Webinar on «Design of Cold-Formed Steel Structures»

January-February 2023

8 sessions of 90min (1h30), 1 session/day, from 10:30 CET

Reference book: Design of Cold-Formed Steel Structures

Speakers:

Prof. Dan Dubina, Politehnica University of Timisoara, Romania
Prof. Raffaele Landolfo, University of Naples "Federico II", Italy
Prof. Viorel Ungureanu, Politehnica University of Timisoara, Romania

PROGRAMME			
Date	**Topic**	**Content**	**Speaker**
Week 1			
Session 1 24/01	Welcome & Introduction	- Content, objectives - Logic of the book and of the lectures	Professor Dan DUBINA
	Specific features of cold-formed steel structures	- Cold Formed Steel Construction: Past, Present and Future - Fabrication technology and properties - Peculiar problems in design of cold-formed steel structures - Examples of application - Q & A	Professor Dan DUBINA
Session 2 26/01	Basic design rules and procedures according to EN 1993-1-3	- Theory and worked examples - Design of sections - Design of members - Connection technology and design - Q & A	Professor Viorel UNGUREANU
Week 2			
Session 3 31/01	Design assisted by testing	- Why design assisted by testing? - Case studies - Design assisted by testing of Palled Racks - Q & A	Professor Dan DUBINA
Session 4 02/02	Design assisted by numerical models	- Principles - Finite Element Model analysis - The signature curve - The Direct Strength Method - Examples - Q & A	Professor Raffaele LANDOLFO

Date	Topic	Content	Speaker
Week 3			
Session 5 **07/02**	Design of residential, social and industrial buildings	- Conceptual design - Prescriptive methods - Case studies - Q & A	Professor Viorel UNGUREANU
Session 6 **09/02**	Design of cold-formed steel buildings in seismic areas	- Seismic design principles for lightweight construction - Strap-braced shear wall - Sheathing-braced shear wall - Research and codification - Case studies - Q & A	Professor Raffaele LANDOLFO
Week 4			
Session 7 **14/02**	Conceptual design and technology aspects of modular multi-storey buildings	- Modular Steel Construction - Structural systems and technologies - Examples - Hybrid solutions: principles and examples - Q & A	Professor Dan DUBINA
Session 8 **16/02**	Sustainable benefits of cold-formed steel construction	- Environmental impact and Life-cycle assessment - Durability - Embodied energy - Prefabrication - Reuse & recycling, circular economy - Waste minimization - Adaptability & flexibility - Integrated CAD-to-production - Features of an energy efficient building envelope - Q & A	Professor Viorel UNGUREANU
Closing of the course : short conclusions (all lecturers)			

This webinar is organized by the European Convention for Constructional Steelwork. As a not-for -profit association, the aim of ECCS is to promote the use of steelwork in the construction sector by the development of standards and promotional information. More information is available on https://www.steelconstruct.com/