# Cheng Yu, Ph.D., P.E., F.SEI

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### EDUCATION

Ph.D., Civil/Structural Engineering (May 2005), Johns Hopkins University, Baltimore, MD

M.S., Civil/Structural Engineering (May 2005), Johns Hopkins University, Baltimore, MD

B.E., Civil/Structural Engineering (June 1998), Tsinghua University, Beijing, P. R. China

### WORK EXPERIENCE

**Professor and Program Coordinator**, Construction Engineering Technology Program, Department of Mechanical Engineering, University of North Texas, Denton, TX (September 2020 – Present)

**Professor and Program Coordinator**, Construction Engineering Technology Program, Department of Engineering Technology, University of North Texas, Denton, TX (September 2016 – August 2020)

Associate Professor and Program Coordinator, Construction Engineering Technology Program, Department of Engineering Technology, University of North Texas, Denton, TX (September 2012 – August 2016)

Assistant Professor and Program Coordinator, Construction Engineering Technology Program, Department of Engineering Technology, University of North Texas, Denton, TX (January 2005 - August 2011)

**Graduate Research Assistant**, Department of Civil Engineering, Johns Hopkins University, Baltimore, MD (September 2000 - December 2004)

### LICENSURES AND CERTIFICATIONS

**Professional Engineer, Texas** (December 2019 – Present)

# AWARDS AND RECOGNITION

- Fellow, Structural Engineering Institute, American Society of Civil Engineers, 2021-present.
- 2018 Outstanding Reviewer Award, Journals of Constructional Steel Research, Elsevier.
- 2018 Outstanding Reviewer Award, Thin-Walled Structures, Elsevier.
- Student Commendation, UNT Thank a Teacher Program, University of North Texas, June 2014. [Award certificate in suppl. AW6]
- Best Paper Award. Kuo, C.-C., Johnson, J. L., and Yu, C. (2012). "Selection of Delivery System, Contract Type, and Incentive/Disincentive Strategy for Highway Construction Projects in the United States." Proceedings of the 6th International Conference on Operations and Supply Chain Management, July 14 18, Xi'an, China, 109 111. [Award certificate in suppl. AW5]
- 2011 Outstanding Reviewer Award, Journal of Structural Engineering, American Society of Civil Engineers. [Award certificate in suppl. AW4]
- Faculty Early Career Development (CAREER) Award, National Science Foundation, 2010 2015. [NSF Grant #0955189, Award letter in suppl. GR20]
- Recognition as source of support and inspiration by students at Honors Day Program, University of North Texas 2009. [Award letter in suppl. AW2, AW3]
- Recognition as source of support and inspiration by students at Honors Day Program, University of North Texas 2007. [Award letter in suppl. AW1]

• 2002 MBMA (Metal Building Manufacturers Association) Graduate Fellowship Award

# GRANTS

### **Awarded Research Grants/Contracts**

### External

- 58. PI, "Behavior and Performance of Light Frame Shear Walls Sheathed by Composite Panels." Ectek International Inc., August 2021 November 2021, GP00101.
- 57. PI, "Analysis and Design of Casing Panels." Baltimore Aircoil Company, August 2021 March 2022, GP00098.
- 56. PI, "*Tensile Strength of Inserts of Tiltwall Panel Lifting System*." Tiltwall Headquarters & Supplies, June 2021 July 2021, GP00097.
- 55. PI, "Behavior and Performance of Screw Connection at Chord-Web Joint of Advant Trusses." Advant Steel, LLC., June 2021 August 2021, GP00096.
- 54. PI, "Experimental Investigation and Design Method of Cold-Formed Steel Joists with Edge-Stiffened Web Openings." AISI Standards Council Small Project Fellowship Program, American Iron and Steel Institute, April 2021 May 2022, GP00092.
- 53. PI, "Behavior and Performance of Light Frame Shear Walls Sheathed by Composite Panels." Ectek International Inc., May 2021 September 2021, GP00090.
- 52. PI, "*Testing Special Hinge Connections*." Universal Storage Containers, October 2020 December 2020, GP00079.
- 51. PI, "*Testing of Cold-Formed Steel Framed Shear Walls for Frame-CAD*." FRAMECAD America, Inc., September 2020 December 2020.
- 50. PI, "Analysis of Nucor Bolted Connections for Cold-Formed Steel." Nucor Buildings Group, June 2020 September 2020.
- 49. PI, "Analysis of Cold-Formed Steel Framed Shear Walls Sheathed by MegaBoard." Ectek International Inc., June 2020 March 2021.
- 48. PI, "*Equivalent Section Properties of Cold-Formed Steel Members*." Hilti Inc., November 2019 May 2020.
- 47. PI, "*Thermal Conductivity of Cold-Formed Steel Supported Concrete Panels*." Hi-Tech Tilt, August 2019 September 2019.
- 46. PI, "*Testing of Cold-Formed Steel Framed Shear Walls Sheathed by Different Panel Materials.*" Ectek International Inc., April 2019 June 2019.
- 45. Co-PI, (Title-Removed Export Controlled)" KRI at Northern, LLC, March 2019 March 2020. (PI Nahotre, Co-PIs Mukherjee, Nasrazadani, Voevodin, Zhang.).
- 44. PI, "Shear Strength of Cold-Formed Steel Clip Angles with Multiple Lines of Screws." AISI Standards Council Small Project Fellowship Program, American Iron and Steel Institute, April 2019 - January 2020.
- 43. PI, "*Expanding Effective Strip Method to Thicker Stud Walls*." AISI Standards Council Small Project Fellowship Program, American Iron and Steel Institute, April 2019 January 2020.
- 42. PI, "Testing of Cold-Formed Steel Member Connections Using BAC Fasteners." Baltimore Aircoil Company, January 2019 March 2019.
- 41. PI, "Testing of CF-Steel Roof and Floor Trusses." CFS Steel LLC, October 2018 December 2018.
- 40. PI, "Testing of CF-Steel Trusses." CFS Steel LLC, April 2018 May 2018.
- 39. PI, "*Experimental Study on the Behavior and Strength of Lifting Lugs*." Baltimore Aircoil Company, March 2018 – May 2018.

- 38. PI, "*Behavior and Strength of USG Structural Panel in Axial Compression*." United State Gypsum Company, March 2018 June 2018.
- PI, "Investigation on bolted connections in cold-formed steel members using J429 SAE bolts." AISI Standards Council Small Project Fellowship Program, American Iron and Steel Institute, February 2018 – January 2019.
- 36. PI, "*Testing of Cold-Formed Steel Framed Shear Walls Sheathed by USG Structural Panel Concrete Subfloor*." United State Gypsum Company, January 2018 May 2018.
- 35. PI, "*Testing of Cold-Formed Steel Member Connections Using BAC Fasteners*." Baltimore Aircoil Company, December 2017 June 2018.
- 34. Co-PI, "Engineered Materials and Materials Design of Engineered Materials (EMMDEM); Tactical Shelters." ARMY Natick Soldier Systems Center, October 2017 March 2019. PI Nahotre, Co-PIs Mukherjee, Nasrazadani, Voevodin, Zhang.
- 33. PI, "*Pull-out and Bearing Test of Screw Connections*." Noble Environmental Technologies Corporation, September 2017 October 2017.
- PI, "Major Improvement of LOD Specification for CFS Framing Construction." AISI Standards Council Small Project Fellowship Program, American Iron and Steel Institute, June 2017 – March 2018.
- Co-PI, "Light Weight Composite Structures for Advanced Tactical Shelters." ARMY Natick Soldier System, Northeastern University, September 2016 – August 2018. PI Schultz. Co-PIs Mukherjee, Nasrazadani, Voevodin, Zhang.
- 30. PI, "Structural Performance of Cold-Formed Steel Framed ROK-ON Walls." MagBoard, LLC, May 2016 May 2017.
- 29. PI, "GOALI-Supplement: Achieving a Novel Cold-Formed Steel Shear Wall System from Lab to Construction Site." National Science Foundation, August 2016 January 2017.
- 28. PI, "*Load Bearing Clip Angle Design Phase Two*." American Iron and Steel Institute, March 2016 March 2018.
- 27. PI, "Development of LOD Specification for Building Information Models of Metal Building Systems." AISI Standards Council Small Project Fellowship Program, American Iron and Steel Institute, May 2016 – August 2016.
- 26. PI, "*REU-Supplement: Deflection Characteristics of Innovative Cold-Formed Steel Shear Walls Using Corrugated Steel Sheet Sheathing.*" Proposal # 1541570, National Science Foundation, August 2015 January 2016.
- 25. PI, "*REU-Supplement: Effect of Non-Structural Materials to the Behavior of Corrugated Steel Sheet Shear Walls.*" Proposal # 1520457, National Science Foundation, May 2015 August 2016.
- 24. PI, "*Experimental Study on System Reliability of Cold-Formed Steel Roof Trusses*." American Iron and Steel Institute, June 2015 May 2016.
- 23. PI, "Advancing Building Information Modeling (BIM) for Cold-Formed Steel Structures." AISI Standards Council Small Project Fellowship Program, American Iron and Steel Institute, May 2015 August 2015.
- 22. PI, "NSF PFI:AIR-TT Innovative High-Performance Cold-Formed Steel Walls for Light Framed Construction." Grant # 1445065, National Science Foundation, 2014 2016. Co-PI Jeff Martin, Verco Decking.
- 21. PI, Master Research Contract with KEYMARK Enterprises, LLC, (2013 present), total grant as of August 2015.

- PI, "CAREER: Comprehensive Research on Cold-Formed Steel Sheathed Shear Walls: Special Detailing, Design, and Innovation." Grant #0955189, National Science Foundation, 2010 – 2016 (NCE).
- 19. PI, Research Contract with FRAMECAD America, (2014).
- 18. PI, "*Load Bearing Clip Angle Design.*" American Iron and Steel Institute, September 2013 December 2014.
- 17. PI, Master Research Contract with Nuconsteel Commercial Corp, (2010 2012).
- 16. PI, "Strength of Stud-to-Track Connections." Nuconsteel Commercial Corp., June 2010 July 2010.
- 15. PI, "Compression Strength of Truss Chord Members." Nuconsteel Commercial Corp., April 2010 June 2010.
- 14. PI, "*Testing and Analysis of Cold-Formed Steel Structures*." Nuconsteel Commercial Corp., June 2009 August 2009.
- 13. PI, "*Eccentrically Loaded Cold-Formed Steel Wall Stud Walls*." Nucor Corporation, August 2008 August 2009.
- 12. PI, "Evaluation of Stiffback for Monolithic Placement of Monolithic Placement of Ecospan Joist on ICF." Nucor Corporation, August 2008 August 2009.
- 11. PI, "Shear Resistance of Cold-Formed Steel Stud Walls with Wider Range of Options in Steel Sheathing Phase Two." American Iron and Steel Institute, August 2008 December 2008.
- 10. PI, "Testing and Analysis of Cold-Formed Steel Connections with Bolts in Oversize Holes or Short Slots without Washers - Phase 2." American Iron and Steel Institute, co-funded by Metal Building Manufacturers Association, October 2008 – September 2009.
- 9. PI, "*Testing and Analysis of Cold-Formed Steel Structures*." Nuconsteel Commercial Corp., June 2008 May 2009.
- 8. PI, "Shear Resistance of Cold-formed Steel Framed Shear Wall Assemblies for Mid-rise Construction." Worthington Industries, February 2008 July 2008.
- 7. PI, *"Finite Element Analysis on Special Braced Frame."* BORM Associates, Inc., June 2007 December 2007.
- 6. PI, "*Testing and Analysis of Cold-Formed Steel Structures*." Nuconsteel Commercial Corp., June 2007 May 2008.
- 5. PI, "Finite Element Analysis on BORM Moment Frame." BORM Associates, Inc., April 2007 May 2007.
- 4. PI, "Testing and Analysis of Cold-Formed Steel Connections with Bolts in Oversize Holes or Short Slots without Washers." American Iron and Steel Institute, April 2007 August 2008.
- 3. PI, "Shear Resistance of Cold-Formed Steel Stud Walls with Wider Range of Options in Steel Sheathing." American Iron and Steel Institute, January 2007 April 2007.
- 2. PI, "*Testing and Analysis of Cold-Formed Steel Structures*." Nuconsteel Commercial Corp., June 2006 May 2007.
- 1. Co-PI, "*Cold-Formed Steel Structures Analysis*." Nuconsteel Commercial Corp., June 2005 May 2006 (PI: Dr. Bill Grubbs).

# PUBLICATIONS

### Book

1. Yu, C., (2016). "<u>Recent Trends in Cold-Formed Steel Construction</u>." Woodhead Publishing Limited, Elsevier. ISBN 9780081009604. (Editor)

### **Book Chapters**

- Rahman, N., Chen, H., Yu, C., (2020). "Chapter 9 Design of Cold-Formed Steel Structural Members." Structural Engineering Handbook by Mahamid, Gaylord and Gayload, Fifth Edition, McGraw-Hill. ISBN 9781260115987.
- 2. Yu, C., Chen, H., (2016). "Chapter 2 Recent Code Development and Design Standards for Cold-Formed Steel Structures." Recent Trends in Cold-Formed Steel Construction, Woodhead Publishing Limited, Elsevier. ISBN 9780081009604.
- 1. Yu, C., Zhang, W., (2016). "Chapter 3 AISI Design Procedures and Practical Examples for Cold-Formed Steel Structures." Recent Trends in Cold-Formed Steel Construction, Woodhead Publishing Limited, Elsevier. ISBN 9780081009604.

# **Refereed Journal Articles (\* student advised, 'corresponding author)**

- 72. Zhang, W.\*, Liu, Y.\*, Xu, X.\*, **Yu, C**.<sup>1</sup> (2022). "Improved Shear Design Method of Cold-Formed Steel Clip Angles," Elsevier, Journal of Constructional Steel Research, 188 (2022) 107045. doi.org/10.1016/j.jcsr.2021.107045.
- Zhang, W.\*, Mahdavian, M.\*, Lan, X.\*, Yu, C.<sup>!</sup> (2021). "Cold-Formed Steel Framed Shear Walls with In-Frame Corrugated Steel Sheathing." ASCE, Journal of Structural Engineering. DOI: 10.1061/(ASCE)ST.1943-15 541X.0003182.
- Yu, C.<sup>!</sup>, Tian, Y.\*, Yan, W., Zhang, W.\* (2021). "Novel Energy Dissipation Bracing Designed for Corrugated Sheet Sheathed Cold-Formed Steel Shear Wall." ASCE, Journal of Structural Engineering. DOI: 10.1061/(ASCE)ST.1943-541X.0003147.
- 69. Liu, X.<sup>1</sup>, Meng, K., Zhang, A., Zhu, T., **Yu, C.** (2021). "*Bearing Capacity of H-Section Beam Wrapped with Ceramsite Concrete.*" Steel and Composite Structures, Vol, 40, No. 5 (2021), September 10, 2021, Pages 679-696. https://doi.org/10.12989/scs.2021.40.5.679.
- Xie, Z.\*, Zhang, W<sup>!\*</sup>., Chen, T., Zhou, D., Shi, L., Yu, C. (2021). "Comparative Analysis and Design Method of Shear Strength for Hybrid SPR-SDS Joints in Thin-Walled Steel Structures." Elsevier, Structures, Vol 33, October 2021, 4313-4329. https://doi.org/10.1016/j.istruc.2021.07.003.
- 67. Zhao, Y., **Yu, C.**, Chen, S., Jian, Z., Zhang, W.<sup>1</sup> (2021). "*Shear Performance of Cold-Formed Steel Shear Walls with High-Aspect-Ratios.*" Elsevier, Structures, Vol 33, October 2021, 1193-1206. https://doi.org/10.1016/j.istruc.2021.05.011.
- 66. Zhang, J., Li<sup>1\*</sup>, X., Yu, C., Cao, W. (2021). "Cyclic Behavior of High-Strength Concrete Shear Walls with High-Strength Reinforcements and Boundary CFST Columns." Elsevier, Journal of Constructional Steel Research. 182 (2021), July 2021, 106692, https://doi.org/10.1016/j.jcsr.2021.106692.
- 65. Zhang, W.\*, Xu, X.\*, Liu, Y.\*, **Yu, C.**<sup>1</sup>, Liu X., Xie, Z. (2021). "*High-Strength Cold-Formed Steel Framed Shear Wall with Steel Sheet Sheathing*." Elsevier, Thin-Walled Structures, 162 (2021), May 2021, 107584. https://doi.org/10.1016/j.tws.2021.107584
- 64. Xie, Z.\*<sup>!</sup>, Zhang, A., Yan, W., Zhang, Y., Mu, T.\*, **Yu, C.** (2021). "*Study on Shear Performance and Calculation Method for Self-pierce Riveted Joints in Galvanized Steel Sheet.*" Elsevier, Thin-Walled Structures. 161 (2021), April 2021, 107490. https://doi.org/10.1016/j.tws.2021.107490
- 63. Zhan, X, Liu, X.<sup>!</sup>, Feng, S., **Yu, C.** (2021). "Seismic Performance of a Square HSS Column to Hsection Beam Bolted Connection with Double Cover Plate." Elsevier, Engineering Structures, Volume 131, 15 March 2021, 111729.
- 62. Zhang, A., Liu, X.<sup>!</sup>, Wang, Y., **Yu, C.**, Bai, Z., Ha, T. \* (2021). "*Static Performance of Slideable Bolt-Assembly Truss-to-Column Connection with Oversized Bolt Holes.*" Elsevier, Journal of Constructional Steel Research. 176 (2021) 106374.
- 61. Liu, X.<sup>!</sup>, Chen, G., Xu, L., **Yu, C.**, Jiang, Z. (2021). "Seismic Performance of Blind-Bolted Joints for Square Steel Tube Columns under Bending-Shear." Elsevier, Journal of Constructional Steel Research. 176 (2021) 106395.

- 60. Zhao, Q.<sup>!</sup>, Qiu, J., Zhao, Y., **Yu, C.**, Li, Z., (2020) "*Estimating Fundamental Period of Corrugated Steel Plate Shear Walls.*" KSCE Journal of Civil Engineering. 24, 3023-3033(2020)
- 59. Zhan, J.<sup>1</sup>, Li, X.\*, Cao, W., **Yu, C.** (2020). "Seismic Behavior of Composite Shear Walls Incorporating High-Strength Materials and CFST Boundary Elements." Elsevier, Engineering Structures, Vol 220, 1 October 2020, 110994.
- Xie, Z.<sup>!\*</sup>, Zhang, A, Yan, W., Zhang, Y., Yu, C., Mu, T. (2020). "*The Shear Behavior and Calculation Method of Self-Piercing Riveted Connections on Thin-Waled Steel Sheets.*" Engineering Mechanics. Vol. 37, No. 6, June 2020. DOI: 10.6052/j.issn.1000-4750.2019.12.0793. (In Chinese)
- Liu, X.<sup>!</sup>, Wang, Y., Cui, X., Yu, C., Bai, Z. (2020). "Seismic Performance of Bolted Beam-To-Column Connection with Rib-Stiffened Splicing Plate." Elsevier, Journal of Constructional Steel Research. 174 (2020) 106300.
- 56. Liu, X.<sup>!</sup>, Feng, S., Shang, Z., **Yu, C.,** Bai, Z. (2020). "*Performance of Prestressed T-Type Self-Centering Energy-Dissipation Brace*." Elsevier, Engineering Structures. 223 (2020) 111174.
- 55. Xie, Z<sup>!\*</sup>, Zhang, A., Yan, W., Zhang, Y., Yu, C., Mu, T. (2020). "Research on Shear Behavior and Calculation Method for the Screw-Rivet Hybrid Connection in Cold-Formed Thin-Walled Steel." Journal of Building Structures. Vol. 41, No. 10, Oct. 2020. DOI:10.14006/j.jzjgxb.2019.0899. (In Chinese)
- 54. Liu, X.<sup>!</sup>, Zhang, A., Wang, Y., Shang Z., **Yu, C.**, Bai, Z. (2020). "Seismic Behavior of an X-Deployed Cable-Braced Bolt-Assembly Steel Frame." Elsevier, Journal of Constructional Steel Research. 170 July 2020, 106132.
- 53. Zhang, X.<sup>1</sup>, Xie, Z.\*, Song, L.\*, Yan, W., **Yu, C.** (2020). "*Feasibility Research on the Application of Self-Piercing-Riveted Connection in Cold-formed Steel Structures.*" Elsevier, Journal of Constructional Steel Research. 168 (2020) 105957.
- 52. Zhao, J.<sup>!</sup>, **Yu, C.**, Sun, K. (2019). "*Tests and Direct Strength Design on Cold-Formed Steel Channel Beams with Web Holes*." Engineering Structures, Vol 184 (2019), 434–446.
- Song, L.\*<sup>!</sup>, Yu, C., Tan, Q., Yan, W., Xie, Z.\* (2019). "Flexural Behavior Investigation of the CFS Truss Beams with Self-Piercing Riveted Connection." Elsevier, Journal of Constructional Steel Research. Vol 156, May 2019, 28-45.
- Liu, X.<sup>!</sup>, Cui, F., Zhan, X., Yu, C., Jiang, Z. (2019). "Seismic Performance of Bolted Connection of H-Beam to HSS-Column with Web End-Plate." Elsevier, Journal of Constructional Steel Research. 156 (2019) 167-181.
- 49. Zhang, W.\*, **Yu, C.**<sup>!</sup>, Mahdavian, M.\* (2019). "Seismic Performance of Cold-Formed Steel Shear Wall using Corrugated Sheathing with Slits." ASCE, Journal of Structural Engineering. 145(4), April 2019.
- 48. Zhao, J.<sup>1</sup>, **Yu, C.** (2019). "Experimental Study and Numerical Simulation of G550 High Strength Cold-Formed Steel Z-Section Members under Pure Bending and Moment Gradient." International Journal of Steel Structures. Vol. 19, Issue 2, pp 366-380, April 2019.
- 47. Yan, W., Mu, T.\*, Xie, Z.\*, Yu, C.<sup>1</sup> (2019). "*Experimental Investigation of Typical Connections for Fabricated Cold-Formed Steel Structures*." Advances in Structural Engineering. Vol. 22(1) 141–155.
- 46. Zhang, W.\*, Mahdavian, M.\*, **Yu**, C.<sup>!</sup> (2018). "*Different Slit Configuration in Corrugated Sheathing of Cold-Formed Steel Shear Wall.*" Elsevier, Journal of Constructional Steel Research. Vol 150, November 2018, 430-441.
- 45. Zhang, W.\*, Mahdavian, M.\*, **Yu, C.**<sup>!</sup> (2018). "*Lateral Strength and Deflection of Cold-Formed Steel Shear Wall using Corrugated Sheathing*." Elsevier, Journal of Constructional Steel Research. Vol 148, September 2018, 399-408.

- 44. Qiu, J., Zhao, Q.<sup>!</sup>, **Yu, C.**, Li, Z., (2018). "*Experimental Studies on Cyclic Behavior of Corrugated Steel Plate Shear Walls*." ASCE, Journal of Structural Engineering. Vol. 144, Issue 11 (November 2018).
- 43. Zhang, J.<sup>1</sup>, Zheng, W., **Yu, C.**, Cao, W. (2018). "Shaking Table Test of RC Coupled Shear Walls with Single Layer of Web Reinforcement and Inclined Steel Bars." Advances in Structural Engineering. 21(15), 2282-2298.
- 42. Xie, Z.\*, Yan, W., **Yu, C.**<sup>!</sup>, Mu, T.\*, Song, L.\* (2018). "*Experimental Investigation of Cold-Formed Steel Shear Walls with Self-Piercing Riveted Connections*." Elsevier, Thin-Walled Structures. Vol 131 (2018) 1-15.
- 41. Xu, L.<sup>1</sup>, Zhang, S., **Yu, C.** (2018). "Determination of Equivalent Rigidities of Cold-Formed Steel Floor Systems for Vibration Analysis, Part II: Evaluation of the Fundamental Frequency." Elsevier, Thin-Walled Structures. 132 (2018) 1-15.
- 40. Xie, Z.\*, Yan, W.<sup>!</sup>, **Yu, C.**, Mu, T., Song, L. (2018). "*Improved Shear Strength Design of Cold-Formed Steel Connection with Single Self-Piercing Rivet.*" Elsevier, Thin-Walled Structures. 131 (2018) 708-717.
- 39. Yu, C.<sup>!</sup>, Zhang, W.\*, Yu, G.\*, Wang, J.\* (2018). "*Cold-Formed Steel Framed Shear Wall using Corrugated Steel Sheathing with Slits.*" ASCE, Journal of Structural Engineering. Vol 144, Issue 8 August 2018.
- Xie, Z.\*, Yan, W., Yu, C.<sup>!</sup>, Mu, T.\*, Song, L. (2018). "Tensile Capacity of Self-Piercing Rivet Connections in Thin-Walled Steel Structures." Elsevier, Journal of Constructional Steel Research. 144 (2018) 211-220.
- Zhang, W.\*, Mahdavian, M.\*, Yousof, M.\*, Yu, C.<sup>!</sup> (2018). "Testing and Design of Cold-Formed Steel Clip Angles in Tension: Pull-Over and Serviceability." Elsevier, Thin-Walled Structures. 124 (2018) 13-19.
- 36. Zhang, W.\*, Mahdavian, M.\*, **Yu, C.**<sup>!</sup>, (2017). "*Recent Development on Seismic Performance of Cold-Formed Steel Framed Shear Walls with Corrugated Steel Sheathing*." Progress in Steel Building Structures, Vol. 19, No. 6, December 2017. (in Chinese)
- 35. Yu, C.<sup>1</sup>, Vora, H.\*, (2017) "A Pilot Study on Cold-Formed Steel Framed Shear Wall Assemblies with *Corrugated Sheathing*." International Journal of Structural Engineering, 2017, 8(3), 272-288.
- 34. Zhang, W.\*, Mahdavian, M.\*, Li, Y., **Yu, C.**<sup>!</sup> (2017). "Seismic Performance Evaluation of Cold-Formed Steel Shear Walls using Corrugated Steel Sheathing." ASCE, Journal of Structural Engineering. Vol 143 (11), November 2017.
- Yan, W., Xie, Z.\*, Yu, C.<sup>!</sup>, Song, L., He, H. (2017). "Experimental Investigation on Self-Piercing Rivet Connections in Thin-Walled Steel Structures." Elsevier, Journal of Constructional Steel Research. 133 (2017) 231-240.
- 32. Yu, C.<sup>!</sup>, Yousof, M.\*, Mahdavian, M.\*, Zhang, W.\* (2017). "*Design of Cold-Formed Steel Clip Angles in Compression*." ASCE, Journal of Structural Engineering. Vol. 143, Issue 6, June 2017.
- 31. Yang, Q., Lu, X.<sup>1</sup>, **Yu, C.**, Gu, D. (2017). "*Experimental Study and Finite Element Analysis of Energy Dissipating Outriggers*." Advances in Structural Engineering. Vol 20, Issue 8, 1196-1209, 2017.
- 30. Zhang, W.\*, Madsavian, M.\*, Li, Y., **Yu, C**.<sup>!</sup> (2017). "Experiments and Simulations of Cold-Formed Steel Wall Assemblies using Corrugated Steel Sheathing subjected to Shear and Gravity Loads." ASCE, Journal of Structural Engineering. Vol. 143, Issue 3, March 2017.
- 29. Yu, C.<sup>!</sup>, Yu, G.\* (2016). "*Experimental Investigation of Cold-Formed Steel Framed Shear Wall using Corrugated Steel Sheathing with Circular Holes.*" ASCE, Journal of Structural Engineering, Vol. 142, Issue 12, December 2016.
- 28. B.W. Schafer<sup>1</sup>, D. Ayhan, J. Leng, P. Liu, D. Padilla-Llano, K.D. Peterman, M. Stehman, S.G. Buonopane, M. Eatherton, R. Madsen, B. Manley, C.D. Moen, N. Nakata, C. Rogers, and **C. Yu.**

(2016). "Seismic Response and Engineering of Cold-Formed Steel Framed Buildings." Elsevier, Structures, Vol 8, Part 2, Pages 197-212, November 2016.

- 27. Yu, C.<sup>!</sup>, Yousof, M.\*, Mahdavian, M.\*, Zhang, W.\* (2016). "*Behavior and Design of Thin-Walled Cold-Formed Steel Clip Angles subjected to Shear Load.*" ASCE, Journal of Structural Engineering, Vol. 142, Issue 7, July 2016.
- 26. Dara, M.\*, **Yu, C.**<sup>!</sup> (2016). "Direct Strength Method for Web Crippling of Cold-Formed Steel C- and Z- Sections Subjected to One-Flange Loading." Journal of Steel Structure and Construction, OMICS International, 1: 105. doi:10.4172/jssc.1000105.
- Zhang J.<sup>!</sup>, Dong, H., Cao, W., Yu, C., Chi, Y. (2016). "Shaking Table Tests of Low-Rise Shear Walls Made of Recycled Aggregate Concrete." Structural Engineering International, IABSE. Vol. 26, Number 1, pp. 62-73(12), February 2016.
- 24 Lu, X.<sup>!</sup>, Xie, L., Yu, C., Lu X., (2016). "Development and Application of a Simplified Model for the Design of a Super-Tall Mega-Braced Frame-Core Tube Building." Elsevier, Engineering Structures, 110 (2016) 116-126.
- 23. Tian, H.W., Li, Y.Q.<sup>1</sup>, **Yu, C.** (2015). "*Testing of Steel Sheathed Cold-Formed Steel Trussed Shear Walls*." Thin-Walled Structures, 09/2015; 94(2015), 280-292.
- 22. Yu, C.<sup>!</sup>, Li, C.\* (2015). "Behavior and Strength of Cold-Formed Steel Shear Walls using Composite *Panels.*" Advances in Structural Engineering, Vol 18, No. 7 (2015), 1063-1070.
- 21. Zhang, J.<sup>!</sup>, Cao, W., Meng, S., **Yu, C.**, Dong, H. (2014). "*Shaking Table Experimental Study of Recycled Concrete Frame-Shear Wall Structures*." Earthquake Engineering and Engineering Vibration, Springer, June 2014, 13(2):257-267.
- Zhang, J.<sup>1</sup>, Cao, W., Yu, C., Dong, H. (2014). "Shake Table Test of Reinforced Concrete Wall Structure with Concealed Bracings." Structures and Buildings, ICE Publishing. Vol. 167, Issue 10, October 2014, 598-609.
- 19. Balh, N., DaBreo, J., Ong-Tone, C., El-Saloussy, K., **Yu, C.**, Rogers, C.A.<sup>1</sup> (2014). "*Design of Steel Sheathed Cold-Formed Steel Framed Shear Walls*." Thin-Walled Structures 75 (2014), 76-86.
- 18. Yanagi, N.\*, **Yu, C.**<sup>1</sup> (2014). "*Effective Strip Method for the Design of Cold-Formed Steel Framed Shear Wall with Steel Sheet Sheathing*." ASCE, Journal of Structural Engineering, Vol. 140, Issue 4, April 2014.
- 17. Ahmadi, M., Zhang, H.<sup>1</sup>, **Yu, C.**, Wahrmund, J. (2014). "Determining Elastic and Shear Moduli of cold-Formed Steel at Elevated Temperatures Using a New Sonic Resonance Method." Nondestructive Testing and Evaluation, Volume 29, No. 1, 1-13.
- 16. Yu, C.<sup>1</sup>, Panyanouvong, M.X.\* (2013). "Bearing Strength of Cold-Formed Steel Bolted Connections with a Gaps." Elsevier, Thin-Walled Structures, 67 (2013), 110-115.
- 15. De Leon, D.<sup>1</sup>, Reyes, A., **Yu, C.** (2013). "Probabilistic Assessment of the Structural Safety of Bolted and Welded Connection for Seismic Zones." Elsevier, Journal of Constructional Steel Research, 88 (2013), 15-20.
- 14. Yu, C.<sup>1</sup>, Xu, K.\*, (2013). "Shear Strength of Cold-Formed Steel Sheet in Bolted Connections Using Oversized Holes." ASCE, Journal of Structural Engineering, 139 (2013), 860-864.
- 13. Zhao, Y.\*, Yan, W., **Yu, C.**<sup>!</sup> (2012). "*Experimental Study of Cold-Formed Steel Framed Shear Wall Assemblies with Tapping Corrugated Sheet Steel Sheathing*." Earthquake Resistant Engineering and Retrofitting, 6 (2012), 87-92.
- Law, K.\*, Zhao, Y.\*, Yan, W., Yu, C. (2012). "Simplified Method for Critical Elastic Distortional Buckling of Cold-Formed Steel C and Z Sections." Advances in Structural Engineering, Vol 15, No. 12, (2012), 2013-2019.
- 11. Yu, C.<sup>1</sup> (2012). "Cold-Formed Steel Flexural Member with Edge Stiffened Holes: Behavior, Optimization, and Design." Elsevier, Journal of Constructional Steel Research, 71 (2012), 210-218.

- 10. Yu, C.<sup>1</sup>, Yan, W. (2011). "Determining Distortional Buckling Strength of Cold-Formed Steel Flexural C and Z Sections Using Effective Width Method Thin-Walled Structures." Elsevier, Thin-Walled Structures, Volume 49, Issue 2, (2011), 233-238.
- 9. Yu, C.<sup>1</sup>, Xu, K.\*, Sheerah, I.\* (2011). "Bearing Strength of Cold-Formed Steel Bolted Connections Using Oversized Holes without Washers." ASCE, Journal of Structural Engineering, 137 (2011), 156-159.
- 8. Yu, C.<sup>1</sup>, Chen, Y.\* (2011). "Detailing Recommendations for 1.83-m Wide Cold-Formed Steel Shear Walls with Steel Sheathing." Elsevier, Journal of Constructional Steel Research, 67 (2011), 93-101.
- 7. **Yu, C.**<sup>1</sup> (2010). "Shear Resistance of Cold-Formed Steel Framed Shear Walls with 0.686-mm, 0.762mm, and 0.838-mm Steel Sheet Sheathing." Elsevier, Engineering Structures, 32 (2010), 1522-1529.
- 6. **Yu, C.**<sup>!</sup> (2010). "Distortional Buckling Of Cold-Formed Steel Shear Wall Studs Under Uplift Force." ASCE, Journal of Structural Engineering, 136 (3), 317-323.
- 5. Yu, C.<sup>1</sup>, Schafer, B.W. (2007). "Simulation of Cold-Formed Steel Beams in Local and Distortional Buckling with Applications to the Direct Strength Method." Elsevier, Journal of Constructional Steel Research, 63(5), 581-590.
- 4. Yu, C.<sup>1</sup>, Schafer, B.W. (2007). "*Effect of Longitudinal Stress Gradient on the Elastic Buckling of Thin Plates*." ASCE, Journal of Engineering Mechanics, 133(4), 452-463.
- 3. Yu, C.<sup>1</sup>, Schafer, B.W. (2006). "*Effect of Longitudinal Stress Gradient on the Ultimate Strength of Thin Plates.*" Elsevier, Thin-Walled Structures, 44 (7), 787-799.
- 2. Yu, C.<sup>1</sup>, Schafer, B.W. (2006). "Distortional Buckling Tests on Cold-Formed Steel Beams." ASCE, Journal of Structural Engineering, 132 (4), 515-528.
- 1. Yu, C., Schafer, B.W.<sup>!</sup> (2003). "*Local Buckling Tests on Cold-Formed Steel Beams*." ASCE, Journal of Structural Engineering, 129 (12), 1596-1606.

#### **Conference Papers and Presentations (\* student advised)**

- Xu, X\*, Zhang, W., Yu, C., (2021). "The Design and Development of Lightweight Composite Panels for Rigid Wall Shelters." Proceedings of 2021Annual Stability Conference, Structural Stability Research Council, Virtual Conference, April 13-16, 2021.
- 56. Zhang, W.\*, **Yu, C.**, Mahdavian, M.\*, Lan, X\* (2020). "*Cold-Formed Steel Framed Shear Walls with In-Frame Corrugated Steel Sheathing*." Proceedings of the 2020 CFSRC Colloquium, October 20, 2020.
- 55. Zhang, W.\*, **Yu, C.**, Mahdavian, M.\*, Lan, X\* (2020). "*Cold-Formed Steel Framed Shear Walls with In-Frame Corrugated Steel Sheathing*." Proceedings of the 2020 CFSRC Colloquium, October 20, 2020.
- 54. **Yu, C.**, Tian, Y., Yan, Z., (2020). "*Shear Strength of Cold-Formed Steel Flexural Members Connected Using Clip Angles.*" Proceedings of 2020 SSRC Annual Stability Conference, Structural Stability Research Council, Atlanta, GA, April 21-24, 2020 (Conference cancelled due to Covid).
- 53. **Yu, C.**, (2019). "*The Design of Clip Angle Connectors in Cold-Formed Steel Framing.*" ASCE Structures Congress, Orlando, FL, April 25-27, 2019. (Abstract and Presentation)
- 52. Artman, J.\*, **Yu, C.**, (2019). "*The Design and Development of Lightweight Composite Panels for Rigid Wall Shelters.*" ASCE Structures Congress, Orlando, FL, April 25-27, 2019. (Abstract and Presentation, Section Chair)
- Artman, J.\*, Yu, C., (2018). "The Design and Development of Lightweight Composite Panels for Rigid Wall Shelters." Proceedings of the 24<sup>th</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, November 7-8, 2018.
- 50. Zhang, W.\*, Yan, Z.\*, Mahdavian, M.\*, Yousof, M.\*, **Yu, C.**, (2018). "*Tensile Strength and Serviceability of Cold-Formed Steel Clip Angles*." Proceedings of the 24<sup>th</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, November 7-8, 2018.

- 49. Yu, C., Yan, Z.\*, Zhang, W.\*, (2018). "Strength of Cold-Formed Steel Clip Angle in Combined Bending and Shear Loading." Proceedings of the 24<sup>th</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, November 7-8, 2018.
- 48. Zhdanov, D., **Yu, C.**, (2018). "*Recent Trends in the Use of Cold-Formed Steel Profiles in the US Construction Industry*," Perspective Directions of Innovative Development of Construction Industry and Engineering Training, Brest, Belarus, October 25-26, 2018, pp. 137–143 (in Russian).
- 47. Lan, X.\*, **Yu, C.**, Zhang, W.\*, Mahdavian, M.\* (2018). "Seismic Performance Evaluation of Cold-Formed Steel Framed Shear Walls using In-Frame Corrugated Steel Sheets." Proceedings of Annual Stability Conference, Structural Stability Research Council, Baltimore, MD, April 11-13, 2018.
- 46. Mahdavian, M.\*, Lan, X.\*, Zhang, W.\*, **Yu, C.** (2017). "*Cold-Formed Steel Framed Shear Walls using Corrugated Steel Sheathing.*" 2017 CFSEI EXPO and Annual Meeting, Fort Worth, TX, May 21-23, 2017. (Presentation Only)
- 45. Artman, J.\*, Derrick, N.\*, Martinez, N., **Yu, C.**, Mukherjee, S. (2017). "*Light Weight Composite Structures for Advanced Tactical Shelters*." 2017 CFSEI EXPO and Annual Meeting, Fort Worth, TX, May 21-23, 2017. (Presentation Only)
- 44. Zhang, W.\*, Mahdavian, M., Li, Y., **Yu, C.** (2017). "*Finite Element Analysis on Shear Strength of Cold-Formed Steel Shear Walls Using Corrugated Steel Sheathing*." Proceedings of Annual Stability Conference, Structural Stability Research Council, San Antonio, TX, March 22-24, 2017.
- 43. Johnson, A.\*, Smith, B., Moen, C., **Yu, C.** (2017). "*A Stud on the System Reliability of Cold-Formed Steel Roof Trusses.*" Proceedings of Annual Stability Conference, Structural Stability Research Council, San Antonio, TX, March 22-24, 2017.
- 42. Jia, P.\*, Zhang, W.\*, Mahdavian, M.\*, Derrick, N.\*, **Yu, C.** (2016). "*Behavior of Steel Sheet Sheathed Cold-Formed Steel Walls Subjected to Combined Lateral and Vertical Loads.*" Proceedings of the 23<sup>rd</sup> International Specialty Conference on Cold-Formed Steel Structures, Baltimore, MD, November 9-10, 2016.
- Zhang, W.\*, Mahdavian, M.\*, Li, Y, Yu, C. (2016). "Simulating the Seismic Performance of Cold-Formed Steel Framed Buildings using Corrugated Sheet Shear Walls." Proceedings of the 23<sup>rd</sup> International Specialty Conference on Cold-Formed Steel Structures, Baltimore, MD, November 9-10, 2016.
- Mahdavian, M.\*, Zhang, W.\*, Yu, C. (2016). "Sheathing Overlapping and Attachment Methods for Cold-Formed Steel Shear Walls with Corrugated Steel Sheathing." Proceedings of the 23<sup>rd</sup> International Specialty Conference on Cold-Formed Steel Structures, Baltimore, MD, November 9-10, 2016.
- Johnson, A.\*, Ramirez, R.\*, Yu, C. (2016). "Advancing BIM for Cold-Formed Steel Structures." Proceedings of the 23<sup>rd</sup> International Specialty Conference on Cold-Formed Steel Structures, Baltimore, MD, November 9-10, 2016.
- 38. **Yu, C.**, Yousof, M.\*, Mahdavian, M.\*, Zhang, W.\* (2016). "*Screw Connections in Cold-Formed Steel Clip Angles Subjected to Uplift Forces.*" Keynote presentation, 2<sup>nd</sup> World Congress and Exhibition on Construction and Steel Structure, Las Vegas, NV, September 22-24, 2016. (Abstract only)
- 37. Mahdavian, M.\*, Zhang, W.\*, Ding, Chu, Moen, C., **Yu, C.** (2016). "*Cyclic Simulation of Cold-Formed Steel Shear Walls with Corrugated Steel Sheathing*." Proceedings of Annual Stability Conference, Structural Stability Research Council, Orlando, FL, April 12-15, 2016.
- 36. Bagheri, A.\*, Kondapally, S.\*, Bostanci, H., Foster, P.R., **Yu, C.** (2016), "Visualization and Simulation of an Innovative Rotary Displacer Stirling Machine Operation," Proc. 2016 ASEE-GSW Annual Conference, Fort Worth, TX, March 6-8, 2016.
- 35. Zhang, W.\*, Wang, J.\*, Mahdavian, M.\*, Yu, C. (2016). "Seismic Performance of Cold-Formed Steel Framed Buildings using Corrugated Sheet Shear Walls." Proceedings of the 2016 ASCE Geotechnical and Structural Engineering Congress, Phoenix, AZ, February 14-17, 2016.

- 34. Yu, C., Yousof, M.\* (2015). "Behavior and Design of Thin-Walled Cold-Formed Steel Clip Angles subjected to Compression Load." Proceedings of the IJSSD Symposium on Progress in Structural Stability and Dynamics, Lisbon, Portugal, July 22-24, 2015.
- 33. **Yu, C.**, Vora, H.\*, Li, C.\* (2015). "*High-Strength Cold-Formed Steel Framed Shear Walls Sheathed with Noncombustible Panels.*" Proceedings of the Eighth International Conference on Advances in Steel Structures, Lisbon, Portugal, July 22-24, 2015.
- 32. Yu, C., Yu, G.\*, Wang, J.\* (2015). "Optimization of Cold-Formed Steel Framed Shear Wall Sheathed with Corrugated Steel Sheets: Experiments and Dynamic Analysis." Proceedings of the 2015 ASCE Structures Congress, Portland, OR, April 23-24, 2015.
- 31. Yu, C., Yousof, M.\*, Mahdavian, M.\* (2015). "Behavior and Design of Thin-Walled Cold-Formed Steel Clip Angles Subjected to Shear Load." Proceedings of Annual Stability Conference, Structural Stability Research Council, Nashville, TN, March 24-27, 2015.
- Yu, C., Yu, G.\*, Wang, J.\* (2014). "Innovative Cold-Formed Steel Framed Shear Wall Sheathed with Corrugated Steel Sheets: Experiments and Dynamics Analysis." Proceedings of the 22<sup>st</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, November 5-6, 2014.
- Schafer, B.W., Ayhan, D., Leng, J., Liu, P.\*, Padilla-Lllano D., Peterman, K.D., Stehman, M., Buonopane, S.G., Eatherton, M., Madsen R., Manley, B., Moen, C.D., Nakata, N., Yu, C. (2014).
  *"The CFS-NEES Effort: Advancing Cold-Formed Steel Earthquake Engineering."* Proceedings of 10<sup>th</sup> U.S. National Conference on Earthquake Engineering, Anchorage, AK, July 21-25, 2014.
- Choy, M.Y.\*, Jia, X.F.\*, Yuan, X.\*, Zhou, J.\*, Wang, H.S.\*, Yu, C. (2014). "Direct Strength Method for Web Crippling of Cold-Formed Steel C- and Z- Sections Subjected to Two-Flange Loading." Proceedings of Annual Stability Conference, Structural Stability Research Council, Toronto, Canada, March 25-28, 2014.
- 27. Yu, C., Li, C.\*, Elliott, C. (2014). "Behavior and Design of Cold-Formed Steel Framed Shear Walls using Structural Composite Panels." Proceedings of the 2014 ASCE Structures Congress, Boston MA, April 3-4, 2014.
- 26. Yanagi, N.\*, **Yu, C.** (2013). "*Effective Strip Model for Cold-Formed Steel Shear Wall using Steel Sheet Sheathing*." Proceedings of the 21<sup>st</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, April 2013.
- 25. Liu, P.\*, Peterman, K.D., **Yu, C.**, Schafer, B.W. (2012). "*Characterization of Cold-Formed Steel Shear Wall Behaviors under Cyclic Loading for the CFS-NEES Building.*" Proceedings of the 21<sup>st</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, October 2012.
- 24. **Yu, C.**, Moen, C. (2012). "*The 1<sup>st</sup> Student Competition on Cold-Formed Steel Design.*" Proceedings of the 21<sup>st</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, October 2012.
- 23. Kuo, C.-C., Johnson, J. L., and **Yu, C.** (2012). "Selection of Delivery System, Contract Type, and *Incentive/Disincentive Strategy for Highway Construction Projects in the United States.*" Proceeding of the 6th International Conference on Operations and Supply Chain Management, July 14-18, Xi'an, China, 109-111.
- 22. Yanagi, N.\*, **Yu, C.** (2012). "Cold-Formed Steel Sheet Sheathed Shear Walls in Mid-Rise Construction." Proceedings of the Annual Stability Conference, Structural Stability Research Council, Grapevine, TX, April 2012.
- 21. Yu, C., Chao, L.\* (2012). "*Experimental Investigation of Cold-Formed Steel Shear Walls Sheathed with Steel-Gypsum Composite Panels*." Proceedings of the Annual Stability Conference, Structural Stability Research Council, Grapevine, TX, April 2012.
- 20. Liu, P.\*, Peterman, K.D., **Yu, C.**, Schafer, B.W. (2012). "*Cold-formed steel shear walls in ledger-framed buildings*." Annual Stability Conference, Structural Stability Research Council, Grapevine, Texas, April 2012.

- 19. Law, K,\* Zhao, Y.\*, **Yu, C.**, Yan, W. (2011). "Simplified Methods for Determining the Critical Elastic Buckling Load of Thin-Walled Cold-Formed Steel Sections." Proceedings of the Annual Stability Conference, Structural Stability Research Council, Pittsburgh, PA, May 2011.
- 18. Yu, C., Chen, Y.\* (2010). "*Experimental Investigation on 6 Feet Wide Cold-Formed Steel Framed Shear Walls with Steel Sheet Sheathing*." Proceedings of the 20<sup>th</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, November 2010.
- 17. Yu, C. (2010). "Appropriate Adjustment Method for Experimental Results of Cold-Formed Steel Shear Walls Sheathed with Steel Sheets." Proceedings of the Annual Stability Conference, Structural Stability Research Council, Orlando, FL, May 2010.
- Moen, C. D., Yu, C. (2010). "Elastic Buckling of Thin-Walled Structural Components with Edge-Stiffened Holes." Proceedings of the 51<sup>st</sup> AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference, Orlando, FL, April 2010.
- 15. Yu, C., Huang, Z., Vora, H.\* (2009). "*Cold-Formed Steel Framed Shear Wall Assemblies with Corrugated Sheet Steel Sheathing*", Proceedings of the Annual Stability Conference, Structural Stability Research Council, Phoenix, AZ, April 2009.
- 14. Vora, H.\*, **Yu, C.** (2008). "*Pilot Research on Cold-Formed Steel Framed Shear Wall Assemblies with Corrugated Sheet Steel Sheathing*." Proceedings of the 19<sup>th</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, October 2008.
- Yu, C., (2008). "Shear Resistance of Cold-Formed Steel Framed Shear Wall Assemblies with 0.027-.0.030-,0.033-inch Sheet Steel Sheathing." Proceedings of the 19<sup>th</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, October 2008.
- 12. Yu, C., Sheerah, I.\* (2008). "Cold-Formed Steel Bolted Connections without Washers on Oversized Holes: Shearing and Bearing Failures in Sheets." Proceedings of the 19<sup>th</sup> International Specialty Conference on Cold-Formed Steel Structures, St. Louis, MO, October 2008.
- 11. **Yu, C.** (2008). "A Unique Buckling Mode for Cold-Formed Steel Framed Shear Wall with Sheet Steel Sheathing." Proceedings of the 5<sup>th</sup> Conference on Coupled Instabilities in Metal Structures, Sydney, Australia, June 2008.
- Yu, C. (2008). "Cold-Formed Steel C-Sections with Edge Stiffened Perforations: Optimization, Behavior, and Design." Proceedings of the 5<sup>th</sup> International Conference on Thin-walled Structures, Brisbane, Australia, June 2008.
- 9. Yu, C. (2007). "Behavior and Design of Cold-Formed Steel Joists with Edge Stiffened Perforations." Proceedings of the Annual Technical Session and Meeting, Structural Stability Research Council, New Orleans, LA, April 2007.
- 8. **Yu, C.**, Schafer, B.W. (2006). "*Finite Element Modeling of Cold-Formed Steel Beams: Validation and Application*." Proceedings of the 18<sup>th</sup> International Specialty Conference Cold-Formed Steel Structures, Orlando, FL, October 2006.
- Yu, C., Lokie, T.\* (2006). "Effective Width Method Based Design for Distortional Buckling of Cold-Formed Steel Beams." Proceedings of the 18<sup>th</sup> International Specialty Conference Cold-Formed Steel Structures, Orlando, FL, October 2006.
- Yu, C., Schafer, B. W. (2006) "Stability of Thin Plates under Longitudinal Stress Gradient." Proceedings of the Annual Technical Session and Meeting, Structural Stability Research Council, San Antonio, TX, February 2006.
- Ádány, S., Yu, C., Schafer, B. (2005) "Local and Distortional Buckling Resistance of Cold-Formed Steel Beams: Eurocode 3 in the light of (i) Experimental Research and (ii) Other Design Codes." Proceedings of the EUROSTEEL 2005 Conference, Maastricht, Netherlands, June 8-10, 2005.
- Yu, C., Schafer, B.W. (2004). "Distortional Buckling Tests on Cold-Formed Steel Beams." Proceedings of the 17<sup>th</sup> International Specialty Conference on Cold-Formed Steel Structures, Orlando, FL, 2004.

- 3. Yu, C., Schafer, B.W. (2004). "*Stress Gradient Effect on the Buckling of Thin Plates.*" Proceedings of the 17<sup>th</sup> International Specialty Conference on Cold-Formed Steel Structures, Orlando, FL, 2004.
- 2. Yu, C., Schafer, B.W. (2003). "Analysis and Testing of Cold-Formed Steel Beams." Proceedings of the Advances in Structures: Steel, Concrete, Composite and Aluminum ASSCCA'03, Sydney, Australia.
- 1. **Yu, C.**, Schafer, B.W. (2002). "*Local Buckling Tests on Cold-Formed Steel Beams*." Proceedings of the 16<sup>th</sup> International Specialty Conference on Cold-Formed Steel Structures, Orlando, FL, 2002.

# **Published Technical Reports**

- 10. Yeganeh, B., Yu, C. (2020). "Investigation of Bolted Connections in Cold-Formed Steel Members using SAE J429 Bolts." Research Report RP20-8, American Iron and Steel Institute, Washington, DC.
- 9. **Yu, C.**, Yan, Z., Qian, L. (2018). "*Load Bearing Clip Angle Design Phase II*." Research Report RP18-4, American Iron and Steel Institute, Washington, DC.
- 8. **Yu, C.**, Yousof, M., Mahdavian, M. (2015). "*Load Bearing Clip Angle Design.*" Research Report RP15-2, American Iron and Steel Institute, Washington, DC.
- Yu, C., Xu, K. (2010). "Cold-Formed Steel Bolted Connections Using Washers on Oversized and Slotted Holes – Phase 2." Research Report RP10-2 submitted to American Iron and Steel Institute, Washington, DC.
- 6. **Yu, C.**, Chen, Y. (2009). "Steel Sheet Sheathing Options for Cold-Formed Steel Framed Shear Wall Assemblies Providing Shear Resistance Phase 2." Research Report RP09-2 submitted to American Iron and Steel Institute, Washington, DC.
- 5. **Yu, C.** (2008). "*Design of Clip Angle Bearing Stiffeners*." Technical Note, Cold-Formed Steel Engineers Institute, Wilmington, NC, (Peer Reviewed).
- 4. Yu, C. (2008). "Cold-Formed Steel Bolted Connections without Washers on Oversized and Slotted Holes Phase 1." Research Report RP08-11 submitted to American Iron and Steel Institute, Washington, DC.
- 3. Yu, C. (2007). "Steel Sheet Sheathing Options for Cold-Formed Steel Framed Shear Wall Assemblies." Research Report RP07-3 submitted to American Iron and Steel Institute, Washington, DC.
- 2. **Yu, C.**, Schafer, B.W. (2005). "*Distortional Buckling of Cold-Formed Steel Members in Bending*." Research Report RP05-1, American Iron and Steel Institute, Washington, DC.
- 1. Schafer, B.W., **Yu, C.** (2002). "*Test Verification of the Effect of Stress Gradient on Webs of Cee and Zee Sections.*" Research Report RP02-5 submitted to American Iron and Steel Institute, the Metal Building Manufacturers Association.

# **Design Provisions Developed**

- 9. Section "*B5.2.2.3.2.1 Effective Strip Method*" for wind load design, **AISI S240-15** North American Standard for Cold-Formed Steel Structural Faming, 2015 Edition, Page 44 45, American Iron and Steel Institute, Washington DC.
- 8. Section "*E2.3.1.1.1 Effective Strip Method*" for seismic load design, **AISI S400-15** North American Standard for Seismic Design of Cold-Formed Steel Structural Systems, 2015 Edition, Page 28 30, American Iron and Steel Institute, Washington DC.
- 7. Section "C2.1 Available Strength [Factored Resistance] Table C2.1-1 Nominal Shear Strength for Wind Load for Shear Walls for 0..030" 0.033"steel sheet one side" and "Table C2.1-3 Nominal Shear Strength for Seismic Loads for Shear Walls for 0.030", 0.033" steel sheet one side", AISI S213-12 North American Standard for Cold-Formed Steel Framing – Lateral Design, 2012 Edition (S213 was replaced by new AISI S240-15 page 48 and AISI S400-15, page 31), American Iron and Steel Institute, Washington DC.

- Section "C2.1 Available Strength [Factored Resistance] Table C2.1-1 Nominal Shear Strength for Wind Load for Shear Walls for 0.027"steel sheet one side" and "Table C2.1-3 Nominal Shear Strength for Seismic Loads for Shear Walls for 0.027" steel sheet one side", AISI S213-07 (2012) North American Standard for Cold-Formed Steel Framing – Lateral Design, 2007 Edition (Reaffirmed 2012), Page 11, 13, American Iron and Steel Institute, Washington DC.
- Section "E3.3.1 Bearing Strength [Resistance] Without Consideration of Bolt Hole Deformation Table E3.3.1-1 Bearing Factor, C, for Connections With Oversized or Short-Slotted Holes" and "Table E3.3.1-2 Modification factor, mf, for Connections With Oversized or Short-Slotted Holes", AISI S100-12 North American Specification for the Design of Cold-Formed Steel Structural Members, 2012 Edition, Page 106-107, American Iron and Steel Institute, Washington DC.
- 4. Section "C4.2 (b) Distortional Buckling Strength [Resistance] For C- and Z-Sections or any Open Section with a Stiffened Compression Flange Extending to One Side of the Web where the Stiffener is either a Simple Lip or a Complex Edge Stiffener", AISI S100-07 North American Specification for the Design of Cold-Formed Steel Structural Members, 2007 Edition, Page 61-62, American Iron and Steel Institute, Washington DC.
- 3. Section "C4.2 (a) Distortional Buckling Strength [Resistance] Simplified Provision for Unrestrained C- and Z-Sections with Simple Lip Stiffeners", AISI S100-07 North American Specification for the Design of Cold-Formed Steel Structural Members, 2007 Edition, Page 60-61, American Iron and Steel Institute, Washington DC.
- Section "C3.1.4 (b) Distortional Buckling Strength [Resistance] For C- and Z-Sections or any Open Section with a Stiffened Compression Flange Extending to One Side of the Web where the Stiffener is either a Simple Lip or a Complex Edge Stiffener", AISI S100-07 North American Specification for the Design of Cold-Formed Steel Structural Members, 2007 Edition, Page 40-42, American Iron and Steel Institute, Washington DC.
- Section "C3.1.4 (a) Distortional Buckling Strength [Resistance] Simplified Provision for Unrestrained C- and Z-Sections with Simple Lip Stiffeners", AISI S100-07 North American Specification for the Design of Cold-Formed Steel Structural Members, 2007 Edition, Page 39-40, American Iron and Steel Institute, Washington DC.

# Patent

Yu, C., Martin, J., Haws, R. "In-Frame Shear Wall", U.S. patent 10822793. (granted on 11/3/2020)

# TEACHING

#### Professor, Associate Professor, Assistant Professor, Department of Engineering Technology, University of North Texas, Denton, TX (2005 – Present) Master's Level

Master's Level

- MSET 5220 Building Information Modeling, 3 credit hours
- MSES 5230 Risk Management in Construction, 3 credit hours
- MSET 5040 Analytical Methods for Engineering Technology, 3 credit hours
- MSET 5800 Graduate Studies: Cold-Formed Steel Design, 3 credit hours
- MSES 5900, MEET 5900, MEET 5910, MSET 5910 Graduate Special Problems, 1-3 credit hours
- MSES 5930, Graduate Research Problems in Lieu of Thesis

# Undergraduate Level

- ENGR 2332 Mechanics of Materials, 4 credit hours (lecture and lab)
- CNET 1160 Construction Methods and Materials, 3 credit hours (lecture and lab)
- CNET 2300 Architectural Drawing, 2 credit hours (lecture and lab)
- CNET 3430 Structural Analysis, 3 credit hours

- CNET 3440 Steel Structures, 3 credit hours
- CNET 3460 Soils and Foundation, 3 credit hours (lecture and lab)
- CNET 4620 Advanced Design of Cold-Formed Steel Structures, 3 credit hours (lecture and lab)
- CNET 4780 Senior Design I, 2 credit hours (lecture and lab)
- CNET 4790 Senior Design II, 3 credit hours (lecture and lab)
- CNET 4900 Special Problems, 1-3 credit hours

### STUDENT ADVISING

### Graduate Students Advised, Me as Major Professor

### **Current Students**

• Idisinke Inyang, M.S. in Engineering Technology - Construction Management, Project "Developing building information models of cold-formed steel sections" (May 2021).

### **Students Already Graduated**

### Thesis track:

- Maimouna Doukoure, M.S. in Engineering Technology Construction Management, Thesis title "Structural Analysis and Finite Element Modeling of Aluminum Honeycomb Sandwich Structures" (May 2021).
- Mohaned Dewaidi, M.S. in Engineering Technology Construction Management, Thesis title "Design Method for Cold-Formed Steel Shear Wall Sheathed with Polymer Composite Panel" (July 2020).
- Noraiz Rao, M.S. in Engineering Technology Construction Management, Thesis title "Modeling and Analysis of Prototype Shelter Structures on ABAQUS" (May 2020).
- Alexander Rowen, M.S. in Engineering Technology Construction Management, Thesis title "Structural, Thermal, and Corrosion Properties of a Cold-Formed Steel Rigid Wall Relocatable Shelter" (May 2020).
- Babak Yeganehtalab, M.S. in Engineering Technology Construction Management, Thesis title "Construction Management Method and Techniques in Army Tactical Shelter" (December 2019).
- Aida Askhanalam, M.S. in Engineering Technology Construction Management, Thesis title "Design Method of Cold-Formed Steel Frame Shear Wall Sheathed by Structural Concrete Panel" (December 2019).
- Xun Li, M.S. in Engineering Technology Construction Management, Thesis title "Cold-Formed Steel Member Connections Using BAC Fasteners" (May 2019).
- Jeremy Artman, M.S. in Engineering Technology Construction Management, Thesis title "The Design and Development of Lightweight Composite Wall, Roof, and Floor Panels Rigid Wall Shelters" (May 2018).
- Zhishan Yang, M.S. in Engineering Technology Construction Management, Thesis title "Shear Strength of Cold-Formed Steel Clip Angles Subjected to Different Screw Pattern" (December 2017).
- Nathan Derrick, M.S. in Engineering Technology Construction Management, Thesis title "Shear and Bending Strength of Cold-Formed Steel Solid Wall Panels using Corrugated Steel Sheets" (December 2017)
- Xing Lan, M.S. in Engineering Technology Construction Management, Thesis title "Structural Performance of Novel Cold-formed Steel framed Shear Walls sheathed with Corrugated Sheets" (May 2017).
- Adam Johnson, M.S. in Engineering Technology Construction Management, Thesis title "A Study on the System Reliability of Cold-Formed Steel Roof Trusses" (May 2017).
- Mahsa Mahdavian, M.S. in Engineering Technology Construction Management, Thesis title "Innovative Cold-Formed Steel Shear Walls with Corrugated Steel Sheathing" (May 2016).
- Martin Dara, M.S. in Engineering Systems Mechanical Engineering System, Thesis title "Direct Strength Method for Webcrippling of Cold-Formed Steel Sections under One-Flange Loading" (Summer 2015)

- Mohamad Yousof, M.S. in Engineering Technology Construction Management, Thesis title "Analytical Model for Lateral Deflection in Cold-Formed Steel Framed Shear Walls with Steel Sheathing" (December 2014).
- Praveen Seelam, M.S. in Engineering Systems- Mechanical Engineering System, Thesis title "Direct Strength Method for Web Crippling of Cold-Formed Steel C Sections" (May 2013).
- Noritsugu Yanagi, M.S. in Engineering Systems- Construction Management, Thesis title "Analytical Model of Cold-Formed Steel Framed Shear Wall with Steel Sheet and Wood –Based Sheathing" (May 2013).
- Guowang Yu, M.S. in Engineering Systems- Construction Management, Thesis title "Cold-Formed Steel Framed Shear Wall Sheathed with Corrugated Steel Sheet" (May 2013).
- Chao Li, M.S. in Engineering Systems Construction Management, Thesis title "Cold-Formed Steel Shear Wall using OSB Sheathing" (May 2012).
- Xouphab Panyanouvong, M.S. in Engineering Systems Construction Management, Thesis title "Bearing Strength of Cold-Formed Steel Bolted Connections without Nut" (May 2012).
- Yujie Chen, M.S. in Engineering Systems Mechanical Engineering System, Thesis title "Seismic Detailing for Cold-Formed Steel Shear Walls with Steel Sheathing" (Summer 2010).
- Ke Xu, M.S. in Engineering Systems Mechanical Engineering System, Thesis title "Cold-Formed Steel Bolted Connections using Oversized and Slotted Holes without Washers" (Summer 2010).
- Ibraheem Shreah, M.S. in Engineering Systems Mechanical Engineering System, Thesis title "Cold-Formed Steel Bolted Connections without Washers on Oversize and Slotted Holes" (May 2009).
- Hitesh Vora, M.S. in Engineering Technology Mechanical Engineering Technology, Thesis title "Shear Wall Tests and Finite Element Analysis of Cold-Formed Steel Structural Members" (December 2008).

## **Project track:**

- Kirti Koneru, M.S. in Engineering Technology Construction Management, Project "Analysis method for thermal performance of cold-formed steel buildings with different insulation technologies" (May 2019).
- Adnan Sayeed Syed, M.S. in Engineering Technology Construction Management, Project title "Development BIM Family for CFS Corrugated Shear Walls" (December 2015).
- Pavan Teja Kondisetti, M.S. in Engineering Technology Construction Management, Project title "Finite Element Analysis of Cold-Formed Steel Clip Angles in Tension" (December 2015).
- Justin Coffey, M.S. in Engineering Technology Construction Management, Project title "Finite Element Analysis of Cold-Formed Steel Clip Angles in Shear" (December 2015).
- Saikrishna Kondapally, M.S. in Engineering Technology Mechanical Engineering System, Project title, "Modeling of an Innovative Stirling Engine" (Summer 2015).
- Raviteja Charungundia, M.S. in Engineering Systems Construction Management, Project title, "Modeling and Analysis of Traffic at UNT Discovery Park" (Summer 2015).
- Matthew McCall, MS in Engineering Systems Construction Management, Project title, "BIM Applications in Residential Buildings" (December 2014).
- Puja Sapru, MS in Engineering Technology- Construction Management, Project title, "BIM Applications in Clash Detection" (May 2014).
- Kiam Hai Law, M.S. in Engineering Systems Mechanical Engineering System, Project title "Cold-Formed Steel Members with Stiffened Perforations" (Fall 2010).
- Khanh Nguyen, M.S. in Engineering Technology Mechanical Engineering Technology, Project title "Finite Element Analysis on Cold-Formed Steel Specially Braced Frame" (May 2008).

### Graduate Students Advised, Me as Co-Advisor

- Wenying Zhang, PhD in Civil Engineering, "Seismic Performance of Cold-Formed Steel Framed Shear Walls using Corrugated Steel Sheathing," School of Civil Engineering, Tongji University, Shanghai, China. Co-advisor: Dr. Yuanqi Li. September 2018.
- Pengchun Jia, M.S. in Civil Engineering, "Experimental Study and FEA Analysis on Seismic Performance of Cold-Formed Steel Framing Walls," College of Architecture and Civil Engineering, Beijing University of Technology, Beijing, China. June 2016.
- Yang Zhao, M.S. in Civil Engineering, "Study on the Seismic Performance of Cold-Formed Steel Framed Shear Wall with Openings Corrugated sheet Steel Sheathing", College of Architecture and Civil Engineering, Beijing University of Technology, Thesis title June 2012.

# Graduate Students Advised, Me as Thesis Committee Member

- Jibril Shittu, Ph.D. in Department of Materials Science and Engineering, Dissertation title "Tribo-Corrosion of High Entropy Alloys" (Fall 2020).
- Satvik Janardhan Yaddanapudi, M.S. in Engineering Technology, thesis title "Spray Cooling with HFC-134A and HFO-1234YF for Thermal Management of Automotive Power Electronics" (Summer 2015).
- Pohua Lee, M.S. in Engineering System Mechanical, thesis title "Experimental Study of Piezoelectric Energy Harvester" (May 2012).
- Uzochukwu Okafor, M.S. in Engineering System Mechanical, Thesis title "Evaluation of the Mechanical Properties of D2 and A2 Tool Steels using Nanoindentation" (May 2012).
- John Black, M.S. in Engineering System, Thesis title "John Black, M.S. in Engineering System, thesis title "Recommended Modified Zone Method Correction Factor for Determining R-Values of Cold-Formed Steel Wall Assemblies" (May 2011).
- Ardeep Pati, M.S. in Engineering Technology, thesis title "Effects of Rebar Temperature and Water to Cement Ratio on Rebar-Concrete Bond Strength of Fly Ash Containing Concrete" (May 2010).
- Ali Shaito, Ph.D. in Department of Materials Science and Engineering, Dissertation title "Long Term Property Prediction of Polyethylene Nanocomposties" (May 2008).
- Elias Sudio, M.S. in Engineering Technology, Thesis title "Factors influencing horizontal cracking in continuously reinforced concrete pavements" (May 2008).

### Undergraduate Students (all supported by research grants)

# UNT Students

- Huy Le, Osinachi Izuogu, Mohamad Khodr, Dylan Warren (2020)
- Rhett Buoter, Josh Fleming, Aziz Haryani, Omar Kohar, Ha Tran, Dawson Guerrettaz, Sebastian Gatewood, Zachary Canales (2018-2019)
- Sage Ellis (2017)
- Nathan Derrick, Roni Ramirez, Jose Sandoval, Nick O'Connor, Christopher Lavezo, Douglas Joseph, Jeremy Artman (2015-2016)
- Kevin Holden, Tom Kalisky, Emmanuel Salazar, Adam Johnson (2013 2015)
- Marcus Sanchez, Roger Rovira (2010 2012)
- Kyle Durham, Devin Hyde, Travis Stivors, Taylor Cheney, Andy Hetrick (2009)
- George Trabazo, Robert Moore, Jole Bolz (2007 2008)
- Cole Earle, Jimmy Tucker (2005 2007)
- Tony Dianard (2005 2006)
- Trevor Lokie, Andrew Alnoso (2005)

Texas Academy of Mathematics and Science (TAMS) Students

- Harish Sridharan, Wakdikar Som (2020-2021)
- Tobias Haynes, Rasna Baweja (2017-2018)
- Maxine Tao (2016)
- Haein Kim, Josh Lee (2012)
- Wesley Beckner, Alex Wu (2009)
- Stepen Mathai, Szu-Chun Huang (2008)

# **External PhD Dissertation Examiner**

• Van Bac Mai, PhD Dissertation "Fracture Behaviors in Cold-Reduced High Strength Steel", School of Civil Engineering, University of Sydney, Sydney, Australia, 2019.

# **PROFESSIONAL AFFILIATIONS**

# Journal Editorial Boards

- Associate Editor, Journal of Materials in Civil Engineering, ASCE, <u>http://ascelibrary.org/journal/jmcee7</u> (2011 present).
- Editorial Board Member, Thin-Walled Structures, Elsevier, <u>https://www.journals.elsevier.com/thin-walled-structures</u> (2018 present)
- Editorial Board Member, Journal of Steel Structure and Construction, OMICS International, <u>http://www.omicsonline.org/steel-structures-construction.php</u> (2015 – present)
- Editorial Board Member, Engineering Mechanics Journal, <u>http://gclx.tsinghua.edu.cn/CN/volumn/home.shtml</u> (2015 – present)
- Founder and Organizer, International Student Competition on Cold-Formed Steel Design, <u>http://cfscompetition.unt.edu</u>. (2011 2016).

# **Professional and Research Association Affiliations**

- President, America-China Steel Framing Association (2019 present)
- Member and Subcommittee Member, Committee on Framing Standards of American Iron and Steel Institute (2006 present)
- Member and Subcommittee Member, Committee on Specifications of American Iron and Steel Institute (2005 present)
- Member, Jim McNatt Logistics Institute for Logistics Research, University of North Texas (2015 present)
- Principal Investigator, Cold-Formed Steel Research Consortium (2014 present)
- Vice Chair, Task Group 5 Thin-Walled Structures, Structural Stability Research Council (2012 2016).
- Member, American Society of Civil Engineers (2011 present, 2005 2011 associate, 2000 2005 student)
  - o Member, Committee on Cold-Formed Members, Structural Engineering Institute, Engineers (2010 2016, 2018 present)
  - o Committee on Multihazard Mitigation, Structural Engineering Institute (2015 present)
  - o Committee on Modular, Rapidly Erectable, & Deployable Structures, Structural Engineering Institute (2020 - present)
- Member, Cold-Formed Steel Engineers Institute (2014 present)
  - o Education Committee (2015 present)

- o CFSEI Technical Document Committee (2007 2009)
- Member, Structural Stability Research Council (2006 present)
- Member, American Institute of Steel Construction, (2007 present)
- Member, Technical Assistance Panel, TAP 5, Texas Department of Transportation (2005 present)
- Senior Member, American Institute of Aeronautics and Astronautics (2010 present)
- Member, PACCAR Technology Institute, University of North Texas (2013 2019)
- Member, CFSEI Technical Document Committee (2007 2009)
- Member, American Council for Construction Education (2005 2008)