contact Using the Mortar Method M. Cermak, T. Světlík, R. Varga and L. Pospíšil
- **CST.10.4** Size Optimisation of 2D Frame Structures using Inexact Restoration T. Světlík, M. Mrovec, L. Pospíšil and M. Cermak
- **CST.10.5** Quadratic Programming Algorithm for Dual Solution of Mortar-based Contact Problems in Linear Elasticity
 - L. Pospíšil, T. Světlík, R. Varga and M. Cermak
- **CST.10.6** Numerical Modeling of 3D-Printed Alloy Structures
 - J. Vorel, A. Jíra and J. Kruis
- **CST.10.7** Homogenization Based Computational Two-Scale Modelling of Self-Contact in Collapsible Fluid Saturated Micropores
 - E. Rohan and J. Heczko

10:30-11:00: Coffee Break

9:00-10:30

Chaired by: Dr. Alfonso Pagani and Dr. Damjan Banić

Computational Structural Analysis

- **CST.11.1** Finite Element Formulation for Buckling Analysis of Angle-Ply Beam-Type Structures Considering Shear Deformation Effects
 - D. Banić, G. Turkalj, D. Lanc and S. Kvaternik Simonetti
- **CST.11.2** Forming Processes of a Retaining Ring based on the Response Surface Method G. Shi
- **CST.11.3** Single-Layer Modelling of Semi-Infinite 2D Domains Invoking Periodicity X. Chen and B.A. Izzuddin

Numerical Methods and Computational Techniques

- **CST.13.2** Stress and Free Vibration Analysis of Fibre-Reinforced Soft Structures by 2D High Order Finite Elements
 - A. Pagani, P. Chiaia and E. Carrera
- **CST.13.3** Addressing Material Softening and Strain Localization in Spatial Frame-Like Structures using Velocity-Based Beam Formulation
 - S. Kusuma Chandrashekhara and D. Zupan

Timber Structures

CST.16.1 Experimental and Numerical Analysis of Strengthening with Fibre Reinforced Polymers of Aged Timber Beams with Cracks and Knots

A. Lengyel and K. Saad

10:30-11:00: Coffee Break

11:00-13:00

Chaired by: Dr. Raffaele Cucuzza and Dr. Marco Domaneschi

Innovative Methods for Structural Design and Optimization

organized by: Prof. Giuseppe Carlo Marano, Prof. Gabriele Milani, Dr. Majid Movahedi Rad, Dr. Raffaele Cucuzza and Dr. Marco Domaneschi

- **CST.4.1** Derivative-Free Trust-Region-Guided Explicit Level Set Topology Optimisation E.K. Bontoft, D. Jia, V. Toropov and Y. Zhang
- **CST.4.2** A Combinatorial Analysis for the Assessment of the Optimal Tie Rods' Configuration in Historical Masonry Buildings
 - M. Buzzetti, R. Cucuzza, M. Domaneschi, M. Movahedi Rad, G.C. Marano and G. Milani
- **CST.4.3** Topology Optimization of Strain Energy Constrained 2D Elasto-Plastic Truss H. Shi and F.J. Montans Leal
- **CST.4.4** Reliability-Based Optimization of Steel Beam Designs for Elevated Temperature Applications M. Movahedi Rad, M. Habashneh, R. Cucuzza and M. Domaneschi
- **CST.4.5** Seismic Performance-Based Optimisation of Reinforced Concrete Dual-Systems A. Kheradmand, S. Gholizadeh and T. Dehghanpour Afshar
- **CST.4.6** Topology and Sizing Optimisation of Cowcatcher for Enhancing Post-Derailment Passive Safety Performance
 - Z. Tang, Z. Peng, S. Liu, T. Chen and Z. Qu
- **CST.4.7** Integration of Life Cycle Assessment in Structural Optimisation of Steel Structures R. Cucuzza, M. Domaneschi, R. Di Bari, M. Movahedi Rad, G. Milani and G.C. Marano
- **CST.4.8** Fitness Criteria for the Optimization of Load-Bearing Structures in Comparison C. Müller and K. Deix

11:00-13:00

Chaired by: Prof. Jiri Naprstek and Prof. Ranjan Banerjee

Classical and Numerical Methods for Buckling, Free Vibration and Response of Structures

organized by: Prof. Jiri Naprstek and Prof. Ranjan Banerjee

- **CST.8.1** A Numerical Model for Thermal Buckling Analysis of Functionally Graded Porous Thin-Walled Structures
 - S. Kvaternik Simonetti, D. Lanc, G. Turkalj and D. Banić
- **CST.8.3** Lévy's Solution for Laminated Composite Plates using Higher-Order Shear and Normal Deformation Theory
 - H. Sawhney, S. Yadav, Y. Desai and S. Pendhari
- CST.8.4 Combined Random and Deterministic Effects in a Simple Aeroelastic Model
 - C. Fischer and J. Náprstek
- **CST.8.5** The Accuracy and Reliability of the Finite Element Method in Free Vibration Analysis of Beams and Frameworks
 - J.R. Banerjee
- CST.8.6 Modal Analyses by Eigenvector and Ritz Vector Methods

T.Q. Li and W.J. Lewis

Geotechnical and Ground Water Engineering

- **ECT.9.1** Simplified Approach for Calibrating Groundwater Flow in SWMM
 - A. Vassiljev, K. Suits, I. Annus, N. Kändler, K. Kaur, M. Truu and K. Kõiv
- **ECT.9.2** Advanced Continuation Methods for Limit Load and Shear Strength Reduction Methods S. Sysala
- **ECT.9.3** Automatic Differentiation in PyTorch as a Tool for Robust Implementation of Elasto-Plastic Constitutive Model
 - T. Janda, M. Šejnoha, A. Zemanová and T. Žalská

List of participants

Prof. Jamal A. **ABDALLA** Mr. Amin ALIBAKHSHI Dr. Andréas **ANDERSSON** Prof. Josep **ARNAL Jiping** Dr. BAI **BANERJEE** Prof. Ranjan Dr. Damjan BANIĆ Prof. Jose Maria

BENITEZ BAENA Dr. Bartlomiej BLACHOWSKI Mr. Elliot Karl **BONTOFT** Martina **BUZZETTI** Ms. Dr. Pierfrancesco **CACCIOLA** Mr. Massimiliano **CASATA** Dr. Martin **CERMAK** Ms. Mahnoosh **CHAABI** Ms. Caroline **CHAMPNEY** Mr. Yiwei **CHEN** Ms. Xiaoqiong **CHEN** Prof. Cosmin Gruia **CHIOREAN** Raffaele

Mrs. Tala **DEHGHANPOUR AFSHAR**

CUCUZZA

CZARNECKI

Ralf Prof. **DEITERDING**

Dr. Karl **DEIX**

Sławomir

Dr.

Dr.

Prof. Anna **DERLATKA** Prof. Yogeshkumar **DESAI**

Dr. Marco **DOMANESCHI**

Dr. Hale **ERGÜN** Mr. Pingchu **FANG** Dr. Cyril **FISCHER**

Guillaume **GBIKPI-BENISSAN** Dr.

Mr. Karan **GUPTA** Prof. Prabhat **HAJELA** Prof. Rami **HAWILEH**

HERRERO-PÉREZ Prof. David

Prof. Jung-Wuk HONG David Prof. **HORAK** Mr. Yiwei **HUA** Mr. Yongbin **HUANG** Mr. Dong HUO IANNUZZO Dr. Antonino

IRASTORZA-VALERA Mr. Luis

Prof. Peter **IVANYI** Dr. Tomáš **JANDA** Yue JING Mr. Prof. Zhao JING KAMIŃSKI Marcin Prof. Mr. Jae Young KANG

Arsalan **KHERADMAND** Mr.

Mr. Yoon Sung **KIM**

List of participants

Min Sook Dr. **KIM** Mr. Sunwoo **KIM** Prof. Jaroslav **KRUIS** Sudhanva Mr. KUSUMA CHANDRASHEKHARA Dr. Sandra **KVATERNIK SIMONETTI KWAK** Prof. Hyo-Gyoung Prof. Young Hak LEE Prof. Jaehong LEE Tae Hee Mr. LEE Dr. András **LENGYEL** Dr. T Q LI Prof. János LÓGÓ Dr. Charles LOO CHIN MOY Dr. Otoniel LÓPEZ-GRANADO Prof. Lee **MARGETTS** Dr. Miguel MARTÍNEZ-RACH Prof. Alberto **MARTINS** Prof. Liang **MENG** Dr. Elena **MICELI** Dr. Hector **MIGALLON** Dr. **Bartosz MILLER** Mr. Mateusz MOJ Dr. Francisco Javier **MONTANS** Dr. Majid MOVAHEDI RAD Dr. Christoph MÜLLER Prof. Jiri NÁPRSTEK Dr. Alfonso **PAGANI** Mr. Luca **PARENTE** Mr. Taeyeon **PARK** Ms. Natalia **PINGARO** Dr. Lukáš POSPÍŠIL Prof. Andrés **PRIETO** Mr. Stefan **RAMSAUER** Prof. Eduard **ROHAN** Mr. Zsolt SCHÄFFER Dr. Jakob **SCHEIDL** Prof. Michal ŠEJNOHA Mr. Haohong SHI Can SHI Dr. Prof. Guanglin SHI SIMWANDA Dr. Lenganji Dr. Bartosz **SOBCZYK** Mr. Longlong **SONG** Mariana SOUZA RECHTMAN Ms. SVĚTLÍK Tadeáš Dr. Stanislav **SYSALA** Dr. Zhao **TANG** Prof. Solomon **TESFAMARIAM** Barry H V Prof. **TOPPING** Prof. Vassili **TOROPOV**

List of participants

Mr. Radek VARGA Dr. Anatoli VASSILJEV Yury Prof. VETYUKOV Dr. Jan VOREL Mr. Yadong WANG Mr. Toby WILKINSON Weisheng ZHANG Prof. Xiaoyu ZHUANG Dr. Qinmeng Dr. ZOU