12:30 p.m. Technical Session No. 10: Roof and Wall Systems

Chairpersons:
C. H. Rael, Milwaukee School of Engineering, Milwaukee, WI, USA
K. D. Peterman, University of Massachusetts Amherst, Amherst, MA, USA

The Design and Development of Lightweight Composite Panels for Rigid Wall Structures,” J. J. Artman and C. Y. University of North Texas, Denton, TX, USA

Experimental Study on Uplift Capacity of Purlins Considering Restraints from Standing Seam Roof Systems,” W. L. Yuan and Y. Li, Tongji University, Shanghai, China

Localised Screw Connection Failures in Cold-formed Steel Roofing Systems,” M. Sivathanusundaram and M. Mahendran, Queensland University of Technology, Brisbane, Australia

Law Fatigue Response of Crest-Fixed Cold-Formed Steel Drape Curved Roof Claddings,” K. Roy, J. B. P. Lin, A. M. Yousefi, G. C. Clifton, University of Auckland, Auckland, New Zealand and M. Mahendran, Queensland University of Technology, Brisbane, Australia

A Finite Element Study of Corrugated Steel Deck Subjected to Concentrated Loads,” V. V. Dosty, New Millennium Building Systems, LLC, Columbia, SC, USA

1:45 p.m. Technical Session No. 11: Diaphragm Behavior

Chairpersons:
T. Spoto, Sputo and Lammert Engineering, Gainesville, FL, USA
R. B. Haws, Nucor, Denton, TX, USA

Stressed Skin Design of Steel Sheetieing Panels – Part 1: Shear Resistance and Flexibility of Screw Lapped Joints,” A. M. Wraszewski, University of West Scotland, Paisley, UK, J. B. P. Lin, International University of Auckland, NZ, J. A. MacLeod, University of Strathclyde, Glasgow, UK and R. M. Lawson, University of Surrey, Guildford, UK

Stressed Skin Design of Steel Sheetieing Panels – Part 2: Shear Panels with Sheeting Fixed on All 4 Sides,” A. M. Wraszewski, University of West Scotland, Paisley, UK, J. B. P. Lin, University of Auckland, NZ, J. A. MacLeod, University of Strathclyde, Glasgow, UK and R. M. Lawson, University of Surrey, Guildford, UK

Computational Modeling of Joist-to-Ledger Connections in Cold-Formed Steel Diaphragms,” H. C. Kastaneda and K. D. Peterman, University of Massachusetts Amherst, Amherst, MA, USA

Effect of Connection Details on the Cyclic Behavior of Nestable Screw Sidelaps,” S. Torabian, H. Folk, and B. W. Schafer, Johns Hopkins University, Baltimore, MD, USA

Sidelap and Structural Fastener Tests for Steel Deck Diaphragms,” Y. Shi, Virginia Tech, Blacksburg, VA, USA, S. Torabian, H. Folk, and B. W. Schafer, Johns Hopkins University, Baltimore, MD, USA

2:45 p.m. Break

3:00 p.m. Technical Session No. 12: Light-Steel Framing

Chairpersons:
W. L. Babich, Alpine TrusSteel, Orlando, FL, USA
P. Ford, raSmith, Waukesha, WI, USA

Tensile Strength and Serviceability of Cold-Formed Steel Clip Angles,” W. Zhang, Tongji University, Shanghai, China, Z. Yan, University of North Texas, Denton, TX, USA, M. Madhavani, Verco Decking, Sunnyvale, CA, USA, M. Yousof, Future Pipe Industries, Houston, TX, USA and C. Yu, University of North Texas, Denton, TX, USA

Strength of Cold-Formed Steel Clip Angle in Combined Bending and Shear Loading,” C. Yu, Z. Yan, University of North Texas, Denton, TX, USA and W. Zhang, Tongji University, Shanghai, China

Critical Design Criteria for Standard, Truncated, and Parallel Chords Cold-Formed Steel Trusses,” M. van Thienen, J. Dimyadi, J. B. P. Lim and G. C. Clifton, University of Auckland, Auckland, New Zealand

Fire Resistance of Cavity Insulated Light Gauge Steel Framed Walls,” A. D. Artyanayagam and M. Mahendran, Queensland University of Technology, Brisbane, Australia


Numerical Simulation of the Thermal and Mechanical Behavior of Cold-Formed Steel Composite Floor under Fire Conditions,” J. Peng, W. Chen, J. Ye, China University of Mining and Technology, Xuzhou, China and Z. Wang, Southeast University, Nanjing, China

Influence of Gypsum Panels on the Response of Cold-Formed Steel Framed Strap-Braced Walls,” S. Lu and C. A. Rogers, McGill University, Montreal, Canada

Human-Structure Interaction in Cold-Formed Steel Roof Systems: An Analytical Perspective,” S. Zhang and L. Xu, University of Waterloo, Waterloo, Canada

5:00 p.m. Closing Remarks and Adjournment

Conference Directors
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Wei-Wen Yu, Founding Director
of the Wei-Wen Yu Center for Cold-Formed Steel Structures, Missouri S&T

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W. W. Yu - Missouri S&T; Conference Co-Director
PROGRAM

Tuesday, November 6, 2018
8:00 p.m. Registration

7:00 a.m. Welcoming Remarks
R.A. LaBoube, Missouri University of Science and Technology, Rolla, MO, USA

8:15 a.m. Technical Session No. 1: Member Chairpersons

B.W. Schaefer, Johns Hopkins University, Baltimore, MD, USA
C.H. Pham, University of Sydney, Sydney, Australia

“Generalizing Beam Theory to Assess the Behavior of Curved Thin-Walled Members,” N. Peres, R. Goncalves, Universidade NOVA de Lisboa, Caparica, Portugal, and D. Camotim, Universidade de Lisboa, Lisbon, Portugal

“Proposed to improve the DSM design of Cold-Formed Steel Angle Columns: Needs, Background, Quality Assessment and Illustration,” P.B. Dinis and D. Camotim, Universidade de Lisboa, Lisbon, Portugal

Distortional Buckling of Cold-Formed Steel Flanges under Stress Gradient,” R.S. Glaub, RSG Software, Lee’s Summit, MO, USA

“Comparison of Experimental and Numerical Results for Flexural Capacity of Light-Gage Steel Roof Deck,” C.H. Raelbel, Milwaukee School of Engineering, Milwaukee, WI, USA and D. Gwizd, CSD Structural Engineers, Milwaukee, WI

10:15 a.m. Break

9:45 a.m. Technical Session No. 2: Flexural Members - Web Crippling and Shear

Chairpersons:

M.W. Seek, Old Dominion University, Norfolk, VA, USA
W.E. Sagen, Metal Building Manufacturers Association, Noblesville, IN, USA

“Web Bearing Capacity of Cold-Formed Ferritic Stainless Steel Unlipped Channels with Web perforations Under the End-Two-Flange (ETF) Loading,” A.M. Yousefi, J.B.P. Lim and G.C. Clifton, University of Auckland, Auckland, New Zealand

“Web crippling behaviour of Cold-Formed Ferritic Stainless Steel Unlipped Channels Under Interior-One-Flange and End-One-Flange Loadings,” A.M. Yousefi, J.B.P. Lim and G.C. Clifton, University of Auckland, Auckland, New Zealand

“Web crippling Behaviour of Cold-Formed Ferritic Stainless Steel Unlipped Channels with Web perforations Under the End-Two-Flange (ETF) Loading,” M. Seek, Old Dominion University, Norfolk, VA, USA

1:15 p.m. Technical Session No. 4: Compression Members

Chairpersons:

H.B. Blum, University Wisconsin-Madison, Madison, WI, USA
C.A. Rogers, McGill University, Montreal, Canada

“The effect on Web stiffening of Cold-Formed Steel-Thinned Flanged Lipped Sigma Sections in Compression,” K. Roy, K. Fujishahi, Nippon Steel & Sumitomo Metal Company, Japan, K. Fujishahi, NS Hi-Parts Corp., Japan, S. Son, K. Fujishahi, Nippon Steel & Sumitomo Metal Company, Japan, A. Sato and T. Ono, Nagoya Institute of Technology, Japan

“Bracing Design for Torсиional Buckling of Cold-Formed Steel Wall Stud Columns,” C.D. Moen, NBM Technologies, Blacksburg, VA, USA

“Experimental Investigation into the Behaviour of back-to-back Gapped Cold-Formed Steel Storage Rack Uprights under Compression,” K. Roy, University of Auckland, Auckland, New Zealand, T.C.H. Ting, H.H. Lau, Curtin University of Malaysia, Sarawak, Malaysia and J.B.P. Lim, University of Auckland, Auckland, New Zealand

2:00 p.m Break

2:30 pm Technical Session No. 5: Connections

Chairpersons:

D. Camotim, Universidade de Lisboa, Lisbon, Portugal
M. Mahendran, Queensland University of Technology, Brisbane, Australia

“Cyclic Performance and Behavior Characterization of Steel Deck Side-Edge-Stiffened Rectangular Hollow Sections Subjected to Web Crippling,” A. Uzzaman, University of Strathclyde, Glasgow, UK, J.B.P. Lim, University of Auckland, Auckland, New Zealand and B. Young, University of China, Hong Kong, China

“Parametric Studies and Design Recommendations of Cold-Formed Steel Sections with Edge-Stiffened Circular Holes Subjected to Web Crippling,” A. Uzzaman, University of Strathclyde, Glasgow, UK, J.B.P. Lim, University of Auckland, Auckland, New Zealand

“New Proposals for the Direct Strength Method of Design of Cold-Formed Steel Beams with Holes in Shear,” S.H. Pham, Ch.H. Pham, University of Sydney, Sydney, Australia, C.A. Rogers, McGill University, Montreal, Canada and G.J. Hancock, University of Sydney, Sydney, Australia

11:45 p.m. Lunch

12:30 p.m. Technical Session No. 3: Flexural Members

Chairpersons:

R.S. Glaub, RSG Software, Inc., Lee’s Summit, MO, USA
J.W. Larson, American Iron and Steel Institute, Washington, DC, USA

“A Preliminary Study on Stainless Steel Hollow Flange Beams Fabricated using a Laterally Supported Cold-Forming Machine,” A.M. Yousefi, H. Chen, American Iron and Steel Institute, Washington, DC, USA

“SDI Steel Deck on Cold-Formed Steel Framing Design Manual,” T. Spoto, Steel Deck Institute, Gainesville, FL, USA

“The 2017 AISI Cold-Formed Steel Design Manual,” J. Buckholt, Computerized Structural Design, Milwaukee, WI, USA and H. Chen, American Iron and Steel Institute, Washington, DC, USA

“The Influence of the Future American Cold-Formed Steel Design Standard on the Behavior of Beam to Column Cold Formed Section Connections,” A. Madzadeh, Islamic Azad University-South Tehran Branch, Tehran, Iran and H. Mohammadi, Masih University of Technology, Kermanshah, Iran

5:00 p.m Wei-Yen Yu Outstanding Student Paper and Student Scholar Awards

6:30 p.m. Adjourn

Thursday, November 8, 2018
8:00 a.m. Technical Session No. 7: Rack Structures

Chairpersons:

J. Davidson, Metal Building Manufacturers Association, Cleveland, OH, USA
C.D. Moen, NBM Technologies, Blacksburg, VA, USA

“Performance of Cold-Formed Steel Shear Walls with Frame Blocking and Double-Streeting,” R. Rizic, V. Briere, V. Santos and C.A. Rogers, McGill University, Montreal, Canada

11:45 a.m. Lunch