

CURRICULUM VITAE

Caroline M. Clevenger

ADDRESS University of Colorado-Denver **PHONE** 303.315.7567
1200 Larimer Street, North Classroom 3023C
Campus Box 113, Denver, CO 80217

EDUCATION

2010 Ph.D. Civil and Environmental Engineering, Stanford University
1998 M.S. Systems Engineering, University of Pennsylvania
1997 M.Arch Graduate School of Fine Arts, University of Pennsylvania
1991 B.S. Civil Engineering, Stanford University

Licenses:

2004 Professional Engineer, State of Colorado, License No. 38,400
2004 Registered Architect, State of Colorado, License No. 400,289

Certifications:

2001 Leadership in Energy and Environmental Design (LEED) Accredited Professional,
re-accredited LEED BD+C in 2013

PROFESSIONAL EXPERIENCE

Academic

2016 – present Associate Professor with Tenure, Assistant Director of Construction Engineering and Management, University of Colorado Denver
2014 – 2016 Associate Professor, Assistant Director of Construction Engineering and Management, University of Colorado Denver
2013 - present Instructor, Center for Environmental Management of Military Lands (CEMML), Colorado State University
2009 – 2014 Assistant Professor, Department of Construction Management, Colorado State University
2006 – 2009 Research Assistant, Precourt Institute for Energy Efficiency (PEEC), Stanford University
2006 - 2008 Teaching Assistant, CEE 115/215, Goals and Methods of Sustainable Building Projects, Civil and Environmental Engineering, Stanford University.
2006 Teaching Assistant, CEE 173L/273L, Advanced Energy Efficiency: Concepts and Practice, Civil and Environmental Engineering, Stanford University.
2001-2004 Instructor, ENVD 4365, Daylighting, Environmental Design, University of Colorado Boulder.
2001 Instructor, ARCH 6390, Lighting and Illumination, College of Architecture and Planning, University of Colorado Denver.
1997-1998 Teaching Assistant, ESE 301, Engineering Probability, Systems Engineering, University of Pennsylvania.
1996 – 1997 Teaching Assistant, ARCH 535, Structures I, Department of Architecture, University of Pennsylvania.
1996 – 1997 Teaching Assistant, ARCH 536, Structures II, Department of Architecture, University of Pennsylvania.
1990 – 1991 Teaching Assistant, ENGR 103, Public Speaking, Engineering, Stanford University.

Other

- 2006-2007 Visiting Fellow, 3D-4D BIM Program, General Services Administration (GSA)-Office of the Chief Architect (OCA), Washington, DC
- 2001 – 2005 Senior Engineer, Team Leader Sustainable Design Assistance, Architectural Energy Corporation, Boulder, Colorado
- 2000 – 2001 Associate Engineer, Architectural Energy Corporation, Boulder, Colorado
- 1998 – 2000 Assistant Engineer, Architectural Energy Corporation, Boulder, Colorado
- 1997 - 1998 Architectural Assistant, Donald Prowler and Associates, Philadelphia, Pennsylvania

HONORS AND AWARDS

- 2018 Outstanding Educator Award, Associated Schools of Construction (ASC), Region 6.
- 2018 Excellence in Leadership and Service Award, College of Engineering and Applied Science, University of Colorado Denver.
- 2017 Associated Schools of Construction's International Journal of Construction Education and Research, Editorial Board Recognition.
- 2016 Colorado's Associated General Contractors' (AGC) ACE Construction Education Challenge Award (CEM Program Award).
- 2016 Associated Schools of Construction's International Journal of Construction Education and Research, Editorial Board Recognition.
- 2015 Colorado Center for Sustainable Urbanism (CCSU) Fellow, Research Center, College of Architecture and Planning, University of Colorado Denver.
- 2015 Third Place, Institute of Industrial Engineers (IIE) Construction Division Student Paper Competition, Jayapradha Madhavan (Advisor).
- 2014 Highly Commended Paper, Journal of Cultural Heritage Management and Sustainable Development, Emerald Publishing, England.
- 2013 American Society of Civil Engineers (ASCE), Outstanding Reviewer, Journal of Construction Engineering and Management, Blacksburg, Virginia.
- 2013 Associated Schools of Construction Excellence in Teaching Award, Associated Schools of Construction, San Luis Obispo, California.
- 2013 Provost's N. Preston Davis Award for Instructional Innovation, Colorado State University, Fort Collins, Colorado.
- 2013 Instructional Innovation in Service-Learning Award, Colorado State University, Fort Collins, Colorado
- 2013 Best Conference Paper Honorable Mention, Associated Schools of Construction, San Luis Obispo, California.
- 2012 Mortenson Faculty Scholar, Department of Construction Management, Colorado State University
- 2012 Provost's N. Preston Davis Award for Instructional Innovation, Colorado State University, Fort Collins, Colorado.
- 2012 Teaching Fellow, the Institute of Teaching and Learning, Colorado State University, Fort Collins, Colorado.
- 2011 Best Teacher Award Nominee, College of Applied Human Sciences, Colorado State University, Fort Collins, Colorado.
- 2011 Teaching Fellow, the Institute of Teaching and Learning, Colorado State University, Fort Collins, Colorado.
- 2011 Mortenson Faculty Scholar, Department of Construction Management, Colorado State University
- 2010 Teaching Fellow, the Institute of Teaching and Learning, Colorado State University, Fort Collins, Colorado.
- 2010 Mortenson Faculty Scholar, Department of Construction Management, Colorado State University, Fort Collins, Colorado.
- 2009 Reviewers' Favorite, the 17th International Conference on Engineering Design (ICED), Stanford, California.
- 1997 Faculty Prize, Graduate School of Fine Arts, University of Pennsylvania, Philadelphia,

Pennsylvania.

1991 Honors in the Humanities, Stanford University, Stanford, California.

1990 Golden Grant for undergraduate research, Stanford University, Stanford, California.

1987-1991 Scholar / Honor Athlete, Stanford University, Stanford, California.

PUBLISHED WORKS

Refereed Journal Articles (*student advisee, **student):

- 2018**
1. **Clevenger, C.M.**, Abdallah, M., Wei, Wu, Barrows*, M. (2018), Assessing an Online Tool to Promote Sustainability Competencies in Construction Engineering Education. *ASCE's Journal of Professional Issues in Engineering Education and Practice* Volume 145 Issue 1 - January 2019. [Link](#)
 2. Patel*, M., **Clevenger, C.M.**, Abdallah, M., (2018), Carbon nano-tube as Water Reducer in CDOT Class E 12 hr Concrete Mix, *Case Studies in Construction Materials*, 10.1016/j.cscm.2018.e00207
 3. Brogan*, E., McConnell*, W., **Clevenger, C.M.**, (2018), Emerging Patterns in Construction Defect Litigation: Survey of Construction Cases. *ASCE's Journal of Legal Affairs and Dispute Resolution in Engineering and Construction* Volume 10 Issue 4 - November 2018, (Feature). [Link](#)
 4. McConnell*, W., **Clevenger, C.M.**, (2018), Frequently Disputed Sections within the AIA A201–2017 General Conditions. *ASCE's Journal of Legal Affairs and Dispute Resolution in Engineering and Construction* Volume 10 Issue 4 - November 2018, (Feature). [Link](#)
 5. VanDemark*, L., **Clevenger, C.M.**, (2018), Risk Mitigation for the Design and Installation of Underdrain Systems. *ASCE's Journal of Legal Affairs and Dispute Resolution in Engineering and Construction* Volume 10 Issue 4 - November 2018, (Feature). [Link](#)
 6. **Clevenger, C.M.** (2018). Development of a Project Management Certification Plan for a DOT. *ASCE's Journal of Management in Engineering*: 2018, 34(4): 06018002, (Technical Note). [Link](#)
 7. **Clevenger, C.M.**, Abdallah, M., Madhavan*, J. (2018) Analyzing Tax Credits for Residential Energy Efficiency Using Energy Modeling. *Journal of Green Building*: Winter 2018, Vol. 13, No. 1, pp. 83-94. [Link](#)
- 2017**
8. **Clevenger, C.M.** Rogers, Z. (2017) Managing Daylight in Airports, *ASCE's Journal of Architectural Engineering* 23 (3) 04017006, [Link](#)
 9. Martinez*, L., **Clevenger, C.M.** (2017) Case Study for Meeting SmartRegs Requirements for Prescriptive and Performance Pathways in Boulder, Colorado, *ASCE's Journal of Architectural Engineering* 23 (3) 04017007, [Link](#)
 10. **Clevenger, C M**; Brothers, H; Abdallah, M; Wolf, K; (2017), Initial Assessment of a Newly Launched Interdisciplinary Construction Engineering Management Graduate Program *ASCE's Journal of Professional Issues in Engineering Education and Practice* 4017001, [Link](#)
 11. Ozbek, M.E., **Clevenger, C.M.** (2017). Collaboration in Construction Academia. *ASCE Journal of Construction Engineering and Management*: 60th Year Special Issue 143 (9) 02517002, 1-2. (Invited Forum) [Link](#).
- 2016**
12. Reaves*, D., **Clevenger, C.M.**, Nobe, ME, Aloise-Young, P. (2016), Identifying Perceived Barriers and Benefits to Reducing Energy Consumption in an Affordable Housing Complex, *Social Marketing Quarterly* 1524500416632406. p. 1-20, [Link](#)
 13. **Clevenger, C. M.**, Ozbek, M. E., Simpson*, S., Atadero, R (2016), Challenges in Developing a Transportation Sustainability Rating System that Meets the Preferences of a Department of Transportation (DOT), *ASCE's Journal of Transportation Engineering* 142(4), 04016005.1-7. [Link](#)
 14. McGuire*, B, Atadero, R, **Clevenger, C. M.**, Ozbek, M. E. (2016), Bridge Information Modeling for Inspection and Evaluation, *ASCE's Journal of Bridge Engineering* 21.4 (2016): 04015076, 1-9. [Link](#)
- 2015**
15. Glick, S, **Clevenger, C.M.**, Laverty*, M (2015) Assessing the Implementation of Mandating Energy Efficiency: Boulder, Colorado's Implementation of SmartRegs. *Journal of Sustainable Real Estate*: 2015, Vol. 7, No. 1, pp. 183-197. [Link](#)

16. Marley**, J., Nobe, ME, **Clevenger, C.M.**, Banning, J. (2015) Participatory Post-Occupancy Evaluation (PPOE): Exploring a Method to Include Students in Evaluating Health-Promoting Attributes of a Green School, *Children, Youth and Environments* 25(01), 4-28. [Link](#)
17. Feuer*, M., Glick, S., **Clevenger, C.** (2015), Benefits of Owner Mandated CM/GC Contract Amendment Templates, *Journal of Facilities Management* 13(3), 282-296. [Link](#)
18. **Clevenger, C.M.**, Ozbek, M.E., Fanning*, B., Vonfeldt, S. (2015), Case Study of Work-based Learning involving BIM for Infrastructure in Support of Graduate Construction Research, *ASC's Journal of Construction Education and Research* 11(3), 163-178. [Link](#)
19. Valdes-Vasquez, R., **Clevenger, C.M.**, (2015), Piloting Collaborative Learning Activities in a Sustainable Construction Class, *ASC's Journal of Construction Education and Research* 11(3), 79-96. [Link](#)
20. **Clevenger, C.**, Lopez Del Puerto, C., Glick, S. (2015), Interactive BIM-enabled Safety Training Piloted in Construction Education, *ASCE's Advances in Engineering Education* 4(3) 1-14. [Link](#)
21. Wilkes, J.**, Nobe, ME, **Clevenger, C.M.**, Cross, J., (2015), Needs Assessment: Identifying and Addressing High School Counselors' Perceptions of Construction Management, *ASC's Journal of Construction Education and Research*, 11(3), 196-217. [Link](#)
22. Hessman*, T., **Clevenger, C.M.**, Nobe, ME, & Leigh, K. E. (2015), Solar Orientation for Low-Energy Residential Buildings in Pagosa Springs, Colorado, *The Professional Constructor* 39(01), 47-58. [Link](#)
- 2014** 23. Lewis, A**, Valdes-Vasquez, R., **Clevenger, C.**, Shealy T., (2014), Case Study: BIM Energy Modeling - Teaching Module for Sustainable Design and Construction Courses. *ASCE's Journal of Professional Issues in Engineering Education and Practice*, C5014005 1-6. [Link](#)
24. Fanning*, B., **Clevenger, C. M.**, Ozbek, M. E., & Mahmoud, H. (2014). Implementing BIM on Infrastructure: Comparison of Two Bridge Construction Projects, *ASCE's Practice Periodical on Structural Design and Construction* 04014044 1-8. [Link](#)
25. Knox*, M. W., **Clevenger, C. M.**, Dunbar, B. H., & Leigh, K. E. (2014). Impact of Charrettes and their Characteristics on Achieved LEED Certification. *ACSE's Journal of Architectural Engineering* 20(1) pp. 1-6. [Link](#)
26. **Clevenger, C. M.**, & Khan, R. (2014). Impact of BIM-Enabled Design-to-Fabrication on Building Delivery. *ASCE's Practice Periodical on Structural Design and Construction*. 19, SPECIAL ISSUE: Construction Engineering: Leveraging Project and Career Success, 122–128. [Link](#)
- 2013** 27. Lopez del Puerto, C., **Clevenger, C. M.**, Boremann, K.**, Gilkey, D. P. (2013). Exploratory Study to Identify Perceptions of Safety and Risk among Residential Latino Construction Workers as Distinct from Commercial and Heavy Civil Construction Workers. *ASCE's Journal of Construction Engineering and Management* 140(2), 04013048 1-7. [Link](#)
28. **Clevenger, C. M.**, and Ozbek, M. E. (2013). Service-Learning Assessment: Sustainability Competencies in Construction Education. *ASCE's Journal of Construction Engineering and Management*, 139(12) 1-8. [Link](#)
29. Leigh, K., **Clevenger, C.M.** (2013). Service-Learning Cross-Cultural Collaboration: Sustainable Actions in an Elementary School, Bagaces, Costa Rica, *International Journal for Service Learning In Engineering Humanitarian Engineering and Social Entrepreneurship* 8(1) 102-115. [Link](#)
30. **Clevenger, C.**, Haymaker, J., and Jalili, M**. (2013). Demonstrating the Impact of the Occupant on Building Performance. *ASCE's Journal of Computing in Civil Engineering*, 28(1), 99–102. (Technical Note) [Link](#)
31. Glick, S., **Clevenger, C.**, Watson*, P., (2013). High Performance Preservation: Research and Funding Opportunities at the Chautauqua National Historic Landmark, *Journal of Cultural Heritage Management and Sustainable Development*, 3(1) 68-81. **Highly Commended Paper, 2014.** [Link](#)
32. **Clevenger, C.**, Ozbek, M., (2013). Teaching Sustainability through Service-Learning in Construction Education, *ASC's International Journal of Construction Education and Research*, 9(1) 3-18. [Link](#)
- 2012** 33. Wood*, C., **Clevenger, C.**, (2012). A sampling of community-based housing efforts at Pine Ridge Indian Reservation, *American Indian Culture and Research Journal*, 36(4) 1-28. [Link](#)

34. **Clevenger, C. M.**, Haymaker, J., (2012). The value of design strategies applied to energy efficiency. *Smart and Sustainable Built Environment*, 1(3), 222-240. [Link](#)
35. Ozbek, M. E., **Clevenger, C.M.**, and Fillion, A. C. (2012). Quantitative Decision-Making Framework to Evaluate Environmental Commitment Tracking Systems: Colorado Department of Transportation Case Study. *Transportation Research Record* (2270), 188- 194. [Link](#)
36. **Clevenger, C.**, Haymaker, J., Ehrich, A. (2012). Design Exploration Assessment Methodology: Testing the Guidance of Design Processes, *Journal of Engineering Design*, 24(3), 165-184. [Link](#)
37. **Clevenger, C.**, Glick, S., Lopez del Puerto, C., (2012). Interoperable Learning Leveraging Building Information Modeling (BIM) in Construction Education, ASC's *International Journal of Construction Education and Research*, 8(2), 101–118. [Link](#)
- 2011** 38. **Clevenger, C. M.**, Haymaker, J., (2011). Metrics to Assess Design Guidance, *Design Studies* 32(5), 431-456. [Link](#)
39. Barrett*, L., Glick, S., **Clevenger, C.**, (2011). The Process for Adopting an Energy Efficiency Code in Existing Homes: A Case Study of Boulder, Colorado's SmartRegs Program, *Journal of Sustainable Real Estate* 3(1), 192-211. [Link](#)

Refereed Proceedings/Transactions (All of the proceedings in this list were presented in conferences;

* student advisee, **student):

- 2018** 1. Monghasemi, S.**, Abdallah, M. Tawfik, A.M., **Clevenger, C.** (2018) Analyzing Implementation of Greenhouse Gas Emissions Reduction Tools and Systems on Businesses and Employees, Proceedings of the International Conference on Transportation and Development 2018, July 15–18, Pittsburgh, Pennsylvania, pp. 265-276. [Link](#).
2. Schwanz**, A., Tawfik, A.M., Abdallah, M., **Clevenger, C.** (2018) Developing Static and Dynamic Multimodal Transportation System Models to Estimate Individual Commuter Footprints Using ArcGIS, Google Maps, and Here 360, Proceedings of the International Conference on Transportation and Development 2018, July 15–18, Pittsburgh, Pennsylvania., pp. 242-252. [Link](#).
3. Valdes-Vasquez, R., **Clevenger, C. M.**, Thornes, L. Olbina, S. (2018) Cross-cultural Collaboration Inspired by a Sustainable Building Course in Costa Rica, Proceedings of 2018 American Society for Engineering Education (ASEE) Annual Conference and Exposition, June 24-27, Salt Lake City, Utah ID #24532, 10 pages. [Link](#).
4. Mulholland*, S., **Clevenger, C.** (2018) Contracting Methods for Integrated Project Delivery: A Healthcare Case Study, Proceedings of the 2018 Construction Research Congress, April 2-5, 2018, New Orleans, Louisiana, pp. 191-201. [Link](#).
5. VanDemark*, L., **Clevenger, C.**, (2018) Estimation of Infiltration Based on Development Density and Soil Type for Denver Colorado, Proceedings of the 2018 Construction Research Congress, April 2-5, 2018, New Orleans, Louisiana, pp. 529-539. [Link](#).
6. Brogan*, E., **Clevenger, C.**, (2018) Factors Influencing Surface Drainage near Building Foundations, Proceedings of the 2018 Construction Research Congress, April 2-5, 2018, New Orleans, Louisiana, pp. 572-581. [Link](#).
7. **Clevenger, C.**, Pillsbury*, W., Young, R., Abdallah, M., Brothers, H. (2018) Pilot Implementation of Assessing Physiological Measures during Construction Activities using Air Force Cadets, Proceedings of the 2018 Construction Research Congress, April 2-5, 2018, New Orleans, Louisiana, pp. 512-521. [Link](#).
8. **Clevenger, C.**, Pillsbury*, W., Abdallah, M., Brothers, H. (2018) Pilot Assessment of Physiological Measures for Construction Workers. Proceedings of the Associated Schools of Construction 54th Annual International Conference April 18-21, 2018, Minneapolis, Minnesota. [Link](#).
9. Monghasemi**, S. Abdallah, M., Tawfik, A., **Clevenger, C.**, Analysis of GHG Emissions Reduction Policies on Commuters and Organizations, Proceedings of the 2018 Construction Research Congress, April 2-5, 2018, New Orleans, Louisiana, pp. 594-603. [Link](#).
10. Monghasemi**, S. Abdallah, M., Tawfik, A., **Clevenger, C.**, Time-Environmental Impacts Tradeoff Analysis for Businesses Commuters, Proceedings of the 2018 Construction Research Congress, April 2-5, 2018, New Orleans, Louisiana, pp. 628-638. [Link](#).

- 2017**
11. Abdallah, M., **Clevenger, C.**, and Vu, T. (2017) Exploring Fusing Wearables and Mobile Technologies To Optimize Energy Demand And Occupant Comfort, Leadership in Sustainable Infrastructure, Canadian Society of Civil Engineers Annual Conference, Vancouver, Canada, May 31 – June 3, 2017, GEN049-1.
 12. Abdallah, M., Tawfik, A., and **Clevenger, C.** (2017) Time-Cost-Environment Trade-Off Analysis For Business Commuting Systems, Leadership in Sustainable Infrastructure, Canadian Society of Civil Engineers Annual Conference, Vancouver, Canada, May 31 – June 3, 2017.
 13. **Clevenger, C.**, Abdallah, M., and Beauregard*, M. (2017) Advancing Construction Students' Sustainability Competencies Using Online Tools, Leadership in Sustainable Infrastructure, Canadian Society of Civil Engineers Annual Conference, Vancouver, Canada, May 31 – June 3, 2017.
 14. **Clevenger, C.M.**, Abdallah, M., Wu, W (2017). Advisory Board Feedback on Construction Education Learning Outcomes, Proceedings of the Associated Schools of Construction 53rd Annual International Conference, April 5-7, 2017, Seattle, Washington. [Link](#)
- 2016**
15. **Clevenger, C.M.**, Rogers, Z. (2016). Manual Shade Control Simulation, Algorithm and Impact: Short Paper. In Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys '16). ACM, New York, NY, USA, 143-146 pp. 143-146. [Link](#).
 16. **Clevenger, C.**, Brothers, H., Abdallah, M., Wolf, K. (2016) Early Development of an Interdisciplinary Construction Engineering Management Program, Proceedings of the 2016 Construction Research Congress, May 31-June 3, 2016. San Juan, Puerto Rico, pp. 47-51. [Link](#)
 17. Abdallah, M., **Clevenger, C.**, Vu, T., & Nguyen**, A. (2016) Sensing Occupant Comfort Using Wearable Technologies. Proceedings of the 2016 Construction Research Congress, May 31-June 3, 2016. San Juan, Puerto Rico, pp. 940-950. [Link](#)
 18. Rogers, Z., **Clevenger, C.**, Zivkovich**, B., & Abdallah, M. Exploring Horizontal and Vertical Illuminance Daylighting Uniformity Metrics. Proceedings of the 2016 Construction Research Congress, May 31-June 3, 2016. San Juan, Puerto Rico, pp. 2382-2391. [Link](#)
 19. **Clevenger, C.**, Abdallah, M., Tawfik, A., Adame**, B., Akalp**, D., & Ozbek, M. Exploring Student Commute Behavior and Identifying Opportunities to Minimize Commute GHG and Air Pollution Emissions: A Case Study. Proceedings of the 2016 Construction Research Congress, May 31-June 3, 2016. San Juan, Puerto Rico pp. 2392-2402. [Link](#)
 20. Beauregard**, M.S., Karunanithi, A.T., **Clevenger, C.M.** (2016) “Comparative Life Cycle Assessment of Two Design Alternatives for a Geosynthetic Reinforced Bridge Abutment” GeoAmericas 2016. Miami, FL. April 10-13th 2016.
 21. Tawfik, A. M., Abdallah, M., **Clevenger, C. M.**, & Adame**, B. A. (2016). Business+ Commute Optimization System: Model Development and Pilot Case Study. In Transportation Research Board 95th Annual Meeting (No. 16-6713). [Link](#)
- 2015**
22. Abdallah, M., El-Rayes, K., **Clevenger, C.** (2015) Optimal selection of building upgrade measures to minimize energy and water consumption of ageing buildings. The Eighth International Structural Engineering and Construction Conference (ISEC-8), Sydney, Australia, Nov. 23-28, 813-818. [Link](#).
 23. Jalili*, M, **Clevenger, CM**, Ozbek, ME, Abdallah, MA, (2015) Energy Star Windows' Performance and Orientation, Proceedings of ICSC15: The Canadian Society for Civil Engineering 5th International/11th Construction Specialty Conference, University of British Columbia, Vancouver, Canada. June 7-10, 208-1 to 208-8. [Link](#)
 24. Biancardo, SA, Osmanbhoy, N, Ottesen, JL, Migliaccio, GC, **Clevenger, C** (2015) Closing the Contractual Circle: Investigating Emergent Subcontracting Approaches, Proceedings of ICSC15: The Canadian Society for Civil Engineering 5th International/11th Construction Specialty Conference, University of British Columbia, Vancouver, Canada. June 7-10, 265-1 to 265-8. [Link](#)
 25. Abdallah, MA, El-Rayes, KA, **Clevenger, CM**, (2015) Minimizing Greenhouse Gas Emissions and Water Consumption of Existing Buildings, Proceedings of ICSC15: The Canadian Society for Civil Engineering 5th International/11th Construction Specialty Conference, University of British Columbia, Vancouver, Canada. June 7-10, 323-1 to 323-1. [Link](#)
 26. **Clevenger, CM**, Valdes-Vasquez, R, Abdallah, MA, (2015) Implementing a Collaboration Activity in Construction Engineering Education, Proceedings of EESD15: The 7th Conference on Engineering

- Education for Sustainable Development, University of British Columbia, Vancouver, Canada. June 9-12, 039-1 to 039-8. [Link](#)
27. Abdallah, M., **Clevenger, C. M.**, Golparvar-Fard, M., (2015) Developing a Thermal Comfort Report Card for Building, Proceeding of International Conference on Sustainable Design, Engineering and Construction, May 10-13, Chicago, Il., Volume 118, 2015, 675–682 [Link](#)
28. Abdallah, M., El-Rayes, K., **Clevenger, C. M.**, (2015) Minimizing Energy Consumption and Carbon Emissions of Aging Buildings, Proceeding of International Conference on Sustainable Design, Engineering and Construction, May 10-13, Chicago, Il., Volume 118, 2015, 886–893. [Link](#)
- 2014** 29. **Clevenger, C.**, Lopez Del Puerto, C., Glick, S. (2014) Developing a BIM-enabled Bilingual Safety Training Module for the Construction Industry. Construction Research Congress 2014, Atlanta, GA: pp. 1792-1800. [Link](#)
30. Inguva*, G., **Clevenger, C.M.**, Ozbek, M.E., (2014) Differences in Skills Reported by Construction Professionals Who Use BIM/VDC. Construction Research Congress 2014, Atlanta, GA: pp. 61-69. [Link](#)
31. Simpson*, S., **Clevenger, C.M.**, Ozbek, M. E., Rabbani, E., and Atadero, R. (2014). A Framework for Assessing Transportation Sustainability Rating Systems for Implementation in U.S. State Departments of Transportation, Proceedings of the 2014 TRB 93rd Annual Conference, 18 pages (Electronic Proceedings), January 12-16, Washington D.C.
32. Inguva*, G., Lewis, A., **Clevenger, C.**, Valdes-Vaquez, R (2104). Teaching Modules Documenting the Development of a Center for Virtual Design and Construction, Proceedings from Building Innovation 2014: The National Institute of Building Sciences Conference & Expo, 8 pages (Electronic Proceedings with no page numbers), January 6-10, Washington D.C.
- 2013** 33. Bormann, K., **Clevenger, C.**, del Puerto, C. L., & Gilkey, D., (2013) Risk Perception and Cultural Differences of Latinos across Residential, Commercial, and Heavy Civil Construction, Proceedings of the Associated Schools of Construction 49th Annual International Conference, April 10-13, 2013, San Luis Obispo, California. **(Best Conference Paper Honorable Mention)**
34. **Clevenger, C.M.**, Ozbek, M. E., and Simpson*, S., (2013) Review of Sustainability Rating Systems used for Infrastructure Projects, Proceedings of the Associated Schools of Construction 49 th Annual International Conference, April 10-13, 2013, San Luis Obispo, California. [Link](#)
35. Keeler*, K., **Clevenger C.M.**, Atadero, R., (2013) Framework for Sustainability Challenges within the Building Industry, Proceedings of the Associated Schools of Construction 49th Annual International Conference, April 10-13, 2013 San Luis Obispo, California.
- 2012** 36. Marley, J., Nobe, M., **Clevenger, C.**, (2012) Utilization of Post-Occupancy Evaluations in LEED Certified K-12 Schools, ASCE Proceedings for 2nd International Conference for Sustainable Design, Engineering and Construction, Nov 7-9, 2012. Fort Worth, Texas pp. 862-868. [Link](#)
37. Dale, E, Nobe, M., **Clevenger, C.** Cross, J., (2012) Community Based Social Marketing: An Application to Facilities Management, ASCE Proceedings for 2nd International Conference for Sustainable Design, Engineering and Construction, Nov 7-9, 2012. Fort Worth, Texas pp. 552-560. [Link](#)
38. Valdes-Vasquez, R., Pearce, A., **Clevenger, C.**, (2012) Teaching Social Sustainability in Sustainable Construction and Infrastructure Courses: A Collaborative Approach, Proceedings of the 2012 Construction Research Congress, May 21-24, 2012. West Lafayette, Indiana, pp. 2129-2138. [Link](#)
39. Ozbek, M. E., **Clevenger, C.M.**, and Fillion, A. C. (2012). A Quantitative Decision-making Framework to Evaluate Environmental Commitment Tracking Systems for the Colorado Department of Transportation, Proceedings of the 2012 TRB 91st Annual Conference, January 22-26, Washington D.C. (14 pages).
40. **Clevenger, C.**, Ozbek, M., Glick, S., Porter, D., (2012, republished in Chinese) Integrating BIM into Construction Management Education, ArchiCreation Special Issue of BIM: American Experience Sharing 161(10) 40-47.
41. **Clevenger, C.**, Carey*, S., (2012, republished in Chinese) Industry-Academia Collaboration to develop a BIM-based MEPF Coordination Educational Module, ArchiCreation Special Issue of BIM: American Experience Sharing 161(10) 48-57.
42. Lopez del Puerto, C., **Clevenger, C.**, (2012, republished in Chinese) Enhancing Safety throughout

- Construction using BIM/VDC, *ArchiCreation Special Issue of BIM: American Experience Sharing* 161(10) 72-79.
- 2011** 43. **Clevenger, C.,** Rush*, M., (2011), Teaching BIM with Facilities Management, *EcoBuild Conference Proceedings, ECOBuild 2010 BIM Academic Forum, Washington D.C.*, pp. 129-136.
44. **Clevenger, C.,** Rush*, M., (2012, republished in Chinese), Teaching BIM with Facilities Management, *ArchiCreation Special Issue of BIM: American Experience Sharing* 161(10) 72-79.
45. Richards, E., **Clevenger, C.**, (2011) Interoperable Learning Leveraging Building Information Modeling (BIM) in Construction Management and Structural Engineering Education, *47th ASC Annual International Conference Proceedings, Associated Schools of Construction, Omaha, Nebraska*, pp. 91-96. [Link](#)
46. Glick, S., **Clevenger, C.**, Porter, D., (2011) Integrating 3D Models in Construction Management Education: Masonry Interactive Homework, *47th ASC Annual International Conference Proceedings, Associated Schools of Construction, Omaha, Nebraska*, pp. 265-261.
47. **Clevenger, C.**, Lopez del Puerto, C., (2011) Using 3D Visualization to Train Hispanic Construction Workers, *47th ASC Annual International Conference Proceedings, Associated Schools of Construction, Omaha, Nebraska*, pp. 311-316.
- 2010** 48. **Clevenger, C.**, Ozbek, M., Glick, S., Porter, D., (2010) Integrating BIM into Construction Management Education, *EcoBuild Conference Proceedings, EcoBuild 2010 BIM Academic Forum, Washington D.C.*
49. **Clevenger, C.**, Carey, S., (2010) Industry-Academia Collaboration to develop a BIM-based MEPF Coordination Educational Module, *EcoBuild Conference Proceedings, EcoBuild 2010 BIM Academic Forum, Washington D.C.*
50. Lopez del Puerto, C., **Clevenger, C.**, (2010) Enhancing Safety throughout Construction using BIM/VDC, *EcoBuild Conference Proceedings, EcoBuild 2010 BIM Academic Forum, Washington D.C.*
51. Glick, S., Porter, D., **Clevenger, C.**, (2010) System Component Visualization: The Role of 3D Models in Construction Management Education, *46th ASC Annual International Conference Proceedings, Associated Schools of Construction, Boston, Massachusetts*, pp. 113-120.
- 2009** 52. **Clevenger, C.**, Haymaker, J., (2009) Framework and Metrics for Assessing the Guidance of Design Processes, the *17th International Conference on Engineering Design Conference Proceedings, Stanford, California*, pp. 411-422. **(ICED '09 Reviewers' Favorite)** [Link](#)
- 2008** 53. **Clevenger, C.**, Haymaker, J., Swamy, S. (2008) The Importance Process: Enabling Creativity in Performance-based Design through Systematic, Model-based search of Multidisciplinary Impacts, *World Sustainable Building (SB) Conference Proceedings, Melbourne, Australia* (7 pages) [Link](#)
- 2007** 54. Akbas, R., **Clevenger, C.**, Haymaker, J (2007) Temporal Visualization of Building Occupancy Phase, *Conference Proceedings American Society of Civil Engineers Workshop- Computing in Civil Engineering, Pittsburgh, Pennsylvania*, pp. 208-215. [Link](#)
- 2006** 55. **Clevenger, C.**, Haymaker, J. (2006) The Impact of the Occupant on Building Energy Simulations, *Conference Proceedings Joint International Conference on Computing and Decision Making in Civil and Building Engineering, Montreal, Canada*, pp. 3637-3645.

Non-Refereed Journal Articles/Chapters/Proceedings/Transactions:

- Clevenger, CM,** Valdes-Vasquez, R, Abdallah, MA (2016) Implementing a Collaboration Activity in Construction Engineering Education. *New Developments in Engineering Education for Sustainable Development*, Springer.
- Interviewed by Tom Sawyer, *Construction Managers Embrace 4D BIM for Safety* (2014) *Engineering News-Record*.
- Ozbek, M. E., & **Clevenger, C. M.** (2014). Teaching Sustainability Competencies to High School Students using Small-Scale Community-Based Construction Projects. *Handbook of Research on Pedagogical Innovations for Sustainable Development*, 270-327. [Link](#)
- Mukherjee, A., Clevenger, C., Mollaoglu-Korkmaz, S., and Lewis, P. (2013). Special Issue on Considerations of Sustainability in Construction Engineering and Management. *ASCE's Journal of*

- Construction Engineering and Management*, 139(12), A2013001-1. SPECIAL ISSUE: Considerations of Sustainability in Construction Engineering and Management. [Link](#)
- Abo-Moussallam, N.Y., **Clevenger, C.**, (2011), Re-Used Display Systems as Sustainable Media Facades, Position Paper, CHI 2011, May 7–12. Vancouver, BC, Canada. ACM 978-1-4503-0268-5/11/05.
- Clevenger, C.M.**, Ozbek, M.E., and Reaves, D. (2011), Service-learning for Sustainable Construction in IARSLCE Editorial Fellows with B. Harrison, B. O'Steen, & P. Clayton (Eds.), Proceedings of the International Association for Research on Service-Learning and Community Engagement 11th Annual Conference, Nov 2 - 4, 2011. Chicago, IL. <http://iarslceproceedings.wikispaces.com>. (2 pages).
- Clevenger, C.**, Bodin, R., (2010), Impact of Educational Context on Teaching Sustainable Design and Construction, The Association for the Advancement of Sustainability in Higher Education (AASHE) Conference, Denver, Colorado.

Other (e.g. lab texts, book reviews, technical reports, in-house reports):

- Clevenger, Caroline M.**, Mehmet E. Ozbek, Hussam Mahmoud, and Blaine Fanning. *Impacts and Benefits of Implementing BIM on Bridge Infrastructure Projects*, MPC-14-272. North Dakota State University - Upper Great Plains Transportation Institute, Fargo: Mountain-Plains Consortium, 2014, p. 1-28. **(Technical Report)** [Link](#)
- Simpson, S, Ozbek, M.E., **Clevenger, C.M.**, and Atadero, R., A Framework for Assessing Transportation Sustainability Rating Systems for Implementation in U.S. State Departments of Transportation, *Technical Report submitted to the U.S. Department of Transportation Mountain-Plains Consortium University Transportation Center*, 2014, pp. 1-82. **(Technical Report)** [Link](#)
- Knox, M., **Clevenger, C.** (2014). Energy modeling: A tutorial and introduction to eQUEST, Center for Sustainable Engineering Electronic Library, Syracuse Univ., Syracuse, NY.
- Clevenger, C.M.** and Ozbek, M.E. (2013). "Outreach for Leadership of Sustainable Community Projects." *Technical Report submitted to the Colorado Campus Compact*, pp 1-4. **(Technical Report)**
- Clevenger, C.M.**, and Lopez del Puerto, C., (2103) Using 3D Visualization to Enhance Safety Training for Hispanic Construction Workers, *Technical Report submitted to the Mountain Plains Education and Research Center*, pp.1-3. **(Technical Report)**
- Ozbek, M.E. and **Clevenger, C.M.** (2012). Building Social Sustainability through Service-Learning. *Technical Report submitted to the Bohemian Foundation*, Fort Collins, Colorado, pp. 1-12. **(Technical Report)**.
- Clevenger, C.M.** (2012) Internal Research Report: Impact of Prefabrication on Construction Performance, research conducted for Mortenson Construction, Denver Colorado, pp. 1-10. **(White Paper)**
- Clevenger, C.M.**, Ozbek, M.E., 2011, Evaluation of Environmental Commitment Tracking Systems for Use at CDOT, *Technical Report 2011-13 submitted to the Colorado Department of Transportation*, September, Fort Collins, Colorado, pp. 1-115. **(Technical Report)**
- Clevenger, C.**, Haymaker, J., (2010) The Need to Measure the Guidance Afforded by Design Strategies, CIFE Technical Report 190, Stanford University, <http://cife.stanford.edu/online.publications/TR190.pdf> **(Technical Report)**

CONTRACTS & GRANTS

Externally-Funded Projects as PI

- Healthcare Firestop Inventory, GE Johnson Construction and Children's Hospital of Colorado, 10/2018-12/2018, **\$14,714 (PI)**. (Unsolicited Research).
- Colorado Construction Litigation, Associated General Contractors (AGC) Colorado, 9/2017-12/2017, **\$14,444 (PI)**. (Unsolicited Research).
- Measuring Construction Worker Health and Productivity, GE Johnson Construction, 5/2017-8/2017 **\$18,526 (PI)**. (Unsolicited Research).
- Business & Commute Optimization System: Development and Denver Based Case Study, Moatassem

- Abdallah (CoPI), U.S. Department of Transportation Mountain-Plains Consortium University Transpo18, 07/2016- 12/2018 **\$100,000 (PI)**. (Interdisciplinary Research)
- Project Management Employee Development Program (PMEDP), Colorado Department of Transportation (CDOT). Subcontractor to LS Gallegos & Associates Inc. with AECOM. 06/04/15-6/30/18. **\$3,000,000; \$412,500** (CU Denver Portion) **(PI)**
- Developing a Thermal Comfort Report Card for Buildings, Rexel Foundation, Paris, France 10/01/14-09/30/15. **\$32,000 (PI)**. (Interdisciplinary Research)
- A Pilot Case Study to Evaluate the Potential Impact and Benefit of Adopting and Implementing BIM on Bridge and Infrastructure Projects, Mehmet Ozbek (CoPI), Hussam Mahmoud (CoPI), U.S. Department of Transportation Mountain-Plains Consortium University Transportation Center, 05/2013- 05/2015 **\$60,000 (PI)**. (Interdisciplinary Research)
- Scholarship of Engagement: Outreach for Leadership of Sustainable Community, Ozbek M.E. (Co-PI), (OSP 114885) Colorado Campus Compact (CCC), 9/2012- 12/2012 **\$1,500 (PI)**.
- Using 3D Visualization to Enhance Construction Safety for Hispanic Construction Workers, Lopez del Puerto, C., (Co-PI), (OSP 113906) Mountain Plains Education and Research Center, 8/2012-7/2013 **\$10,000 (PI)**.
- Building Social Sustainability Through Service-Learning, Ozbek, M (Co-PI) (OSP 113058) Pharos Fund Grant, Bohemian Foundation, 1/19/2012-12/31/2012, **\$10,000 (PI)**.
- The Evaluation of Environmental Commitment Tracking Programs for Use at CDOT, (OSP 101715), Mehmet Ozbek (CoPI), Colorado Department of Transportation, 10/2010-10/2011, **\$19,948 (PI)**.

Externally-Funded Projects as CoPI

- Calstart Bolt to College Innovative Mobility Service Demonstrations with Zero-Emission Vehicles, California Energy Commission, Abdallah, M. (PI), Tawfik, A. (Co-PI), **\$750,000, \$75,000** (CU Denver Portion) **(Co-PI)**
- Developing Commute Optimization System to Minimize Negative Environmental Impacts, Time and Cost of Business Commuters, California Department of Transportation (Caltrans), Sustainable Transportation Planning Grant, Abdallah, M. (PI), Tawfik, A. (Co-PI), **\$322,006, \$191,865** (CU Denver Portion) **(Co-PI)**
- Assessing Existing Infrastructure Sustainability Rating Systems for use in Mountain-Plains Consortium States, The Mountain-Plains Consortium University Transportation Center Ozbek, M (PI), Atadero, R. (Co-PI) **\$41,998 (Co-PI)**. (Interdisciplinary Research)

Internally-Funded Awards

- “College of Engineering Design Course Development,” (2018) Office of the Dean, **\$4000** (committee member)
- “Healthcare and Construction MOOC Module Development,” (2018) Health + Design Initiative, University of Colorado Denver, **\$2,000** (key personnel).
- “Construction Engineering and Management Program Development and Assessment,” (2016) Faculty Development Grant Proposal, University of Colorado Denver, **\$5,000 (PI)**.
- “Integrated Construction Leadership” New Interdisciplinary Course Award (2015), inworks, University of Colorado Denver, **\$5,000 (PI)**.
- “Business, Innovation and Construction” New Interdisciplinary Course Award (2015), inworks, University of Colorado Denver, **\$7,500 (PI)**.
- “Upgrading an Existing Building Retrofit Optimizer Tool,” University of Colorado Denver (2014), Office of Research Services, **\$22,000** (co-PI).
- “Faculty Research Travel Grant,” (2013) Colorado State University, Office of International Programs (OIP), **\$1,800 (PI)**.
- “Increasing minority participation in STEM through collaborative learning,” (2013-2014) Colorado State University, College of Health and Human Science Mini-Grant, **\$8,000** (co-PI).
- “Development of a Research Team To Increase Demand for Non-traditional Building Material for Affordable & Sustainable Housing by Identifying Cultural Barriers” (2013-2014) SoGES Global Challenges Research Team (GCRT) Grant, Scott Glick (PI), Ken Trembley (Co-PI), Janet Ore (Co-

- PI), Sybil Sharvelle (Co-PI), Ron Holt (Co-PI) **\$10,000 (Co-PI).**
 “Learning Ecologies/Provost’s Course Redesign,” (2012-2013) Colorado State University, The Institute of Learning and Teaching (Tilt). Scott Glick (co-PI), **\$5,000 (co-PI).**
 “Course Redesign Extension,” (2011-2012) Colorado State University, The Institute of Learning and Teaching (Tilt) **\$6,393.90 (PI).**
 “Applied Sustainable Project Delivery,” (2011) Colorado State University, The Institute of Learning and Teaching (Tilt) Service Learning Faculty Mini Grant **\$1,000 (Co-PI)**
 “Course Redesign,” (2010-2011) Colorado State University, The Institute of Learning and Teaching (Tilt) Grant **\$7,954 (PI).**

OTHER INDICATORS OF SCHOLARLY WORK

Workshops Delivered:

- (2016) Project Management Accreditation Workshop, Project Management Employee Development Program, Colorado Department of Transportation (CDOT) April 19, 2015, Golden Colorado.
 (2015) Project Management Competency Workshop #2, Project Management Employee Development Program, Colorado Department of Transportation (CDOT) November 19, 2015, Golden Colorado.
 (2015) Project Management Competency Workshop #1, Project Management Employee Development Program, Colorado Department of Transportation (CDOT) October 15, 2015, Golden Colorado.

Exhibits:

- 2017 Research and Creative Activities Symposium, Undergraduate Video Submission, https://www.youtube.com/watch?v=i_uWV2YAdKs&feature=youtu.be University of Colorado Denver, April 28, 2017.
 2016 Research and Creative Activities Symposium, Undergraduate Video Submission, <https://www.youtube.com/watch?v=IGjCYr-PYF8&feature=youtu.be> University of Colorado Denver, April 29, 2016.
 Constructions from CON 577 Leadership of Sustainable Community Projects displayed: April 11th, 2011 at Centennial High School; April 20th, 2011 at CSU’s Sustainability Fair; and April 23rd, 2011 at Fort Collin’s Earth Day celebration; April 18th, 2012 at CSU’s Sustainability Fair; May 5th, 2012 Bennett Elementary.

Symposia:

- (2011), Building Healthcare of the Future, Academic-Industry Research Symposium: Building Communities of the Future, Colorado State University, Department of Construction Management, Organizer, Denver, Colorado (with Scott Glick).
 (2010), High Performance Building, Academic-Industry Research Symposium: Engagement, Colorado State University, Department of Construction Management, Denver, Colorado.
 (2006), Success using BIM for great design and high performance, AIA CBSP Symposium on BIM for Building Envelope Design and Performance, Washington, D.C. (with Calvin Kam and Kevin Powell).

Invited Lectures/Presentations:

- (2018) Using Natural Language Processing and Text Mining to Identify Patterns in Construction Defect litigation Cases, Construction Issues and Trends, Colorado State University, Department of Construction Management, November 5th, Fort Collins, CO.
 (2018) Invited Panelist, Women and Underrepresented Minorities (URMs) Faculty Panel Session, Construction Research Congress, New Orleans, LA, April 4th, 2018.
 (2018) Colorado Construction Litigation Research, AGC Board of Directors Meeting, Jan 18th, Denver, CO.
 (2017) Colorado Construction Engineering and Management Academic Programs, CU Boulder CEM Industry Advisory Board Meeting, November 1st, Boulder, CO.
 (2017) Measuring Construction Worker Health and Productivity, Construction Issues and Trends, Colorado State University, Department of Construction Management, November 6th, Fort Collins,

- CO.
- (2017) Developing a Strong Research Question, Research Seminar, University of Colorado Denver, September 27th, Denver CO.
 - (2017) Colorado Construction Litigation Research, AGC Legislative Committee Meeting, September 16th, Denver, CO.
 - (2017) Construction Worker Health and Productivity Research Update, GE Johnson Construction, June 20th, Colorado Springs, CO.
 - (2017) Green Building Codes, Construction Specifications Institute (CSI) Chapter Luncheon, February 14th, Lakewood, CO. William McConnell, co-presenter.
 - (2016) Daylighting Metrics, Construction Issues and Trends, Colorado State University, Department of Construction Management, November 7th, Fort Collins, CO.
 - (2016) Fusing Wearables and Mobile Technologies to Optimize Energy Demand and Occupant Comfort, Smart Commercial Buildings Conference, July 20, 2016, Denver, CO.
 - (2016) Fundamentals of PM for Project Managers, Project Management Advancement Program, Colorado Department of Transportation (CDOT) May 26, 2016, Golden, CO.
 - (2015) Integrated Construction, Management and Leadership (ICML) Certificate Kick-off, Jensen, M. December 4th, 2015, Lean Construction Institute Community of Practice (COP), Denver South Campus, Parker, CO.
 - (2015) BIM in Construction Engineering and Management, November 12th, 2015, Design-Build Course, College of Architecture and Planning, University of Colorado Denver, Denver, CO.
 - (2015) CU Denver Program Update, Ingber, M; Rens, K., September 16th, 2015, Association of General Contractors, Board of Directors Meeting, Centennial, CO.
 - (2015) Technology in Construction, April 22nd, 2015, CVEN 5232, University of Colorado Denver, Denver, CO.
 - (2015) Overview of UC Denver, Construction Engineering and Management Program, May 21st, 2015, Construction Management Association of America (CMAA) Owner's Nights, Denver, CO.
 - (2015) Construction Engineering and Management Program Assessment Presentation, April 6th, 2015 University Assessment Committee Meeting, University of Colorado Denver, Denver, CO.
 - (2015) Building Information and Modeling Technology in Construction, February 4th, 2015, ENGR 3400, University of Colorado Denver, Denver, CO.
 - (2015) Introduction to Sustainable Construction, Sept 8th 2014, University of Colorado Denver, Denver, Colorado.
 - (2014) Research Involving Thermal Comfort of Building Occupants, Construction Issues and Trends, Colorado State University, Department of Construction Management, November 3rd, Fort Collins, CO.
 - (2014) Natural Construction, Sustainable Design and Construction, Colorado State University, Department of Construction Management, September 24th, Fort Collins, CO.
 - (2013) Using Service-learning to Teach Leadership in Sustainable Construction.” Colorado Campus Compact Engaged Faculty Institute, March 18th, Loveland, CO. (with Mehmet Ozbek).
 - (2013) Teaching Sustainability through Service-learning in Construction Education. Associated Schools of Construction 26th Annual Student Competition, February 7th, Sparks, NV. (with Mehmet Ozbek).
 - (2013) Enhancing Student Learning through 3D Visualization, Colorado State University Institute for Learning and Teaching, Professional Development Institute, January 15th, Fort Collins, CO (with Scott Glick).
 - (2013) Using Service-learning to Teach Leadership in Sustainable Construction, Colorado State University Institute for Learning and Teaching, Professional Development Institute, January 15th, Fort Collins, CO (with Mehmet Ozbek).
 - (2012) Panelist at National Science Foundation (NSF) sponsored workshop, the Sciences behind Sustainability Quantification for Building and Infrastructure Design, Engineering and Construction (S2QBIDEC) Workshop 2012 in Fort Worth Texas November 7th-9th.
 - (2012) The Impact of BIM-enabled Design-to-Fabrication on Construction Practice, ASCE Construction Institute Program, November 9th Fort Worth, Texas.

- (2012) Using Service-Learning as a Focus for Integrative Learning, Colorado State University Institute for Learning and Teaching Summer Conference on Learning, Teaching, and Critical Thinking, May 16, Fort Collins, CO (with Mehmet Ozbek).
- (2012) A Quantitative Decision-making Framework to Evaluate Environmental Commitment Tracking Systems for the Colorado Department of Transportation, *FHWA Volpe Center Eco-Logical Webinar Series*, January 12, Fort Collins, CO (with Mehmet Ozbek).
- (2011) Summary of Findings from the Evaluation of Environmental Commitment Tracking Systems for Use at CDOT, Colorado Department of Transportation, via webcast (with Mehmet Ozbek).
- (2011) Promoting Occupant Health and Comfort in Residential Construction, Colorado State University, Mary Scott Lecture Series, College of Applied Human Sciences, Fort Collins, Colorado (with Scott Glick).
- (2011) Evolving Construction Management Education using BIM, Associated Schools of Construction Conference, Panel Member, Omaha, Nebraska.
- (2010) Trends in Construction Management Education, University of Helwan, Cairo, Egypt (with Mostafa Khattab).
- (2010) Supporting Critical Thinking in the Social and Applied Sciences, Colorado State University, The Institute of Learning and Teaching (TILT) Summer Conference, Panel Member, Fort Collins, Colorado.
- (2009) The Role of BIM in Energy Management, International Facility Management Association (IFMA) Luncheon, Loveland, Colorado (with Chris Allen).
- (2008) Performance-based Design Research Overview, Stanford University, Center for Integrated Facility Engineering (CIFE) Summer Program, Stanford, California.
- (2006) Lunch Program on Building Information Modeling (BIM). Society for Marketing Professional Services (SMPS), Washington, D.C.
- (2004) Boulder Community Hospital: First LEED-Certified Hospital, Healthcare Design Conference 04 Houston, Texas (with Kristi Ennis).
- (2004) Indoor Environmental Quality, Colorado State University, Green Building Certificate Program, Denver, Colorado.
- (2004) LEED: A Lesson on High Performance Green Buildings, Webcast, International Facility Management Association (IFMA).
- (2004) Marketing Sustainable Design Construction Practices, The Society for Marketing Professionals, Cleveland, Ohio.
- (2004) Economic Models in Laboratory Sustainable Design, Lab Design Conference, San Diego, California.
- (2004) Boulder Community Foothills Hospital, Sustainable Design for Healthcare, AIA Houston Chapter, Annual Event, Houston, Texas (with Kai Albelkis, Kristi Ennis, and David Schafer).
- (2003) Sustainable Design in Bio-Containment Laboratory Facilities, Labs21 Conference, Denver, Colorado (with Joseph Phillips).
- (2003) Water Conservation in the LEED Rating System, American Society of Plumbing Engineers (ASHE) Technical Meeting, Denver, Colorado.
- (2003) Achieving Innovation in Design in the LEED Rating System, USGBC Colorado Chapter, Fall Greening Conference, Denver, Colorado.
- (2003) The North Boulder Recreation Center, USGBC Colorado Chapter Meeting, Denver, Colorado (with Bill Boyes and Dave Hammel).
- (2003) Designing High Performance, Sustainable Schools, Conference for the Association of Independent Schools in New England, Boston, Massachusetts (with Jeff Dewey).
- (2002) Boulder Community Foothills Hospital: Achieving LEED Certification, AIA Architecture for Health Panel (AHP) University of Washington, Spokane Washington (with Kristi Ennis).

Workshops:

- (2014) NSF stipend for 2014 Construction Engineering Conference, National Science Foundation (NSF), Seattle, Washington, March 27-29, 2014 (**Selected Recipient**).
- (2012) Write Winning Grant Proposals Mentored Workshop, College of Applied Human Sciences,

- Colorado State University, Spring-Fall, 2012 (**Selected Participant**).
- (2012) Sciences behind Sustainability Quantification for Building and Infrastructure Design, Engineering and Construction (S2QBIDEC), National Science Foundation (NSF) funded Workshop November 7-9th, Fort Worth, Texas (**Funded Panelist**).
- (2010), Sustainable Design Charrette, Schutz American School, Alexandria, Egypt (**Invited Facilitator**).
- (2006). Healthcare Design Workshop, GreenBuild Conference, Boulder Community Hospital: A Case Study, Denver, Colorado (**Invited Presenter**).
- (2006) Daylighting Design, EnergyDesignResources Virtual Workshop and On-line Training (**Invited Presenter**).

Posters:

- 2018, Cross-Cultural Collaboration inspired by a Sustainable Building Course in Costa Rica, American Society of Engineering Education (ASEE), International Forum, June 26th-28th, Salt Lake City, UT (**Best Poster**).
- 2013, Sustainable Building in Florida, *Annual Celebrate Undergraduate Research and Creativity Showcase*, April 30, Fort Collins, CO. (**Presented by Undergraduate Student Group**)
- 2013, CM Cares Service-Learning Program, *Annual Celebrate Undergraduate Research and Creativity Showcase*, April 30, Fort Collins, CO. (**Presented by an Undergraduate Advisee**)
- 2012, Community Outreach Service-Learning Music Stand Project, *Annual Celebrate Undergraduate Research and Creativity Showcase*, April 17, Fort Collins, CO. (**Presented by an Undergraduate Advisee**)
- 2011, Applied Sustainable Project Delivery, *Annual Celebrate Undergraduate Research and Creativity Showcase*, April 19, Fort Collins, CO. (**Presented by Undergraduate Advisees. Best Poster General Category; Best Poster Service-Learning Category**)

Patents:

- US Provisional Patent (2016) First Developer (CU Denver) Reporting Thermal Comfort in Buildings.
- US Patent No. US 6,714,352 B2. Third developer (Architectural Energy Corporation) Mini-Optical Lightshelf System, "Lightlouver," a static sidelighting louver system that redirects daylight from acceptance angles of 5 to 85 degrees to above horizontal and onto the ceiling plane. [Link](#)

PROFESSIONAL ORGANIZATIONS

Membership in Professional Societies:

- American Society of Civil Engineers (ASCE) Member #9121566, 2011 – present
 American Institute of Architects (AIA) Member #30160518, 2011 – present

Committee participation (National)

- Associated General Contractors of America (AGC) Associated Schools of Construction (ASC) – Joint Committee, 2016- present, Chair
 Construction Industry Institute (CII) Academic Committee, 2012-present

TEACHING

Participation in Professional Development Activities Related to Teaching

- (2017) Design-Build Educator Workshop, Design Build Institute of America (DBIA), University of Denver, Denver, Colorado, August 7-10 (**Selected Participant**).
- (2017) University Relationship Professional Development Workshop: Building Stronger Curriculum with Kiewit (BSCK) workshop, Aurora, Colorado June 14-16 (**Selected Participant**).
- (2015) Teaching in Condensed Formats Workshop, February, 2015, University of Colorado Denver, Denver, Colorado (**Funded Participant**).
- (2014) Excellence in Civil Engineering Education (ExCEEEd) Teaching Workshop, June, 2014, Florida

Gulf Coast University, FL (**Selected Participant**).

(2013) Participant and presenter, Colorado State University, The Institute of Teaching and Learning (TILT) Professional Development Institute, January 15, Fort Collins, CO (**Invited Presenter**)

(2012) National Science Foundation (NSF) sponsored, Center for Sustainable Engineering (CSE) 2012 workshop on “Adding Sustainability to Engineering Education”. Syracuse, New York, June 6-8th (**Funded Participant**).

(2012-2013) Northern Colorado and Wyoming Engaged Faculty Institute’s multi-faceted training around service-learning, Loveland, Colorado (**Funded Participant**).

(2010-2013) Colorado State University, The Institute of Teaching and Learning (TILT) Teaching Fellow Seminar Series (**Invited Participant**).

COURSES TAUGHT:

<u>Course No./Title</u>	<u>Enr oll.</u>	<u>Term</u>	<u>Course Overall</u>	<u>Instr. Overall</u>
CVEN 5246: Construction Business & Innovation	10	Spr18	5.3/6	5.8/6
CVEN 5238: Integrated Construction Leadership	9	Spr18	5.6/6	5.7/6
CVEN 5234: Sustainable Construction	8	Spr18	5.2/6	5.7/6
CVEN-523: Construction Materials and Methods	17	Fall17	5.4/6	5.5/6
CVEN 5234: Sustainable Construction	10	Spr17	5.1/6	5.5/6
CVEN 5238: Integrated Construction Leadership	16	Spr17	5.0/6	5.4/6
CVEN-523: Construction Materials and Methods	12	Fall16	5.3/6	5.5/6
CVEN 5234: Sustainable Construction	16	Spr16	5.5/6	5.8/6
*CVEN 5238: Integrated Construction Leadership	5	Spr16	5.0/6	5.0/6
CVEN-5800; IWKS-4930-001; Special Topics	4	Fall15	5.8/6	5.9/6
CVEN-523: Construction Materials and Methods	14	Fall15	5.3/6	5.8/6
CSU NR580a2: Sustainability Issue in the Department of Defense (DoD), on-line	4	Su15	4.5/5	5.0/5
CVEN 5234: Sustainable Construction	22	Spr15	5.4/6	5.7/6
CVEN 5231: Construction Materials and Methods	17	Fall14	5.2/6	5.6/6
*CSU NR580a2: Sustainability Issue in the Department of Defense (DoD), on-line	6	Su13	4.7/5	4.7/5
CON 576: Sustainable Technologies	8	Spr14	3.7/5	3.9/5
*CON 450: Travel Abroad Sustainable Building	17	Spr14	4.8/5	4.8/5
CON 476: Sustainable Design and Construction (co-taught with Rodolfo Valdes-Vasquez)	21	Fall13	4.2/5	4.6/5
CON 151: Materials and Methods	30	Fall13	4.4/5	4.6/5
CON 151: Materials and Methods	28	Fall13	4.4/5	4.7/5
NR580a2: Sustainability Issue in the Department of Defense (DoD), on-line	5	Su13	4.7/5	4.7/5
CON 576: Sustainable Technologies	10	Spr13	3.8/5	4.1/5
CON 476: Sustainable Design and Construction (co-taught with Rodolfo Valdes-Vasquez)	26	Fall12	4.0/5	4.5/5
CON 151: Materials and Methods	24	Fall12	4.2/5	4.3/5
CON 151: Materials and Methods	23	Fall12	4.1/5	4.6/5
CON 576: Sustainable Technologies	8	Spr12	3.3/5	4.0/5
CON 580a2: Experimental Service-Learning Class "Applied Sustainable Project Delivery" (co-caught with Mehmet Ozbek)	8	Spr12	N/A	N/A
*CON 450: Travel Abroad Sustainable Building	18	Spr12	N/A	N/A
CON 476: Sustainable Design and Construction	21	Fall11	4.0/5	4.4/5
CON 151: Materials and Methods	19	Fall11	3.4/5	4.1/5
CON495 Independent Study-Construction Management	8	Su11	4.5/5	4.6/5
CON 151: Materials and Methods	30	Spr11	3.4/5	4.2/5
CON 151: Materials and Methods	30	Spr11	4.1/5	4.4/5
*CON 580a2: Experimental Service-Learning Class "Applied Sustainable Project Delivery" (co-caught with Mehmet Ozbek)	10	Spr11	4.2/5	4.2/5
*CON 450: Travel Abroad Sustainable Building	10	Spr11	4.9/5	4.9/5
CON 476: Sustainable Design and Construction	31	Fall10	N/A	N/A
CON 562: Construction Issues and Trends	18	Fall10	N/A	N/A
CON 151: Materials and Methods (2 sections)	145	Spr10	N/A	N/A
*CON 450: Travel Abroad Sustainable Building (co-taught B. Dunbar)	24	Spr10	N/A	N/A
CON 476: Sustainable Design and Construction		Fall09	N/A	N/A
CON 562: Construction Issues and Trends		Fall09	N/A	N/A

*Courses taught above required teaching load

ADVISING:

STUDENT ADVISING/GRADUATE SUPERVISION

UNDERGRADUATE STUDENTS:

- 2018 Assigned Undergraduate Advisees (9 Sp)
- 2017 Assigned Undergraduate Advisees (9 Sp, 9 Fall)
- 2016 Assigned Undergraduate Advisees (9 Sp, 7 Fall)
- 2015 Assigned Undergraduate Advisees (13 Sp, 13 Fall)
- 2014 Assigned Undergraduate Advisees (14 Fall)
- Shannon Stearman, BA, 2013 (Honor thesis advisor).

GRADUATE STUDENTS:

Current Graduate Advisees:

Doctoral:

- Elizabeth Brogan (Advisor), Construction Management Association of America (CMAA) Colorado Chapter Scholarship winner (2017, 2018)
- Sean Mulholland (Advisor), Lean Summer School scholarship winner, LC3 Conference 2017, 2018
- William McConnell (Advisor)
- Lance VanDemark (Advisor)

Master:

- Benjamin Davis
- Pouya, Ilkahany
- Phalgun Jakilati
- Meishan Jin

Current Graduate Committee Memberships (excluding those chaired):

4 # MS/MA
4 # PhD

Graduate Committee Memberships (for past 5 years, not including those above)

 # Plan C
 # Plan B
23 # MS/MA
 3 # PhD

Graduate Degrees Completed Under Your Supervision:

University of Colorado Denver

- Hitesh Dalal, 2018 (M. Eng., Advisor)
- Sreemala Das Majumder, 2018 (M.S., Advisor)
- Malay Patel, 2018 (M. Eng., Advisor)
- Wilbur Pillsbury, 2018 (M. Eng., Advisor), winner of CU Denver’s CEM Leadership Award (2018)
- Benjamin Gelem, 2018 (M. Eng., Advisor)
- Yinkai Wang, 2018 (M. Eng., Advisor)
- Matthew Barrows, 2017 (M. Eng., Advisor), winner of CU Denver’s CEM Leadership Award, now faculty University of Nebraska-Lincoln
- Victoria Cabral, 2016 (M. Eng., Advisor)
- Ramanujam, Sai Komali, 2015 (M. Eng., Advisor)
- Jayapradha Madhavan, 2015 (M. Eng., Advisor), IIE Construction Division Student Paper Award
- Lauren A. Martinez, 2015 (M. Eng., Advisor), Haselden Construction’s March, 2017 MVP

Colorado State University (M.S.)

Lavery, Mark, 2015 (Co-Advisor)
 McGuire, Brendan Michael, 2014 (Co-Advisor)
 Fanning, Blaine Lea, 2014 (Advisor)
 Dan Reaves, 2014 (Advisor)
 Feuer, Matthew Seth, 2014 (Co-Advisor)
 Hessman, Torry Deon, 2014 (Advisor)
 Injuva, Girija, 2014 (Advisor)
 Simpson, Sherona, 2013 (Co-Advisor)
 Knox, Michael William, 2013 (Advisor)
 Schatz, Trevor, 2013 (Advisor)
 Watson, Peter Stewart, 2012 (Co-Advisor)
 Wood, Clinton L, 2011 (Advisor)
 Barrett, Laura Marie, 2011 (Co-Advisor)
 Domres, Debra Lynn 2011 (Co-Advisor)
 Farmer, Cody Michael, 2011 (Co-Advisor)
 Patunoff, Dane 2010 (Co-Advisor)
 McLear, Kyle Scott, 2010 (Co-Advisor)

OTHER ACTIVITIES/ACCOMPLISHMENTS – TEACHING/ADVISING

Mentoring Activities

Post-doc Advisor, Moatasseem Abadallah, University of Colorado Denver, 2014-2015
 Coaching: Virtual Design and Construction (VDC) / Building Information Modeling (BIM) The Associated Schools of Construction hold annual student competitions in multiple specialty topics. During the national Building Information Modeling (BIM) competition, each six-person team has 16 hours to solve the problem provided by the industry sponsor.
 2013 **Third Place Award**, National Building Information Modeling (BIM) Competition, Associated Schools of Construction, Reno, NV, (Coach).
 2011 **First Place Award**, National Building Information Modeling (BIM) Competition, Associated Schools of Construction, Reno, NV, (Coach).
 2013 Undergraduate Honor Thesis Advisor, Department of Construction Management, Colorado State University, Fort Collins, CO.

Visiting Scholars Sponsored

(2010-2011) Supervised Nessreen Youssef Abo-Moussallam, Visiting Fulbright Scholar, from Helwan University, Cairo, Egypt.

Judge

(2012) Faculty Judge for Celebrate Undergraduate Research and Creativity (CURC) Showcase, Colorado State University.
 (2010) Faculty Judge for Celebrate Undergraduate Research and Creativity (CURC) Showcase, Colorado State University.

Off-campus/non-credit courses

(2010-2011) Supported the Associated General Contractors' (AGC) sponsored LEED Accreditation Training (offered free to Construction Management students):
 November 2010: 45 students participated
 May 2011: 28 students participated
 October 2011: 55 students participated
 (2011-2013) Lecturer, Sustainable Construction, Colorado State University, Construction Management Certificate Program, Denver, Colorado.
 (2011-2013) Lecturer, Materials and Methods, Colorado State University, Construction Management Certificate Program, Denver, Colorado.

Certificates and Trainings

- 2017 Design Building Institute of America (DBIA) Design-Build Educator Certificate
- 2011 Healthcare Construction Protocol and Procedure Training Program, Saunders Construction
- 2010 Green Building and LEED Fundamentals course, Associate General Contractors
- 2009 Human Research Protection Certificate, Colorado State University, recertified in 2010

SERVICE

National Committees:

- Board of Directors, Associated General Contractors of America (AGC) Education and Research Foundation (2018-present)
- Chairman of Joint Associated General Contractors (AGC) Association of Schools of Construction (ASC) Advisory Group (2015-present)

University Committees:

- Dean Search Committee, Dean of College of Engineering and Applied Science, University of Colorado Denver, 2016-2016
- Creative Research Collaborative (CRC) Steering Committee, University of Colorado Denver, 2015-present
- Research Collaborative Task Force, Office of Research Services, University of Colorado Denver, Fall 2014

College Committees:

- New Engineering Building, Steering Committee, College of Engineering and Applied Science (CEAS), University of Colorado Denver, 2015-2
- Scholarship Selection Committee, College of Engineering and Applied Science (CEAS), University of Colorado Denver, 2014-present
- Student Scholarship and Awards Committee, Colorado State University, College of Health and Human Sciences (**Co-Chair**), 2010-2014
- Dean Search Committee, Colorado State University, College of Applied Human Sciences, 2010 – 2011

Department Committees:

- Program Assessment Task Committee (PATC), Department of Civil Engineering, University of Colorado Denver, 2015-2017
- Construction Engineering and Management, Tenure Track Position, Search Committee, Department of Civil Engineering, University of Colorado Denver, 2015-2016
- Study Aboard task force, Colorado State University, Department of Construction Management (**Chair**), 2013-2014
- Scholarship Committee, Colorado State University, Department of Construction Management (**Co-Chair**), 2010-2014
- CM Cares Committee, Colorado State University, Department of Construction Management, 2011-2014
- Graduate Program Committee, Colorado State University, Department of Construction Management, 2010-2014
- Faculty Search Committee, Colorado State University, Department of Construction Management, 2011-2012
- Ad-hoc BIM Task Force, Colorado State University, Department of Construction Management, 2010-2011
- Professional Advisory Development Board (PADB), Research and Outreach Sub-Committee, Colorado State University, Department of Construction Management, 2009 – present
- Organizing Committee for the 1st Colorado State University, Department of Construction Management, Industry and Academia Research Symposium (2010)
- Organizing Committee for the 2nd Colorado State University, Department of Construction Management,

Industry and Academia Research Symposium (2011)

Other:

Board Member, Building Trades Shop, Centennial High School, Fort Collins, Colorado, 2013- 2014
Alumni Advisory Council, The Key School, Annapolis, Maryland, 2011-2016

Review/Editorial Boards

Journal of Construction Engineering and Management, Associate Specialty Editor, Sustainable Construction, 2016 – present (58 papers handled)
Journal of Construction Engineering and Management, Assistant Specialty Editor, Sustainable Construction, 2011 – 2016 (24 papers handled)
Journal of Construction Engineering and Management, Invited Guest Editor, Special Issue on Considerations of Sustainability in Construction Engineering and Management, 2012
International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship, Invited Guest Editor, Spring Edition, 2014 (2 papers handled)

Peer-reviewer (journals):

Advanced Engineering Informatics
Advances in Engineering Education
Applied Computing and Informatics
Automation in Construction
Building and the Environment
Construction Management and Economics
Design Studies
Energy and Buildings
Energy Research & Social Science
International Journal of Construction Education and Research
Journal of Cleaner Production
Journal of Computing in Civil Engineering
Journal of Construction Engineering and Management
Journal of Engineering Design
Journal of Green Building
Journal of Legal Affairs and Dispute Resolution in Engineering and Construction
Journal of Management in Engineering
Journal of Professional Issues in Engineering Education and Practice
Practice Periodical on Structural Design and Construction
Smart and Sustainable Built Environment
Sustainable Cities and Society

Invited Peer-reviewer (grants):

National Science Foundation (NSF) Invited Panelist, Washington, DC, Summer 2018
Swiss National Science Foundation (SNSF) Invited Reviewer, Summer 2016
National Science Foundation (NSF) Invited Panelist, Washington, DC, Spring 2015
National Science Foundation (NSF) Invited Panelist, Washington, DC, Fall 2014
National Science Foundation (NSF) Invited Panelist, Washington, DC, Summer 2014
Council of University Transportation Centers (CUTC) Invited Reviewer, Summer 2014

Peer-reviewer (conferences):

Technical Committee Member (**Invited**), Construction Research Congress (CRC) 2018
Construction Research Congress (CRC), Paper Reviewer, '12, '14, '16, '18
Construction Research Congress (CRC), Poster Reviewer, '12, '14
Associated Schools of Construction (ASC) Annual Conference, Reviewer, '12, '13, '14, '15, '16, '17

Peer-reviewer (other):

Center for Sustainable Engineering Educational Modules (1 module reviewed)

Conference Sessions Chaired/Moderated

2018 Associated Schools of Construction, Minneapolis, MN

2018 Construction Research Congress, New Orleans, LA

2017 Associated Schools of Construction, Seattle, WA

2016 Construction Research Congress, Puerto Rico

2014 Construction Research Congress, Atlanta, GA

2012 Construction Research Congress, West Lafayette, IN