Chairpersons:
W. Li, G. Pérez, Virginia Tech, Blacksburg, VA, USA
C. Pan, C. Huang, and M. Tsao, Chaoyang University of Technology, Taichung, Taiwan, ROC

1:45 p.m. Break

2:00 p.m. Technical Session No. 10: Shear Walls
Chairpersons:
W. S. Easterling, Virginia Tech, Blacksburg, VA, USA
D. Allen, Super Stud Building Products, Edison, NJ, USA

“Characterization of Cold-Formed Steel Framed Diaphragm Response under In-Plane Loading and Influence of Non-Structural Gypsum Panels,” P. Latreille, V. Nikolaidou, C. A. Rogers, McGill University, Montreal, Canada and D.G. Lignos, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

“Seismic Performance Investigation of Cold-Formed Steel Framed Shear Walls with Steel Sheathing,” R. Feng and P. Xu, Southeast University, Nanjing, China

“Sheathing Overlapping and Attachment Methods for Cold-Formed Steel Shear Walls with Corrugated Steel Sheathing,” M. Mahdavian, University of North Texas, Denton, TX, USA, W. Zhang, Tongying University, Shangaia, China and C. Yu, University of North Texas, Denton, TX, USA

“Simulating the Seismic Performance of Cold-Formed Steel Framed Buildings using Corrugated Sheet Shear Walls,” W. Zhang, Tongying University, Shangaia, China, M. Mahdavian, University of North Texas, Denton, TX, USA, Y. Li, Tongying University, Shanghai, China and C. Yu, University of North Texas, Denton, TX, USA

“Experimental Tests for the Seismic Response Evaluation of Cold-Formed Steel Shear Walls Sheathed with Nailed Gypsum-Based Panels,” L. Fionno, V. Maccio, M.T. Terracciano, T. Pali, B. Bucciero and R. Landolfo, University of Naples, Federico II, Naples, Italy

3:15 p.m. Technical Session No. 11: Light-Steel Framing
Chairpersons:
R. Warr, Frameworks Engineering, Atlanta, GA, USA
W.W. Yu - Missouri S&T; Conference Co-Director
T. Sputo - Sputo and Lammert Eng.: Representative, SDI
J. Swenson - AF&PA; Chairman
H.H. Chen - Representative, AISI
J. Crews - Unarco Material Handling, Inc.; Representative, RMI
W.E. Schultz - R.L. Brockenbrough and Associates; Representative, MBMA
W.S. Easterling - Virginia Tech; Representative, CSSBI, Canada
D. Allen - Super Stud Building Products; Representative, CSSBI, Canada

“Shear Resistance of Cold-Formed Steel Framing Wall with X Strap Bracing,” C. Pan, C. Huang, and M. Tsao, Chaoyang University of Technology, Taichung, Taiwan, ROC

“Development of a Method to Generate a Simplified Finite Element Model for an Electrical Switchboard Cabinet,” E. Lim, B.J. Goodno and J.J. Craig, Georgia Institute of Technology, Atlanta, GA, USA

“An Improved Two-stage Seismic Analysis Procedure for Mid-Rise Buildings with Vertical Combination of Cold-Formed Steel and Concrete Framing,” Y. Yuan and L. Xu, University of Walterloo, Waterloo, Canada

“Seismic Modeling and Incremental Dynamic Analysis of the Cold-Formed Steel Framed CFSEI-NEES Building,” J. Leng, McGill University, Montreal, Canada, S.G. Buonopane, Bucknell University, Lewisburg, PA, USA and B.W. Schafer, Johns Hopkins University, Baltimore, MD, USA

“Full-Scale Experimental and Numerical Study about Structural Behavior of Thin-Walled Cold-Formed Steel Building Affected by Ground Settlements Due to Land Subsidence,” J.A. Ortiz-Lozano, L.A. Hernández-Castillo, M. Hernández-Marin, J. Pacheco-Martinez, M.E. Zermeño-deLeón and R. Salinas-Salinas, Autonomous University of Aguaclavates, Aguascalientes, Mexico

“Design Method for Cold-Formed Thin-Walled Steel Beams with Built-up Box Section,” Y. Li, and Y. Li, Tongji University, Shanghai, China

“An Archetype Mid-Rise Building for Novel Complete Cold-formed Steel Buildings,” S. Torabian, Johns Hopkins University, Baltimore, MD, USA, Z. Sanei Nia, University of Tehran, Tehran, Iran and B.W. Schafer, Johns Hopkins University, Baltimore, MD, USA

5:00 pm Closing Remarks and Adjournment

CONFERENCE DIRECTORS: Roger A. Laboube, Director Wei-Wen Yu Center for Cold-Formed Steel Structures, Missouri S&T


**PROGRAM**

**Tuesday, November 8, 2016**

7 a.m. – 8 a.m.  
Registration

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

8:15 a.m. Technical Session No. 1: Member Design Chairpersons  
G.J. Hancock, University of Sydney, Sydney, Australia  
T. Pekoz, Cornell University, Ithaca, NY, USA

"First-order Generalized Beam Theory for Curved Members with Circular Arches," N. Peres, Universidade de Lisboa, Lisbon, Portugal, Portugal and G. Gonçalves, Universidade NOVA de Lisboa, Caparica, Portugal and D. Camotim, Universidade de Lisboa, Lisbon, Portugal

"A Finite Element Method for Distortion Buckling Analysis of Thin-Walled Members," S. Jin, X. Jian, S. Nie, and M. Cheng, Chongqing University, Chongqing, China


"Analyses of Thin-Walled Sections under Localised Loading for General End Boundary Conditions – Part 1: Pre-Buckling," V.V. Nguyen, G.J. Hancock and C.H. Pham, The University of Sydney, Sydney, Australia

"Analyses of Thin-Walled Sections under Localised Loading for General End Boundary Conditions – Part 2: Buckling," V.V. Nguyen, G.J. Hancock and C.H. Pham, The University of Sydney, Sydney, Australia

"Measured Geometric Imperfections for Cee, Zee, and Built-up Cold-Formed Steel Sections," M.A. English and M.A. Castellucci, Hadley Industries plc, Smethwick, West Midlands, UK

"Material Properties of Cold-Rolled Thin-Walled Steel Plates at Elevated Temperatures," Z. Nie, Y. Li, Tongji University, Shanghai, China

"AISI Standards Developed and Updated in 2015 and 2016," H. Chen, American Iron and Steel Institute, Washington, D.C., USA and R.B. Haws, Nucor Buildings Group, Denton, TX, USA

"Recent Developments in the Australian/New Zealand Standard AS/NZS 4600 for Cold-Formed Steel Structures," G.J. Hancock, The University of Sydney, Sydney, Australia

12:10 p.m. Lunch

12:45 p.m. Technical Session No. 3: Flexural Members Chairpersons  
M.W. Fleed, Old Dominion University, Norfolk, VA, USA  
L. Xu, University of Waterloo, Waterloo, Canada

"Numerical Simulations of Slotted and Slotted Cold-Formed Steel Channels with Different Boundary Conditions in Shear," V.V. Deyegara, New Millennium Building Systems, Columbia, SC, USA and N.V. Deyegara, South-United State University, Chelyabinsk, Russia

"Buckling Behaviour of Cold-Formed Steel Beams under Bending and Torsion," H. Wan, Wuhan University of Technology, Wuhan, China, and M. Mahendran, Queensland University of Technology, Brisbane, Australia

"Finite Element Investigations of the Effect of Residual Stress in Cold-Formed Sigma Beams," F.P. Wang and J. Yang, School of Naval Architecture, Shanghai, China

"Incremental Elastic Local Buckling in a Plain Channel Section Beam Subjected to double-curvature Bending: An Effective-width Approach," E. Lim, B.G. Golobic, and J.J. Craig, Georgia Institute of Technology, Atlanta, GA, USA

"Tests of Cold-Formed Ferritic Stainless Steel Beams," L. Li and B. Young, The University of Hong Kong, Hong Kong, China

"Lateral-Torsional Buckling of General Cold-Formed Steel Beams," R.S. Giauq, RISG Software, Lee’s Summit, MO, USA

"Unconstrained Cross-Sectional Shape Optimisation of Cold-Formed Steel Section Beams and Column-Balls," B. Wang, B.P. Gilbis, G.L. Bosco, H. Guan, Griffith School of Engineering, and Australia and L.H. Teh, The University of Western Sydney, Penrith, Australia

"Design of Industrial Cold-Formed Steel Rack Upright Frames for Single-Shear Connections without Washers," M.E. Uz and L.H. Teh

10:15 a.m. Break

10:45 a.m. Technical Session No. 2: Compression Members Chairpersons  
B.W. Schafer, Johns Hopkins University, Baltimore, MD, USA  
C.H. Pham, University of Sydney, Sydney, Australia

"Buckling Strength of Cold-Formed Circular Steel Column Subjected to Axial Load," A. Ito, N. Shimizu, K. Sato and Y. Kawai, Nippon Steel & Sumitomo Metal Corporation, Japan

"Distortion Buckling Experiment on Cold-Formed Steel Lipped Channel Columns with Circle Hole under Axial Compression," X. Yao, Y. Guo, Nanjing Institute of Technology, Nanchang, China, Z. Nie, Tongji University, Shanghai, China

*A Direct Strength Method (DSM) of Design for Channel Sections in Sheathed and Square Circular Web Shapes,* E.H. Pham, C.H. Pham and G.J. Hancock, The University of Sydney, Sydney, Australia

4:15 p.m. Technical Session No. 5: Technology Transfer Chairpersons  
P.B. Haws, R. Denton, TX, USA  
J.W. Larson, American Iron and Steel Institute, Bethesda, PA, USA


"Recent Developments in the Australian/New Zealand Standard AS/NZS 4600 for Cold-Formed Steel Structures," G.J. Hancock, The University of Sydney, Sydney, Australia

10:00 a.m. Technical Session No. 6: Connections Chairpersons  
D. Camotim, Universidade de Lisboa, Lisbon, Portugal  
C.L. Yee, H.J. Shepherd, G.C. Clifton, R. Das and J.B.P. Ahmadi, Universiti Teknologi Malaysia, Malaysia

"Behaviour of Cold-Formed Steel Trusses with Concentric and Eccentric Joint Arrangements using the Howick Rivet Connector," A. Bian, S. Torabian and B.W. Schafer, Johns Hopkins University, Baltimore, MD, USA

"Tilt Bearing Capacity of Single-Shear Connection without Washers," M.E. Uz and L.H. Teh

"Behaviour of Cold-Formed Steel Semi Rigid Connections," R. Freya, Sri Venkatesha College of Engineering, Tamilnadu, India, R. Senthil, Anna University, Chennai, India, W.J. Mero, Sri Venkatesha College of Engineering, Tumakuru, India, R. Savaganakumar, Anna University, Chennai, India, Kuber and M. Gowtham, Sri Venkatesha College of Engineering, Tumakuru, India

"Shear Behavior of Screw Connection Between Cold-Formed Steel and Gypsum Sheathing at Elevated Temperatures," W. Chen and J. Ye, Southeast University, Nanjing, China

"Experiments on Column Base Stiffness of Long-Span Cold-Formed Steel Portal Frames Composed of Double Channels," H.B. Blum and J.K.R. Rasmussen, The University of Sydney, Sydney, Australia

"Characterizing the Load Deformation Behavior of Steel Deck Diaphragms," O’Brien, S. Florin, C.D. Moe, and M.R. Edington, Virginia Tech, Blacksburg, VA, USA

"Reduced Order Models for Profilied Steel Diaphragm Panels," G. Blan, S. Torosian and B.W. Schafer, Johns Hopkins University, Baltimore, MD, USA

9:30 a.m. Break

10:00 a.m. Technical Session No. 8: Connections Chairpersons  
D. Camotim, Universidade de Lisboa, Lisbon, Portugal  
R.L. Brockenbrough, R.L. Brockenbrough & Associates, Pittsburgh, PA

"Experimental Investigation of the Effect of Screw Fastener Spacing on the Local and Distortional Buckling Behavior of Built-Up Cold-Formed Steel Columns," D.C. Fratamico, S. Torosian, K.J.R. Rasmussen, B.W. Schafer


12:30 p.m. Lunch

12:00 p.m. Technical Session No. 9: Roof and Wall Systems Chairpersons  
W. Chen, Southeast University, Nanjing, China  
L. Luttrell, J. Mattingly, Steel Deck Institute, Allison Park, PA, USA

"New SDI Diaphragm Design Manual," L. Luttrell, J. Mattling, Steel Deck Institute, Pennsylvania, PA, USA and R.B. Haws, Nucor Building Systems, Denton, TX, USA

"Advancing BIM for Cold-Formed Steel Structures," A. Johnson, R. Ramirez and C. Yu, University of North Texas, Denton, TX*, USA" (not to be presented)

5:30 p.m. Award of Appreciation

6:00 - 7:00 p.m.  
*Reception*  
Sponsored by:  
American Iron and Steel Institute  
Cold-Formed Steel Institute  
Metal Building Manufacturers Association  
Raf Industries  
Steel Deck Institute  
Steel Frame Industry Association

8:30 a.m. Technical Session No. 6: Roof Structures Chairpersons  
J. Chen, Nanocor Material Handling, Springfield, TN, USA  
C.H. Pham, American Iron and Steel Institute, Washington, D.C., USA

"Experimental Investigation into Steel Storage Rack Beam-to-Upright Bolted Connections," L. Dai, X. Zhao, Tongji University, Shanghai, China and C. Ren, Shanghai University, Shanghai, China

"Industrial Cold-Formed Steel Rack Column Base Fixity and Strength," F. Roure, Universitat Politècnica de Catalunya, Barcelona, Spain, S. Pekoz, Cornell University, Ithaca, NY, USA, M.R. Somalo, J. Bonada, M.M. Pastor, M.M Casafont, Universitat Politècnica de Catalunya, Barcelona, Spain and J. Crews, Unarco Material Handling, Springfield, TN, USA

"Design of Industrial Cold-Formed Steel Rack Upright Frames for Loads in Cross-Aisle Direction," F. Roure, Universitat Politècnica de Catalunya, Barcelona, Spain, S. Pekoz, Cornell University, Ithaca, NY, USA, M.R. Somalo, J. Bonada, M.M. Pastor, M.M Casafont, Universitat Politècnica de Catalunya, Barcelona, Spain

8:45 a.m. Technical Session No. 7: Behavior of Systems and Frames Chairpersons  
T. Sputo, Spulto and Lammert Engineering, Gainesville, FL, USA  
C. Yu, University of North Texas, Denton, TX, USA

"Experiments on Column Base Stiffness of Long-Span Cold-Formed Steel Portal Frames Composed of Double Channels," H.B. Blum and J.K.R. Rasmussen, The University of Sydney, Sydney, Australia

"Characterizing the Load Deformation Behavior of Steel Deck Diaphragms," O’Brien, S. Florin, C.D. Moe, and M.R. Edington, Virginia Tech, Blacksburg, VA, USA