Professor Federico M. Mazzolani

See:
http://www.worldcat.org/identities/lccn-n83-187497
http://www.journalogy.net/Author/12960356/federico-m-mazzolani
http://www.barnesandnoble.com/c/federico-m.-mazzolani
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Full Professor of Structural Engineering
Department of Structural Engineering
University of Naples “Federico II”, Italy

Text associated with the Charles Massonnet award (2001):
The 2001 Charles Massonnet Award was presented to Prof. Federico MAZZOLANI, Director of the” Institute of Technique of Construction” at he Engineering Faculty of Naples.
Prof. Mazzolani was born in Milan, in 1938, and is graduated in Civil Engineering at the University of Naples. Since 1970, Prof. Federico M. Mazzolani co-operated with the European Convention for Constructional Steelwork, assuming the responsibility of Committee and Twg Chairman. His activity has been characterised by the issue of several fundamental documents, which played a leader role in the development of the European codification at the level of both national codes and Eurocodes. Prof. Federico M. Mazzolani is well known for his publications and works on seism[ic effects]. He is also Chairman of the International Conference on the

"Behaviour of Steel Structures in Seismic Areas" (STESSA).

Awards and Activities:
Doctor Honoris Causa at Technical University of Bucharest (1995).
Doctor Honoris Causa at Politehnica University of Timisoara (1996).
Charles Massonnet award (2001).
Member of the Royal Academy of Engineers of Spain (since 2000).
Member of the Academy of Engineers of Czech Republic (since 2004).
President of the Doctoral School of Civil Engineering (since 2005) at the University of Naples
President of the Master in Design of Steel Structures (since 2006) at the University of Naples
Chairman of the ECCS-TC 13 Committee, Seismic Design (1985-2007).
Chairman of the CEN-TC250/SC9 Committee, Design of Aluminium Structures (since 1992)
Chairman of the national "mirror" committee for Eurocode 3 (Steel structures), Eurocode 4 (Composite steel-concrete structures) and Eurocode 9 (Aluminium structures) (1990-2006)
Chairman of the International STESSA Conferences on the "Behaviour of Steel Structures in Seismic Areas" (since 1994)
Coordinator of the ILVA-IDEM research project on "Seismic upgrading of RC buildings by advanced techniques" (2000-2005).
Coordinator of the international PROHITECH Project on "Earthquake Protection of Historical Buildings by Mixed Reversible Technologies" (2004-2008).
Chairman of the COST C26 Action on "Urban Habitat Constructions under Catastrophic Events" (2006-2010).
Chairman of the Steering Committee of SIJLAB, "Sino-Italian Laboratory for Archimedes Bridge" (2004-2008).
Coordinator of the international Sino-Italian REHICO project on "Innovative methodologies for the rehabilitation of historical constructions" (2006-2009).
Member of the Canadian Standard Association (since 2007).
Member of the Board of IAESE (International Association for Experimental Structural Engineering) (since 2008).
Member of the ESF Pool of Reviewers (since 2009).

His main research topics are: structural analysis and design, steel and aluminium structures (connection, stability), earthquake engineering (seismic design, passive control) and structural restoration (consolidation, upgrading).
He is author of more than 700 papers in journals and conference proceedings, 49 monographs and 34 books (26 in English, 2 in Chinese).

Some Mazzolani publications in which buckling plays an important role:

Ballio, G. and Mazzolani, F, "Theory and Design of Steel Structures", Chapman and Hall, London, 1983

Mandara A, Mazzolani M. Stocky cylinders if compression: postcritical path evaluation and collapse load prediction with ABAQUS. In: Proceedings of ABAQUS User's Conference, Archen, Germany 1993; 421–35.

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A. Mandara, Department of Civil Engineering, Second University of Naples, Italy, alberto.mandara@unina2.it

"The EC9 Approach for Shell Buckling", CIMS2008 Fifth International Conference on Coupled Instabilities in Metal Structures Sydney, Australia, 23-25 June, 2008

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[2] Rotter J.M.: Shell structures: the new European standard and current research needs, Journal of Thin Walled Structures, 31, 1998.
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[4] Mazzolani F.M., Mandara A., Di Lauro: Imperfection Sensitivity Analysis of Aluminium Cylinders, Proc. of III Settimana delle Costruzioni in Acciaio, Genova, Italy, 2003.
[5] Mazzolani F.M., Mandara A. and Di Lauro G.: Remarks on the Use of EC3 Buckling Curves for Aluminium Shells, Proc. of the 10th Nordic Steel Construction Conference, Copenhagen, Denmark, 2004.
[6] Mazzolani F.M.: Aluminium Alloy Structures, 2nd Edition, Chapman & Hall, London, 1995.
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[8] Mazzolani F.M., Mandara A., Di Lauro G.: Buckling of Aluminium Shells: Proposal for European Curves, Proc. of Int. Conf. on Thin Walled Structures ICTWS 2004, Loughborough, U.K, 2004.
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"Inelastic buckling analysis of aluminium shells", (no publisher or date given in the pdf file)

ABSTRACT: The paper summarises a part of the of activity of CEN/TC250 SC9 Committee, devoted to the preparation of Eurocode 9 "Design of Aluminium Structures". The results of a wide imperfection sensitivity F.E.M. analysis, dealing with aluminium cylinders subjected to axial load, uniform external pressure and torsion, are discussed. Numerical simulations have been carried out by accounting for a wide geometrical imperfection spectrum, in order to consider the most dangerous distributions. Results of almost 6000 F.E.M. simulation runs have been used to delineate a numerical data-set for the definition of buckling curves for aluminium alloys shells, to be introduced into the new part prEN1999-1-5 of Eurocode 9. For the sake of homogeneity, the basic layout of prEN1993-1-6 has been referred to as a general framework. Nevertheless, it is shown that buckling curves given in EC3 can not be used for aluminium shells, but require proper modification.

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[1] Rotter, J.M. (1998), Shell structures: the new European standard and current research needs, Thin Walled Structures, 31.
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[4] Mazzolani F.M., Mandara A., Di Lauro (2003), Imperfection Sensitivity Analysis of Aluminium Cylinders, III Settimana delle Costruzioni in Acciaio, Genova, Italy.
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"Plastic buckling of axially loaded aluminium cylinders: a new design approach", CIMS 2004, Fourth International Conference on Coupled Instabilities in Metal Structures, Rome, Italy, 27-29 September, 2004
PARTIAL ABSTRACT: The results of a wide F.E.M. analysis on the imperfection sensitivity of axially loaded aluminium cylinders is used to investigate buckling modes occurring in case of relatively thick cylinders (R/t < 200 to 250). The combined effect of geometrical imperfections, inelastic behaviour of material and boundary conditions is considered in order to set up a refinement of rules given in…. dealing with steel shells…