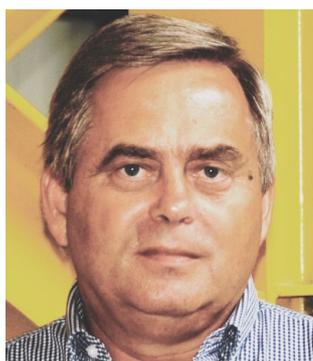


Editorial



Dan Dubina



Viorel Ungureanu

It was in 1971 when Professor H. Beer from the University of Graz, together with his colleague, Dr. G. Schulz, had proposed the first version of European (ECCS) buckling curve equations (*Construction Metallique No. 3*, 1970), suggested the organisation of an international colloquium as a forum of discussion and comparison between such equations and those from Eastern Europe, the United States and Japan. The event, called “**International Colloquium on Column Strength**”, was organized in November 1972 in Paris with the support of IABSE but, sadly, after the sudden death of Professor Beer. This is the event which may be considered the starting point of a long series of International Colloquia dedicated to the stability of steel structures. However, the *real* organization of the series of international colloquia, intended to *globally cover the instability problems of steel structures*, emerged two years later in London as a common initiative of Dr. D. Sfiintesco on behalf of ECCS, and Professor L. Beedle on behalf of SSRC. The basic idea was to organize several series of *travelling* colloquia, with sessions located in different areas of the world. The first series was organized in 1976–1977, with sessions in Tokyo, Liège and Washington, and the world wide circuit continued further.

In October 1982, the Department of Steel Structures and Structural Mechanics of the Politehnica University of Timisoara organized one of the East European sessions of the **3rd International Colloquium on Stability of Steel Structures**, that was followed by two other sessions, organised in 1983 in Toronto and Paris.

In July 1997, at the Asian Session of the 6th Colloquium, the name of the events was changed into **International Colloquium on Stability and Ductility of Steel**

Structures – SDSS. Next, the European Session was organized in September 1999, again in Timisoara, to be followed by those in Budapest (2002), Lisbon (2006) and Rio de Janeiro (2010).

The 2016 edition of SDSS has been jointly organized by the Politehnica University of Timisoara, Department of Steel Structures and Structural Mechanics in co-operation with the Romanian Academy – Timisoara Branch, with the support of the European Convention of Constructional Steelwork (ECCS), through the Structural Stability Technical Committee (TC8), and the Structural Stability Research Council (SSRC).

268 authors from 26 countries on 5 continents are contributing with 116 scientific papers, including the keynote lectures, covering 9 topics as follows:

1. Advanced structural design;
2. Connections;
3. Lightweight steel constructions;
4. Behaviour of members: tension, compression, beams, beam-columns;
5. Plate, shell and space structures;
6. Robustness;
7. Seismic-resistant structures;
8. Steel-concrete composite members and structures;
9. Tubular constructions.

For the present issue, 8 papers have been selected from those presented at the SDDS'2016, with authors from Europe, Japan and the United States being invited to prepare extended and updated contents.

– **Buckling-restrained brace with high structural performance**

Mamoru Iwata, Mitsumasa Midorikawa, Kazuhisa Koyano

– **Buckling design of axially compressed steel silos on discrete supports**

Arne Jansseune, Jan Belis, Wouter De Corte

– **The “combined approach” for the design of shear diaphragms made of trapezoidal profile sheeting**

Thomas Misiek, Gerhard Huck, Saskia Käpplein

– **Design by advanced analysis – 3D benchmark problems. Members subject to major- and minor-axis flexure**

Ronald D. Ziemian, Jean C. Batista Abreu

– **Initial bow imperfections e_0 for the verification of flexural buckling according to Eurocode 3 Part 1-1 –**

Editorial

additional considerations

Joachim Lindner, Ulrike Kuhlmann, Fabian Jörg

- **Experiments on the rotational capacity of beams made of high-strength steel**

Nicole Schillo, Markus Feldmann

- **Lateral torsional buckling design imperfections for use in non-linear FEA**

Bert Snijder, Rob van der Aa, Hèrm Hofmeyer, Dianne van Hove

- **Simulation of dynamic response of steel moment frames following sudden column loss. Experimental calibration of numerical model and application**

Ioan Marginean, Florea Dinu, Dan Dubina

We express our gratitude to all the authors of these papers, who answered our invitation, as well as to ECCS and to the publisher Ernst & Sohn and the editorial staff of the

journal *Steel Construction – Design and Research*, for their contributions to the publication of this special Issue.



Academician Dan Dubina
Chairman of SDSS'2016



Professor Viorel Ungureanu
Scientific Secretary of SDSS'2016