

CIMS2020 GENERAL PROGRAMME

July, 12 2021 (Monday)

- 11:00-11:45 *Opening ceremony*
- 12:00-12:50 *Keynote Lecture 1 prof. Nuno Silvestre*
- 12:50-14:30 *Lunch*

session I- Buckling of Cold Formed Structures I & Plate Structures

- 14:30-14:50 (local time 9:30) Batista E., Matsubara G.: General formulation for the strength of thin-walled cold-formed steel columns under buckling modes interaction
- 14:50-15:10 Behzadi-Sofiani B., Gardner L., Wade M.: Fixed-ended stainless steel equal-leg angle sections columns-behaviour and design
- 15:10-15:30 Becque J.: Linking the von Karman equations to the design of steel plates
- 15:30-15:50 Nedelcu M.: Semi-analytical solutions for the compressed thin plate with large displacements
- 15:50-16:10 *break (tea, coffee)*

session II - Buckling of TWCFSS

- 16:10-16:30 Haffar M.Z., Adany S.: Analytical solutions for the GNI analysis for lateral-torsional buckling of thin-walled beams with doubly-symmetric and mono-symmetric cross-sections
- 16:30-16:50 Hoang T., Adany S.: New transverse extension modes for the constrained finite strip analysis of thin-walled members
- 16:50-17:10 Dubina D., Czechowski L., Kotelko M., Ungureanu D.V.: Some aspects of buckling behavior of channel section members under eccentric compression
- 17:10-17:30 Bianco M.J., Habtemariam A.K., Könke C., Tartaglione F., Zabel V.: Alternative complementary shear and transversal elongation modes in Generalized Beam Theory (GBT) for thin-walled circular cross-sections
- 17:30-17:50 Pawlak A., Paczos P.: Experimental investigation of compressed beams/columns using optical methods
- 17:50-18:10 McCann F., Rossi F.: Investigating local buckling in highly slender elliptical hollow sections through analysis of 3D-printed analogues
- 18:10-18:30 Kołakowski Z., Teter A.: Coupled buckling of hybrid thin-walled channel sections under compression in the elastic range
- 18:30-20:30 *Welcome reception*

July 13, 2021 (Tuesday)

08:30-09:20 (local time 16:30) *Keynote Lecture 2 prof. Kim Rasmussen*

09:20-09:40 *break (tea, coffee)*

09:40-10:30 (local time 10:40) *Keynote Lecture 3 prof. Dan Dubina*

session III - Energy Saving Structures

10:30-10:50 (local time 18:30) Hu Y., Khezri M., Rasmussen K.J.R.: Numerical simulation and verification of adaptive shading modules with buckling as the driver for functionality

10:50-11:10 (local time 18:50) Khezri M., Rasmussen K.J.R.: Shading module with buckling as driver for shape morphing

11:10-11:30 (local time 19:10) Khezri M., Rasmussen K.J.R., Hu Y.: Buckling activated ventilation control modules: A concept proposal and numerical simulations

11:40-12:10 *break (tea, coffee)*

session IV - Buckling of Cold Formed Structures II

12:10-12:30 (local time 19:10) Kobashi T., Kitaoka S.: Evaluation of the post-maximum strength behavior of the lipped-C channel column member under compression

12:30-12:50 (local time 16:00) Kalam Aswathy K.C., Anil Kumar M.V.: Interaction of stiffened and unstiffened element buckling modes in CFS plain channel compression members

12:50-14:20 *lunch*

13:30-14:15 *On-line Meeting of the Scientific Committee*

14:20-15:00 (local time 08:20) *Keynote Lecture 4 prof. Ben Schafer*

session V - Dynamic Buckling of Energy Absorbers

15:00-15:20 Jafarzadeh Aghdam N., Schroeder K.U.: Dynamic buckling of crash boxes under an impact load

15:20-15:40 Szklarek K., Kotelko M., Ferdynus M.: Influence of buckling mode and load on energy absorption effectiveness of thin-walled prismatic frusta

15:40-16:00 *break (tea, coffee)*

session VI - Multi-Layered Structures

16:00-16:20 Timmers R.: Influence of the imperfection shapes on the collapse mechanisms of stiffened plates with class 4 trapezoidal stiffeners

16:20-16:40 Pawlus D.: Buckling sensitivity of three-layered annular plates in temperature field on the rate of imperfection

16:40-17:00 Magnucki K., Magnucka-Blandzi E.: Dynamic stability of a three-layer beam – Generalization of the sandwich structures theory

17:00-17:20 *break (tea, coffee)*

session VII / Design Methods

17:20-17:40 Szalai J.A., Nemer S., Papp F.: The use of the overall imperfection method for fire design situation

17:40-18:00 Vaszlievits-Sömjén B.: Efficient application of the reduced stress method for built-up I sections

18:00-18:20 Kettler M., Unterweger H.: Design proposal for bolted angle members in compression

July 14, 2021 (Wednesday)

08:30-09:20 (local time 14:30) *Keynote Lecture 5 prof. Ben Young*

session VIII / Buckling of Cold Formed Structures III

- 09:20-09:40 (local time 15:20) He Jun, Young B.: Tests of cold-formed steel built-up sections with web holes subjected to web crippling
- 09:40-10:00 (local time 15:40) Qiu-Yun Li, Young B.: Flexural behaviour of cold-formed steel built-up section members
- 10:00-10:20 (local time 11:00) Nagy Z., Kelemen A., Nedelcu M.: The influence on portal frame buckling of different cladding systems- a comparative numerical study considering stressed skin effect
- 10:20-10:50 *break (tea, coffee)*

session IX - Non-linear Analysis of Structures

- 10:50-11:10 Magisano D., Liguori F., Leonetti L., Madeo A., Garcea G.: A reduced model for nonlinear analysis and design of thin-walled structures prone to multi-modal buckling
- 11:10-11:30 Magisano D., Liguori F., Leonetti L., Garcea G.: A robust and efficient iterative strategy for nonlinear analysis of structures subjected to buckling
- 11:30-11:50 Mascolo I., Cutolo A., Esposito L., Guarracino F.: Buckling of circular rings: some issues related to the settings of finite elements analyses
- 11:50-12:10 Borkowski Ł.: Influence of damping effect on the dynamic response of plate
- 12:30-13:30 *lunch*

session X - Buckling of Composites

- 13:30-13:50 Zaczyńska M., Abramovich H., Bisagni C.: Pulse buckling of a thin-walled CFRP cylindrical shell –a numerical approach
- 13:50-14:10 Zaczyńska M., Mania R.J.: Dynamic buckling of fiber metal laminate structure
- 14:10-14:30 Czapski P., Kubiak T.: Influence of manufacturing process technology on buckling behavior of thin-walled, GFRP columns with a square cross-section
- 14:30-14:50 Banat D., Mania R.J.: Numerical and experimental post-buckling analysis of slender thin-walled GLARE members subjected to compressive loading
- 15:00-16:00 *closing of the Conference*