

PROGRAM

Tuesday, November 2, 2010

6-9 p.m. Registration

Wednesday, November 3, 2010

7 a.m. – 4 p.m. Registration

8:00 a.m. Welcoming Remarks

R.A. LaBoube, Missouri University of Science and Technology, Rolla, MO,
USA

8:10 a.m. Technical Session No. 1 Elements and Cross-Section Behavior

Chairpersons:

D.L. Johnson, Maus Engineering, Wolfeboro, NH, USA

T.B. Pekoz, Cornell University, Ithaca, NY, USA

“Impact of Corner Radius on Cold-Formed Steel Member Strength”, V. M. Zeinoddini
and B.W. Schafer, Johns Hopkins University, Baltimore, MD, USA

“Buckling Analysis of Cold-Formed Steel Members with General Boundary Conditions
using CUFSM: Conventional and Constrained Finite Strip Methods”, L. Zhanjie and
B.W. Schafer, Johns Hopkins University, Baltimore, MD, USA

8:50 a.m. Technical Session No. 2 Compression Members

Chairpersons:

B.W. Schafer, Johns Hopkins University, Baltimore, MD, USA

W.L. Shoemaker, Metal Building Manufacturers Association, Cleveland, OH, USA

”Evaluating the LRFD Resistance Factor for Cold-Formed Steel Compression Members”,
K. Ganesan and C.D. Moen, Virginia Tech, Blacksburg, VA, USA

“Experimental Investigation of Optimized Cold-Formed Steel Compression Members”,
D.J. Klingshirn, NAVFAC Pacific, Honolulu, HI, E.A. Summer, North Carolina State
University, Raleigh, NC, and N.A. Rahman, The Steel Network, Durham, NC, USA

“Cyclic Elastoplastic Large Displacement Analysis of Cold-Formed Steel Box Columns
under Combined Action of Axial and Bi-Directional Lateral Loading”, I.H.P. Mamaghani
and S. Montezeri, University of North Dakota, ND, USA

“Test and Finite Element Analysis on Distortional Buckling of Cold-Formed Thin-Walled Steel Lipped Channel Columns”, X. Yao, Y. Guo, Tongji University, Shanghai, China, and Z. Huang, University of Architecture and Technology, Xi’an, China

10:10 a.m. Break

**10:35 a.m. Technical Session No. 3
Built-up Compression Members**

Chairpersons:

D. Camotim, Technical University of Lisbon, Lisbon, Portugal

W.E. Kile, Structurteering, Inc., Houston, TX, USA

“Load-Carrying Capacity Estimation on Cold-Formed Thin-Walled Steel Columns with Built-up Box Section”, Y. Li, X. Yao, Z. Shen, and R. Ma, Tongji University, Shanghai, China

“Comparative Behavior of Built-up Cold-Formed Box Sections Under Rigid and Flexible End Support Conditions”, W. Reyes, Acerias de Columbia, Columbia, and A. Guzmán, Universidad del Norte, Barranquilla, Colombia

“Theoretical Analysis of Cold-Formed Steel Battened Double Angle Members under Compression”, W.F. Maia, J.M. Neto, and M. Malite, University of Sao Paulo, Brazil

**11:35 p.m. Technical Session No. 4
Floor Systems**

Chairpersons:

R.B. Haws, NUCONSTEEL, Denton, TX, USA

W.S. Easterling, Virginia Tech, Blacksburg, VA, USA

“Improvements to the Fire Performance of Light Gauge Steel Floor Systems”, B. Baleshan and M. Mahendran, Queensland University of Technology, Brisbane, Australia

“Feasibility Study for a Repetitive Member Factor for Cold-Formed Steel Framing”, S. Clayton and S.F. Stephens, Kansas State University, Manhattan, KS

12:15 p.m. Lunch

**1:10 p.m. Technical Session No. 5
Flexural Members**

Chairpersons:

H. Chen, American Iron and Steel Institute, Washington, D.C., USA

R.M. Schuster, University of Waterloo, Ontario, Canada

“Extending Direct Strength Design to Cold-Formed Steel Beams with Holes”, C.D. Moen, Virginia Tech, Blacksburg, VA, and B.W. Schafer, Johns Hopkins University, Baltimore, MD, USA

“On the Direct Strength Design of Continuous Cold-Formed Steel Beams”, C. Basaglia and D. Camotim, Technical University of Lisbon, Lisbon, Portugal

“Direct Strength Design of Cold-Formed C-Sections for Shear”, C.H. Pham and G.J. Hancock, University of Sydney, Sydney, Australia

“Direct Strength Design of Cold-Formed C-Sections in Combined Bending and Shear”, C.H. Pham and G.J. Hancock, University of Sydney, Sydney, Australia

“Flexural and Cyclic Behaviour of Hollow and Concrete-Filled Steel Tubes”, S. Arivalagan, Dr M.G.R. University, Chennai, TamilNadu, and S. Kandasamy, Anna University-Trichirappali, Ariyallur campus, Ariyallur, TamilNadu, India

“Lateral Torsional Instability of Single Channels Restrained by Angle Cleats”, G. Bukasa and M. Dundu, University of Johannesburg, Auckland Park, South Africa

“Evaluation of the Flexural Strength of Cold-Formed Steel Studs with Embossed Flanges”, K.B. Reynolds, S.F. Stephens, Kansas State University, Manhattan, KS, and R.A. LaBoube, Missouri University of Science and Technology, Rolla, MO, USA

3:30 p.m. Break

**4:00 p.m. Technical Session No. 6
Design Standards Development**

Chairpersons:

R.L. Brockenbrough, R.L. Brockenbrough and Associates, Pittsburgh, PA, USA
W.W. Yu, Missouri University of Science and Technology, Rolla, MO, USA

“Steel Roof Deck Diaphragms on Cold-Formed Steel Framing”, T. Sputo, Steel Deck Institute, Gainesville, FL, USA

“Overview of Recent Changes and Additions to AISI Standards”, H. Chen, American Iron and Steel Institute, Washington, D.C., R. Brockenbrough, R.L. Brockenbrough and Associates, Pittsburgh, PA, and R. Haws, NUCONSTEEL, Denton, TX, USA

“Review of AISI Design Guide for Cold-Formed Steel Purlin Roof Framing Systems - Component Stiffness Method”, M.W. Seek, East Tennessee State University, Johnson City, TN, USA

5:00 p.m. AISI Presentation and Adjournment
Presentation of 2010 AISI Market Development Industry Leadership

Award by Robert J. Wills, Vice President, Construction Market Development,
American Iron and Steel Institute

6:00-7:00 pm. Reception

Sponsored by:

American Iron and Steel Institute
Cold-Formed Steel Engineers Institute of Steel Framing Alliance
Metal Building Manufacturers Association
Rack Manufacturers Institute
Steel Deck Institute
Steel Stud Manufacturers Association

Thursday, November 4, 2010

**8:00 a.m. Technical Session No. 7
Design Guides Development**

Chairpersons:

J.W. Larson, American Iron and Steel Institute, Washington, D.C. USA
B.L. Babich, ITW Building Components Group, Haines City, FL, USA

“The 2008 AISI Cold-Formed Steel Design Manual”, R.C. Kaehler, Computerized
Structural Design, Milwaukee, WI, and H. Chen, American Iron and Steel Institute,
Washington, D.C., USA

“CFSEI: Educating North American Practitioners in Principles of CFS Framing Design”,
W.D. Allen, Cold-Formed Steel Engineers Institute, Washington, D.C., USA

“Cold-Formed Steel Website for Students”, R.A. LaBoube and C.M. Stratman, Missouri
University of Science and Technology, Rolla, MO, USA

**9:00 a.m. Technical Session No. 8
Rack Systems and Panel and Deck Assemblies**

Chairpersons:

J. Crews, Unarco Material Handling, Springfield, TN, USA
T. Sputo, Steel Deck Institute, Gainesville, FL, USA

“Frame Analysis and Design of Industrial Cold-Formed Steel Racks”, T.B. Pekoz,
Cornell University, Ithaca, NY, USA, and A. Karakaplan, A. Koc, LARSA, Inc, Melville,
NY, USA

“Cross-Aisle Shear Stiffness Tests on Rack Upright Frames”, S.R. Sajja, Amey, Lews, East Sussex, UK, R.G. Beale, and M.H.R. Godley, Oxford Brookes University, Oxford, UK

“Experimental Evaluation of a Vehicular Access Door Subjected to Hurricane Force Winds”, T. Gao and C.D. Moen, Virginia Tech, Blacksburg, VA, USA

10:00 a.m. Break

**10:30 a.m. Technical Session No. 9
Shear Wall Assemblies**

Chairpersons:

S.R. Fox, Canadian Sheet Steel Building Institute, Cambridge, Ontario, Canada

R.C. Kaehler, Computerized Structural Design, Milwaukee, WI, USA

“Shear Behaviours of Light-Gauge Composite Walls under Monotonic and Cyclic Loading”, Y. Li, F. Liu, Z. Shen, and X. Yao, Tongji University, Shanghai, China

“Experimental Investigation on 6 Feet Wide Cold-Formed Steel Framed Shear Walls with Steel Sheet Sheathing”, C. Yu and Y. Chen, University of North Texas, Denton, TX

“Performance of Knee-Braced Cold-Formed Steel Shear Walls Subjected to Lateral Cyclic Loading”, M.Z. Dasterji and H.R. Ronagh, The University of Queensland, Brisbane, Australia

“Innovative Damage Control Systems Using Replaceable Energy Dissipating Steel Fuses for Cold-Formed Steel Structures”, F. Ozaki, Y. Kawai, H. Tanaka, T. Okada, and R. Kanno, Nippon Steel Corporation, Japan

11:50 a.m. Lunch

**1:00 p.m. Technical Session No. 10
Wall and Roof Assemblies**

Chairpersons:

D. Allen, Steel Stud Manufacturers Association, Washington, D.C., USA

P.A. Seaburg, Consultant, Edwardsville, IL, USA

“A Life-Cycle Assessment of Cold-Formed Steel Enclosures verses Alternative Enclosures in Commercial University of Waterloo, Canada Buildings”, K. J. Van Ooteghem and L. Xu, University of Waterloo, Waterloo, Ontario, Canada

“Behavior and Design of Axially Compressed Sheathed Wall Studs”, L.C.M. Vieira, Jr. and B.W. Schafer, Johns Hopkins University, Baltimore, MD, USA

**1:40 p.m. Technical Session No. 11
Connections**

Chairpersons:

J. Mattingly, Consultant, Roselle Park, NJ, USA

C. Rogers, McGill University, Montreal Quebec, Canada

“Shear Behavior of Screw Connections for Cold-Formed Thin-Walled Steel Structures”,
Y. Li, R. Ma and X. Yao, Tongji University, Shanghai, China

“Single Shear Bolted Connection Tests of G500 1.20mm Thin Sheet Steel at Elevated
Temperatures”, S. Yan and B. Young, The University of Hong Kong, Hong Kong

“Arc-Spot Welds for Multi-Overlap Roof Deck Panels”, N. Guenford, R. Tremblay, and
C.A. Rogers, McGill University, Montreal QC, Canada

2:40 p.m. Break

3:00 p.m. Technical Session No. 11 (cont.)

Chairpersons:

A.J. Harrold, Blue Scope Buildings (Butler), Kansas City, MO, USA

C. Moen, Virginia Tech, Blacksburg, VA, USA

“Strength Prediction Model for Power Actuated Fasteners Connecting Steel Members in
Tension and Shear - North American Applications”, J.R.U. Mujagic, Structural
Engineering Consultant, Atlanta, GA, P.S. Green, Consultant, Myrtle Beach, SC, and
W.G. Gould, HILTI, Tulsa, OK, USA

“Cold-Formed Steel Tension Members with Two and Three Staggered Bolts”, D.M. Fox,
iSPAN Systems, Richmond Hill, Ontario, and R.M. Schuster, University of Waterloo,
Waterloo, Ontario, Canada

“Study on the Behavior of Cold-Formed Steel Angle Tension Members”, R.PadmaPriya,
SRM University, Kattankulathur, Chennai, and S.Kandasamy, Anna University
Tiruchirapalli, Ariyalur campus, Ariyalur, India

“Angle Cleat Base Connections,” M. Dundu and S. Maphosa, University of
Johannesburg, Auckland Park, South Africa

“Some Aspects on Seismic Design of Frames Designed With Cold Formed Steel
Shapes”, G. Valencia, National University of Colombia, Bogotá, Colombia

“Screw Connections Subject to Tension Pull-Out and Shear Forces”, R.M. Francka and
R.A. LaBoube, Missouri University of Science and Technology, Rolla, MO, USA

5:00 p.m. Closing Remarks and Adjournment