

# KEITH E. HEDGES

AIA NCARB

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## PROFESSION

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Professor of Architecture

Registered Architect, Iowa, USA

National Council of Architectural Registration Boards certified

## KEY ACCOMPLISHMENTS

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### TEACHING

Nineteen years full-time teaching experience with a repertoire exceeding twenty courses for architecture and engineering university programs. The courses range from architectural design to engineering technologies. Follows the backward design model with an emphasis on aligning the outcomes, assessments, and teaching and learning strategies. Created the *parti pris* structures pedagogy for architecture students.

### SCHOLARSHIP

Over thirty refereed publications and two dozen presentations given, mostly regarding emergent pedagogies and the nature of digital technologies intervening in higher education. Editor-in-chief for the Architectural Graphic Standards Student Edition (12th edition, 670 pages) and served as an advisory board member for the 11th edition for John Wiley & Sons, Inc. Served on the National BIM Standard Project Committee and appointed to the NBIMS Design Workgroup responsible for overseeing the creation of the NBIMS Version 2.

### RECOGNITION

Received Drury University's Faculty Award for Scholarship. Received the Drury University President's Award of Excellence for Community Engagement. Received the 3rd Place Outstanding Paper Award at an ASEE Midwest Section conference for the capstone architectural structures course. Bestowed two AIA TAP BIM awards in conjunction with two AIA National Conventions. Citations from peers of scholarly writings is available on Google Scholar.

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EDUCATION

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DEGREES CONFERRED	Master of Architecture, Architecture, Iowa State University, 1997
	Master of Science, Structural Engineering, Iowa State University, 1997
	Bachelor of Science, Architectural Studies, University of Illinois, 1987
STUDY ABROAD	Academie de Versailles, Ecole D'Architecture, Versailles, France, through the University of Illinois, Fall 1985 – Spring 1986

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LICENSES AND CERTIFICATES

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UNIVERSITY RESEARCH	<i>Social Behavioral Research (SBR) Certificate</i> in the Social and Behavioral Sciences, Collaborative Institutional Training Initiative (CITI), Basic Course, University of Missouri, 2016
	<i>Responsible Conduct of Research (RCR) Certificate</i> in the Social and Behavioral Sciences, Collaborative Institutional Training Initiative (CITI), Basic Course, University of Missouri, 2016
INDUSTRY	<i>NCARB Certificate</i> , National Council of Architectural Registration Boards, 2002
	<i>Registered Architect</i> , State of Iowa, 1999
	<i>NCARB Education Standard</i> , Education Credential Evaluators Inc. / Education Evaluation Services for Architects (ECE/EESA), 1993

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EMPLOYMENT

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UNIVERSITY EXPERIENCE	<i>Professor</i> , Hammons School of Architecture, Drury University, Springfield, MO, 2009 –2015 (tenure-track, assistant professor), 2015 – 2021 (tenured, associate professor), 2021 – present (tenured, professor). Instruct architectural structures and technology courses.
	<i>Academic Professional</i> , Department of Civil and Architectural Engineering, University of Wyoming, Laramie, WY, 2005 –2009 (extended-term track). Instruct architectural design and engineering science courses.
	<i>Teaching Assistant</i> , Department of Architecture, University of Nebraska-Lincoln, Lincoln, NE, 2004 –2005 (part-time). Instruct architectural structures courses.
	<i>Lecturer and Temporary Assistant Professor</i> , Department of Architecture, Iowa State University, Ames, IA, 1999 – 2002 (full-time), 2002 – 2003 (two-thirds time). Instruct architectural technology courses.

*Graduate Teaching Assistant*, Department of Architecture, Iowa State University, Ames, IA, 1993 – 1994 (part-time). Tutor and grader for architectural structures and technologies courses.

INDUSTRY  
EXPERIENCE

*Consultant*, Terrus Real Estate Group, Des Moines, IA, 2000 –2003 (part-time, variable). See accountabilities below for parent company Principal Financial Group.

*Sr. Construction Manager, Architect/Engineer Consultant, and Intern*, Principal Financial Group and subsidiaries, Des Moines, IA, 1993 –1995 (part-time) and 1997 –1999 (full-time). Create and/or administer contract documents for construction projects associated with the company’s management of over 6,000,000 ft<sup>2</sup> (558,000 m<sup>2</sup>) of corporate and investment properties, 7,000 parking spaces, and 300 leases of users throughout the US. The project types included renovations, restorations, tenant improvements, new construction, and systems upgrades.

*Intern Architect*, Brost Architects and Planners, Cedar Rapids, IA, 1987 – 1989 (full-time). Provide architectural services and related activities in preparation of contract documents. Project types included office park developments, offices, credit unions, apartments, day care centers, churches, beer distributorships, retirement homes, and vacation homes.

*Draftsperson*, Morton Buildings, Inc., Morton, IL, 1984 –1985 (part-time). Perform drafting and structural engineering services for a design-build company.

## HONORS AND AWARDS

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UNIVERSITY

*Faculty Award for Scholarship*, Drury University, 2018

*Phi Kappa Phi Honor Society* (elected), University of Missouri, 2015

*President’s Award of Excellence for Community Engagement*, Drury University, 2012

INDUSTRY

*Associate Member* (elected), American Society of Civil Engineers, 2011

*Order of the Engineer* (appointed), University of Wyoming, oath on Oct 14, 2005

BEST PAPERS

**Hedges, K. E.** (2010). The 2010 Haiti earthquake: Real-time disaster inquiry in the classroom. *Educating Engineers for Today and the Future*. Lawrence, KS: University of Kansas.

Award Information

Award	3 <sup>rd</sup> Place Outstanding Paper Award
Conference	American Society for Engineering Education (ASEE) Midwest Section, 2010
Peer Review	Full paper, blind review

NATIONAL  
COMPETITIONS

**Hedges, K. E., Denzer, A. S., Livingston, C., & Hoistad, M. (2009, January 15).** *Making connections with design curricula*. Laramie, WY: University of Wyoming, Montana State University, and University of Nebraska-Lincoln.

Award Information

Award	Honorable Mention
Competition	5 <sup>th</sup> Annual AIA Technology in Architectural Practice (TAP) BIM Award, 2009
Category	Academic Program or Curriculum Development
Ceremony	San Francisco Federal Building, San Francisco, CA, April 29, 2009, in conjunction with the 2009 AIA National Convention
Peer Review	Full paper, blind review
Jurors	Calvin Kam (Optima), Michael LeFevre (Holder Construction), Kathleen Liston (Consultant), Gregg Pasquarelli (SHoP Architects), David Sheer (Scheer and Scheer Architects), and Beverly Willis (Trustee National Building Museum)
Jury Comment	"Linking multiple schools with a single course highlights the real world problems of design and benefits of BIM in a manner we hope to see repeated."
Notables	Other award recipients: <i>KieranTimberlake</i> for the Cellophane House, <i>Miller/Hull Partnership</i> for the Fort Vancouver Regional Library, and <i>University of Wisconsin</i> for the IP/BIM Studio

**Hedges, K. E., & Denzer, A. S. (2008, February 1).** *From CAD to BIM: Exploring the paradigm shift in architectural engineering education*. Laramie, WY: University of Wyoming.

Award Information

Award	Award Citation [category winner]
Competition	4 <sup>th</sup> Annual AIA Technology in Architectural Practice (TAP) BIM Award, 2008
Category	Academic Program or Curriculum Development
Ceremony	Boston Convention Center, Boston, MA, May 14, 2008, in conjunction with the 2008 AIA National Convention
Peer Review	Full paper, blind review
Jurors	Daniel Friedman (University of Washington), Patrick McLeamy (HOK), J. Stuart Eckblad (University of California-San Francisco), Carol Ross Barney (Ross Barney Architects), Derek Cunz (Mortenson Construction), Vladimir Bazjanac (Lawrence Berkeley National Laboratory), and Nadine Post (Engineering News Record)
Jury Comment	"This program illustrates how BIM will show a new generation how to design."
Notables	Other recipients: <i>Morphosis</i> for the Wayne L. Morse US Courthouse, <i>Gehry Technologies</i> for the One Island East, Hong Kong, and <i>Stanford University</i> for Multidisciplinary Modeling and Analysis

TEACHING<sup>1</sup>

DRURY  
UNIVERSITY

*ARCH 231 Building Systems.* This course deals with site analysis, and building form and elements responding to thermal comfort and daylight in sustainable ways. The basic principles of thermal (natural and mechanical) control systems, their integration with other building systems and their impact on the process of design will be stressed. Fire safety, egress and fire suppression systems also will be covered. F19(1)<sup>2</sup>. Enrollment 45. (Required)

*ARCH 233 Introduction to Building Systems.* Introduction of basic design and building principles; human comfort, structure, life safety and enclosure systems. This course will emphasize the development of basic introductory knowledge for an application in the design process. Three credits. F10(1), F11(1), F12(1), F13(2), F15(1). Avg enrollment 18. (Required)

*ARCH 234 Structures I.*<sup>3</sup> Investigation of the basic principles of structural systems through the analysis of overall structural behavior with specific attention to statics and system modeling. Three credits. S10(2), S11(2), S12(2), S13(2), S14(2), S15(2), S16(2), S17(2), S18(2), S19(2), S20(2). Avg enrollment 18. (Required)

*ARCH 332 Building Systems II.* This course provides an understanding of how structural systems and material construction relate to building form and concept. The course provides information for basic size and placement of structural components and moves the basic ideas presented in Building Systems I forward into consideration of the building envelope. Students will begin exploration of the range of materials available for building enclosure. Three credits. F20(1). Avg enrollment 33. (Required)

*ARCH 334 Structures II.* The design and analysis of beams and columns for timber, structural steel, and reinforced concrete materials using the current stress and strength design philosophies. Introduction to reinforced concrete foundations. F15(2), F16(2), F17(2), S19(1), F20(2). Avg enrollment 16. (Required)

*ARCH 336 Structures II.* Analytical examination of timber and steel structures. Involves examination and design of solid and laminated timber and steel structures. F09(2), F10(2), F11(2), F12(2), F13(2), F14(2). Avg enrollment 18. (Required)

*ARCH 338/438 Structures III.* Application of engineering principles and analytical methods, as presented in the earlier technology coursework. Beginning team scientific research into implications and development of these systems through the collection of empirical data using methods of science. Students will write up research results in the form of a professional publication and present their work in a forum open to the full campus. Three credits. S10(2), S12(1), S13(1), S14(1). Avg enrollment 36. (Required)

<sup>1</sup> Documented the nature of liberal arts in engineering courses and programs (2020 ASEE paper)

<sup>2</sup> Whole numbers in parentheses indicate number of course sections, while fractions indicate team teaching

<sup>3</sup> Redesigned the course and introduced the *parti pris* pedagogy for theory (2014 ASEE paper)

*MARC 531 Hypermedia Technologies.*<sup>4</sup> Student immersion in emergent technologies while pursuing novel transdisciplinary collaborative strategies between designers and society. The vehicles for collaboration are hypermedia technologies integrating Building Information Modeling (BIM), interactive 3D (gaming), World Wide Web (www), and file transfer protocols (ftp). Student groups shall create criteria designs for a homeless assistance center, develop collaboration mechanisms for soliciting societal feedback, analyze society data, rearticulate design responses, prepare visualizations for national competition entries representing the course and group work for blind peer review. Each student is expected to become proficient in one area of emergent technologies through an independent journey and shall share their knowledge with the class. Each student is expected to document their experiences in learning journals. Three credits. S11(1). Enrollment 10. (Elective)

*MARC 532/536 Movie Making.*<sup>5</sup> Add to your design skills by engaging a journey into digital movie making and digital audio mixing. You will learn how to transport discrete static studio images, dynamic real-time designing in Revit, and final animations into video editing software; how to mix digital voice recording and background music in digital audio editing software; and how to combine MP4 video and MP3 voice into a movie experience that describes your design. Three credits. F17(1), S(20). Enrollment 20. (Elective)

*MARC 534 Shaping Design Ideas thru Structural Riddles and Paradoxes.*<sup>6</sup> Engage a journey through nature and geometry that explores fundamental riddles and paradoxes such as the Sierpinski's triangle, the Menger sponge, Koch's snowflake, Alexander horned sphere, the Klein bottle, the Mandelbrot and Julia sets, the Banach-Tarski paradox, Zeno's paradox, the Mobius strip and torus, Shlegel diagrams, Voronoi diagrams, Borromean rings, the Reidmeister moves, homeomorphism, and others. Three credits. F16(1). Enrollment 18. (Elective)

*MARC 537 Structural Design Portfolio.*<sup>7</sup> The intervention of structural thinking on the architectural design process in higher education is commonly not very punctual and may appear as a postscript. Are you a bit skeptical about the correctness and integration of your structural systems in your studio courses both visually and verbally? This course is an individual opportunity to revisit past projects or create new ones that express your knowledge of architectural structures. S18(1). Enrollment 18. (Elective)

*MARC 439 / MARC 539 Structures III.* Application of engineering principles and analytical methods, as presented in the earlier structures coursework, to a multistory architectural solution. Students will develop a holistic structural design response that withstands both gravity and lateral forces. The structural design will be refined by applying the principles of rigid-body statics and

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<sup>4</sup> Created new university elective course with an emphasis on collaboration and digital technologies, Fall 2011

<sup>5</sup> Created new university elective course with an emphasis on digital technologies, Fall 2017

<sup>6</sup> Created new university elective course with an emphasis on paradoxical form, Fall 2016

<sup>7</sup> Created new university elective course with an emphasis on digital technologies, Spring 2018

deformable body mechanics to the individual structural elements. S15(1), S16(1), S17(1), S(18), S(19), S(20). Avg enrollment 30. (Required)

UNIVERSITY OF  
WYOMING

*ARE 2410 Fundamentals of Building Performance.*<sup>8</sup> Introduction to building performance measures that embrace a global notion of environmental stewardship. Emphasis on passive heating and cooling systems and daylighting strategies to manage the thermal and luminous environments over the facility life cycle. Three credits. F07(1), S08(1), F08(1), S09(1). Avg enrollment 20. (Required)

*ARE/CE 3100 Civil and Architectural Engineering Practice.* Civil and architectural engineering practice from project inception through construction documentation. Topics include: codes, marketing, specifications, budgeting, contracts, subcontracting, registration, construction planning, scheduling, bidding, liability, insurance, and bonding. Three credits. F05(2), S06(2), F06(2), S07(2), F07(1), S08(1), F08(1), S09(1). Avg enrollment 35. (Required)

*ARE 3600 Architectural Design I.*<sup>9</sup> Introduction to the process of architectural design through the completion of several projects, including residential, commercial, and institutional architecture. Three credits. F05(1), S06(1), F06(1), S07(1), F07(1), S08(1), F08(1), S09 (1). Avg enrollment 18. (Required)

*ES 2110 Statics.* Vector statics of particles, rigid bodies and distributed loads. Three credits. SS07(1). Enrollment 14. (Required)

UNIVERSITY OF  
NEBRASKA-LINCOLN

*ARCH 331 Architectural Structures I.* Analysis and design of structural members in wood, steel, and concrete with an emphasis on slabs, joists, beams, girders, and connections. Comparative building designs. Three credits. SS04(1), F04(2), SS05(1). Avg enrollment 32. (Required)

*ARCH 332 Architectural Structures II.* Analysis and design of structural members in wood, steel, and concrete with an emphasis on columns, walls, soils, trusses, and construction. Comparative building designs. Three credits. S04(2), SS04(2), SS05(2). Avg enrollment 32. (Required)

IOWA STATE  
UNIVERSITY

*ARCH 240 Architectural Materials & Assemblies I.* Introduction to common architectural materials, their physical properties, and integration into light construction subsystems. Building codes, forces, and methods of analysis for the design of building systems. Three credits. F99(1), S01(½, team taught). Avg enrollment 124. (Required)

*ARCH 357 Environmental Forces in Architecture.* Introduction to environmental forces that describe the function of buildings in terms of human comfort and patterns of occupancy. Emphasis on analytical rules of thumb and calculation methods that contribute to design synthesis. A design process is developed utilizing building climatology, control of thermal, luminous, and acoustic environments. Three credits. F01(1), F02(½). Avg enrollment 68. (Required)

<sup>8</sup> Created new university required course with an emphasis on environmental stewardship, Fall 2007

<sup>9</sup> Substantially redesigned the course and introduced BIM into the curriculum, Spring 2006

**ARCH 448 Architectural Materials & Assemblies II.** Investigation of the materials and integrated systems found in complex construction assemblies. Emphasis on determination and utilization of appropriate forms of material assemblies and structural systems for large scale construction. Three credits. F99(1), S00(1), F00(1), S01(1), F01(1), S02(1), F02( $\frac{2}{3}$ ), S03( $\frac{2}{3}$ ). Avg enrollment 68. (Required)

**ARCH 458 Environmental Control Systems.** Overview of architectural environmental control systems in response to occupant comfort, patterns of use, health, and safety regulations. Emphasis on the analytical rules of thumb and calculation methods necessary to provide integrated design synthesis of technical systems within architecture. A process is developed to aid in understanding the use and design of mechanical, electrical, plumbing, fire safety, transportation, and conveying systems and subsystems. Three credits. F00(1), S02(1), S03( $\frac{2}{3}$ ). Avg enrollment 68. (Required)

**ARCH 554 Architectural Acoustic Environment.** An integrated study of the concepts of acoustic stimuli, noise control, room acoustics, and sound isolation. Three credits. S01( $\frac{3}{4}$ , the original instructor was hospitalized the fourth week of the semester). Enrollment 5. (Elective)

**ARCH 557 Advanced Studies in Building Systems.** Advanced studies of the investigation and development of technical building systems. Three credits. S00(1). Enrollment 3. (Elective)

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#### SCHOLARSHIP

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#### REFEREED WORKS

**Hedges, K. E.** (2021). The COVID-19 pandemic: The hallmarks of online and hybrid teaching in the engineering classroom. *The Sun Above, The Future Ahead*. Paper presented at the 128<sup>th</sup> Annual Conference and Exposition. Exposition (Paper No. 31076). ASEE.

**Hedges, K. E.** (2020). A teacher's journey through engineering and liberal arts. *At Home with Engineering Education: ASEE's Virtual Conference*. Paper presented at the 127<sup>th</sup> Annual Conference and Exposition. Exposition (Paper No. 31076). ASEE.

Sooter, T. D., **Hedges, K. E.**, & Chikaraishi, N. (2019). A green recovery in Cunningham Park: Drury University responds to the Joplin tornado [technical report]. In D. Maddox (Ed.) *Green Readiness, Response, and Recovery* (pp. 44-57). United States Forest Service.

**Hedges, K. E.**, Sooter, T. D., Chikaraishi, N., & Krasny, M. E. (2018). The healing powers of nature in Joplin's Cunningham Park: Coupling design-build and civic ecology [book chapter]. In M. E. Krasny (Ed.) *Grassroots to Global: Broader Impacts in Civic Ecology* (pp. 177-193). New York: Cornell University Press.

**Hedges, K. E.** (Ed.) (2017). *Architectural graphic standards student edition* (12th ed.). Hoboken, NJ: John Wiley and Sons, Inc.



Sooter, T. D., Chikaraishi, N., & **Hedges, K. E.** (2014). Whole school design-build in the liberal arts tradition. In T. Cavanagh, U. Hartig, & S. Palleroni (Eds.) *Working Out, Thinking While Building* (pp. 546-554). Washington, DC: ACSA Press.

**Hedges, K. E.** (2014). Introduction to architectural structures: Lessons learned from parti pris pedagogy. *360 Degrees of Engineering Education!* Paper presented at the 121<sup>st</sup> ASEE Annual Conference and Exposition (Paper No. 10134). Indianapolis, IN: ASEE.

**Hedges, K. E.,** & Beach, D. R. (2013). Early onset structural simulation strategies to inform architectural design through building information modeling (BIM). In S. Yazdani, & A. Singh (Eds.) *New Developments in Structural Engineering and Construction* (Vol. 2, pp. 1179-1184). Singapore: Research Publishing Services.

Sooter, T. D., Chikaraishi, N., & **Hedges, K. E.** (2013). Extreme service-learning: Engaging a university design-build course with a broadcast network television show in the aftermath of the Joplin tornado. In S. Yazdani, & A. Singh (Eds.) *New Developments in Structural Engineering and Construction* (Vol. 2, pp. 1463-1468). Singapore: Research Publishing Services.

**Hedges, K. E.** (2013). The polarities of liberal learning [editorial]. *Journal of Architectural Engineering Technology*, 2:e110.

Beach, D. R., & **Hedges, K. E.** (2013). Parallel thinking and the BIM imperative. *The International Journal of Design Management and Professional Practice*, 6(4), 19-26.

**Hedges, K. E.,** & Beach, D. R. (2012). The place, product, and process of design thinking inside the Building Information Modeling (BIM) domain. *Journal of Architectural Engineering Technology*, 1:103.

**Hedges, K. E.** (2012). Connecting big data and the design and construction industries with BIM schema [editorial]. *Journal of Architectural Engineering Technology*, 1:e101.

**Hedges, K. E.,** & Livingston, C. (2012). Advancing the dialogue on collaborative models for green building design. In G. Elvin (Ed.) *The AIA Report on University Research Volume 5*. Washington, DC: The American Institute of Architects.

**Hedges, K. E.,** & Beach, D. R. (2011). Deploying interoperable BIM and online interactive 3D in integrated design. In S. O. Cheung, S. Yazdani, N. Ghafoori, & A. Singh (Eds.) *Modern Methods and Advances in Structural Engineering and Construction* (pp. 537-542). Singapore: Research Publishing Services.

Beach, D. R., & **Hedges, K. E.** (2011). Pre-design simulation strategies. *Design Principles and Practices: An International Journal*, 5(5), 609-620.

Denzer, A. S., & **Hedges, K. E.** (2011). The limitations of LEED: A case study. *Journal of Green Building*, 6(1), 25-33.

**Hedges, K. E.** (2011). The 2010 Haiti earthquake: Real-time disaster inquiry in the classroom. *Your Passport to Engineering Education*. Paper presented at the 118<sup>th</sup> ASEE Annual Conference and Exposition (Paper No. AC 2011-2746) [national]. Vancouver, BC, Canada: ASEE.

Hedges, K. E. (2010). The 2010 Haiti earthquake: Real-time disaster inquiry in the classroom. *Educating Engineers for Today and the Future* (Paper No. 0032) [regional]. Paper presented at the ASEE Midwest Section 2010 Conference. Lawrence, Kansas: University of Kansas.

**Hedges, K. E.** (2010). BIM facilitates architectural design in engineering education. *2010 ASEE Global Colloquium on Engineering Education* (Paper No. 184). Washington, DC: ASEE.

**Hedges, K. E.**, Denzer, A. S., Livingston, C., & Hoistad, M. (2010). Socially responsible collaborative models for green building design [book chapter]. In G. Elvin (Ed.) *The AIA Report on University Research Volume 4* (pp. 84-102). Washington, DC: The American Institute of Architects.

Hedges, K. E., Denzer, A. S., Livingston, C. & Hoistad, M. (2009). Socially responsible collaborative models for green building design [research report]. 2008 AIA RFP (Research for Practice) Research Program, AIA Board Knowledge Communities.

Weber, D., & **Hedges, K. E.** (2008). From CAD to BIM: The engineering student perspectives. In M. M. Ettouney (Ed.) *AEI 2008: Building Integrated Solutions* (Paper No. 8642). Reston, VA: ASCE.

Denzer A. S., & **Hedges, K. E.** (2008). From CAD to BIM: Educational strategies for the coming paradigm shift. In M. M. Ettouney (Ed.) *AEI 2008: Building Integrated Solutions* (Paper No. 8193). Reston, VA: ASCE.

**Hedges, K. E.** (2008). Real-time simultaneous collaboration in the BIM repository. In S. Roaf & A. Bairstow (Eds.) *The Oxford Conference: A Re-evaluation of Education in Architecture* (pp. 311-314). Oxford, UK: WIT Press.

**Hedges, K. E.**, & Denzer, A. S. (2008). How a collaborative architecture influences structural engineering education. In D. Anderson, C. Ventura, D. Harvey, & M. Hoit (Eds.) *Crossing Borders: 2008 Structures Congress* (Paper No. 153). Reston, VA: ASCE.

**Hedges, K. E.**, Denzer, A. S., & Yavuzturk, C. (2008). The Solar Decathlon: Lessons learned from transportable solar houses. In Y. M. Xie & I. Patnaikuni (Eds.) *Innovations in Structural Engineering and Construction* (Vol. 2, pp. 1291-1296). London: Taylor & Francis Group.

**Hedges, K. E.**, & Denzer, A. S. (2008). Shifting the curve to the left: Student response to BIM in the classroom. In Y. M. Xie & I. Patnaikuni (Eds.) *Innovations in Structural Engineering and Construction* (Vol. 2, pp. 1279-1284). London: Taylor & Francis Group.

**Hedges, K. E.**, & Denzer, A. S. (2007). Conceptual complexity: How BIM shapes the introductory studio. *Shell and Spatial Structures: Structural Architecture – Towards the Future Looking to the Past* (Paper No. 251). Venice, Italy: University IUAV of Venice – Italy.

**Hedges, K. E.** (2007). ACSYNT BIM: From the aviation industry to the built environment. In H. Bui & T. Medek (Eds.) *Assuming Responsibility: The Architecture of Stewardship* (pp. 114-119). Washington, DC: The Catholic University of America.

**Hedges, K. E., & Denzer, A. S.** (2007). From integrated practice to integrated academics: BIM in the classroom. In M. A. Mounayar, G. Cruz, & C. Bove (Eds.) *DCA 20th Anniversary Conference Proceedings* (pp. 135-146). Muncie, IN: Ball State University.

Denzer, A. S., & **Hedges, K. E.** (2007). In process: Visualization and sustainable building design in the architectural engineering studio. In M. A. Mounayar, G. Cruz, & C. Bove (Eds.) *DCA 20th Anniversary Conference Proceedings* (pp. 91-100). Muncie, IN: Ball State University.

**Hedges, K. E., & Denzer, A. S.** (2007). Visualizing energy: How BIM influences design choices. *2007 ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference* (Paper No. DETC2007-35525). Las Vegas, NV: ASME.

Denzer, A. S., & **Hedges, K. E.** (2007). The Solar Decathlon: The aesthetics of the solar house. In R. Campbell-Howe (Ed.) *Solar 2007: Proceedings of the 36<sup>th</sup> ASES Annual Conference* (Paper No. 121P). Boulder, CO: American Solar Energy Society, Inc.

**Hedges, K. E.** (2007). How BIM may approach the counterfactual scenario of inadequate interoperability. *From Analysis to Implementation* (Paper No. 289). Paper presented at the 3<sup>rd</sup> International Conference on Life Cycle Management. Zurich, Switzerland: University of Zurich at Irchel.

Denzer, A. S., & **Hedges, K. E.** (2007). Sustainable construction in Yellowstone Park: A case study. In Y. M. Chun, P. Claisse, T. R. Naik, & E. Ganjan (Eds.) *Sustainable Construction Materials and Technologies* (pp. 745-752). London: Taylor & Francis Group.

**Hedges, K. E.** (2007). How the impact of building information modeling (BIM) on the cognitive paradigm may influence the future of architectural education. In J. Bing & C. Veikos (Eds.) *Fresh Air: 2007 ACSA Annual Meeting* (pp. 461-469) [national]. Washington, DC: ACSA Press.

Hedges, K. E. (2006). How the impact of building information modeling (BIM) on the cognitive paradigm may influence the future of architectural education. *Imag(in)ing Worlds to Come*. Paper presented at the ACSA Northeast Regional Conference [regional]. Québec, Canada: Université Laval.

**Hedges, K. E.** (2007). How the impact of building information modeling (BIM) on the experiential-learning cycle (ELC) in architecture education will affect professional practice. In J. C. Shih & J. Sullivan (Eds.) *Symposium on Architecture for the 21<sup>st</sup> Century* (pp. 69-74). Baton Rouge, LA: Louisiana State University.

**Hedges, K. E.** (2006). Immaterial imagination: How building information modeling influences material choices. *Summer Institute for Architecture Journal*, 3, 49-55.

COMPETITION  
ENTRIES

**Hedges, K. E., & Greco S. (Eds.). (2006).** AIA case study: The University of Nebraska and the Durham Research Center. *2005 AIA Case Study Initiatives*.

Sooter, T., Chikaraishi, N., & **Hedges, K. E.** (2016). *Butterfly garden and overlook: A whole-school approach to design-build in response to the Joplin tornado*. [2016-2017 ACSA Architectural Education Awards: Design-Build Category]. Drury University.

Sooter, T., Chikaraishi, N., & **Hedges, K. E.** (2014). *The healing gardens of Cunningham Park in Joplin, Missouri* [2014-2015 ACSA Architectural Education Awards: Design-Build Category]. Drury University.

Sooter, T., Chikaraishi, N., & **Hedges, K. E.** (2012). *Borne from disaster: Design-build lessons learned in response to the Joplin Tornado* [2012-2013 ACSA Architectural Education Awards: Design-Build Category]. Drury University.

**Hedges, K. E.,** Denzer, A. S., Livingston, C., & Hoistad, M. (2009, January 15). *Making connections with design curricula* [2009 AIA TAP BIM Awards]. Laramie, WY: University of Wyoming, Montana State University, and University of Nebraska-Lincoln. – **Honorable Mention**

**Hedges, K. E., & Denzer, A. S.** (2008, February 1). *From CAD to BIM: Exploring the paradigm shift in architectural engineering education* [2008 AIA TAP BIM Awards]. Laramie, WY: University of Wyoming. – **Award Citation**

**Hedges, K. E., & Denzer, A. S.** (2007, February 15). *How BIM enriches an engineering curriculum* [2007 AIA TAP BIM Awards]. Laramie, WY: University of Wyoming.

**Hedges, K. E., & Borner, W.** (2005). *Students in the middle, guides on the sides* [2005 NCARB Prize for Creative Integration of Practice and Education in the Academy]. Lincoln, NE: University of Nebraska-Lincoln.

FUNDED RESEARCH  
GRANTS & CONTRACTS

“Landscapes of Resilience,” Supported by the *National Awards Program for Integrated Research & Design Projects* in conjunction with the Open Spaces Sacred Places: The Healing Power of Nature, 8 February 2013, Fiduciary: Drury University. PI: Tidball K. (Cornell University), Co-Investigators: Svendsen E., Campbell L., Falxa-Raymond, N., Joplin, MO, Drury University Team Members: Sooter, T., Chikaraishi, N., **Hedges, K. E.**, Wlodarczyk, N., Silva-Brown, J., & You, J. Total proposal budget is \$585,258 over three years.

“Socially responsible collaborative models for green building design,” Supported by the *AIA Board Knowledge Committee for the RFP Research Program*, 16 April 2008, PI: **Hedges, K. E.**, Co-Investigators: Denzer, A. S., & Livingston, C. Total proposal budget is \$7,000 over seven months.

Autodesk Agreement (2008, October 18). Sponsorship Agreement between Autodesk and **K. E. Hedges** to provide access to research data in exchange for 40+ professional seats of computer software Revit Structure 2009, Revit MEP 2009, Navisworks Manage 2009, Quantity Takeoff 2009, and Green Building Studio. Total value is undisclosed.

UNFUNDED RESEARCH  
GRANT PROPOSALS

“Building green curricula with BIM,” Submitted to the *AIA Board Knowledge Committee and AIA College of Fellows for the Upjohn Research Initiative*, 1 September 2008, PI: **Hedges, K. E.**, Co-Investigators: Hoistad, M., Denzer, A. S., & Livingston, C. Total proposal budget is \$60,000 over eighteen months including \$30,000 cost share from University of Wyoming School of Energy Resources.

“Real-time cross-disciplinary distance collaboration for green building design,” Submitted to the *U. S. Green Building Council*, 17 March 2008. PI: Denzer, A. S., Co-Investigators: **Hedges, K. E.**, & Livingston, C. Total proposal budget is \$38,340.85 over one year including \$18,433.10 cost share from University of Wyoming School of Energy Resources.

“WyoZED: A demonstration and performance assessment of a net zero energy dwelling in Wyoming,” Submitted to the *U. S. Department of Energy*, 22 May 2006. PIs: **Hedges, K. E.**, Denzer, A. S., & Yavuzturk, C. Total proposal budget is \$639,581 over three years.

“WyoZED: A demonstration and performance assessment of a net zero energy dwelling in Wyoming,” Submitted to the *Wyoming Energy Commission*, 24 March 2006. PIs: **Hedges, K. E.**, Denzer, A. S., & Yavuzturk, C. Total proposal budget is \$428,845 over three years.

“Building integrated photovoltaics: A net positive energy dwelling in high plains climate,” Submitted to the *National Renewable Energy Laboratory* for the Architectural Engineering Institute’s Solar Decathlon 2007, 2 December 2005, PIs: **Hedges, K. E.**, Denzer, A. S., & Yavuzturk, C. Total proposal budget is \$314,750 over two years.

INTERNATIONAL  
CONFERENCE  
PRESENTATIONS

“Extreme service-learning: Engaging a university design-build course with a broadcast network television show in the aftermath of the Joplin tornado,” *7<sup>th</sup> International Structural Engineering and Construction Conference*, Honolulu, HI, 19 June 2013.

“Early onset structural simulation strategies to inform architectural design through building information modeling (BIM),” *7<sup>th</sup> International Structural Engineering and Construction Conference*, Honolulu, HI, 19 June 2013.

“Deploying interoperable BIM and on-line interactive 3D in integrated design,” *6<sup>th</sup> International Structural Engineering and Construction Conference*, Zurich, Switzerland, 23 June 2011.<sup>10</sup>

“BIM facilitates architectural design in engineering education [poster],” *2010 ASEE Global Colloquium on Engineering Education*, Singapore, 19 October 2010.

“Real-time simultaneous collaboration in the BIM repository,” *The Oxford Conference 2008*, Oxford, UK, 24 July 2008.<sup>11</sup>

<sup>10</sup> At Eidgenössische Technische Hochschule (ETH) Zurich, ranked 14<sup>th</sup> in the world and 2<sup>nd</sup> in Europe, *Times Higher Education World University Rankings*

<sup>11</sup> At University of Oxford, ranked 2<sup>nd</sup> in the world (tied) and 1<sup>st</sup> in Europe, *Times Higher Education World University Rankings*

“Conceptual complexity: How BIM shapes the introductory studio,” *International Association for Shell and Spatial Structures 2007 Symposium*, Venice, Italy, 3 December 2007.

“The Solar Decathlon: Lessons learned from transportable solar houses,” *4<sup>th</sup> International Structural Engineering and Construction Conference*, Melbourne, Australia, 27 September 2007.

“Shifting the curve to the left: Student response to BIM in the classroom,” *4<sup>th</sup> International Structural Engineering and Construction Conference*, Melbourne, Australia, 27 September 2007.

“Visualizing energy: How BIM influences design choices,” *2007 ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference*, Las Vegas, NV, 7 September 2007.

“How BIM will enhance the interoperability of life cycle management,” *3<sup>rd</sup> Int’l Conference on Life Cycle Management*, Zurich, Switzerland, 29 August 2007.

NATIONAL  
CONFERENCE  
PRESENTATIONS

“The COVID-19 Pandemic: The Hallmarks of Online and Hybrid Teaching in the Engineering Classroom,” *2020 ASEE National Conference*, Virtual, 26 July 2021.

“A Teacher's Journey Through Engineering and Liberal Arts,” *2020 ASEE National Conference*, Virtual, 24 June 2020.

“Introduction to architectural structures: Lessons learned from parti pris pedagogy,” *ASEE National 2014 Conference*, Indianapolis, IN, 15 June 2014.

“The 2010 Haiti earthquake: Real-time disaster inquiry in the classroom,” *2011 ASEE National Conference*, Vancouver, BC, Canada, 29 June 2011.

“How a collaborative architecture influences structural engineering education,” *2008 Structures Congress*, Vancouver, BC, Canada, 25 April 2008.

“ACSYNT BIM: From the aviation industry to the built environment [poster],” *2008 ACSA Annual Meeting*, Houston, TX, 29 March 2008.

“From integrated practice to integrated academics: BIM in the classroom,” *20<sup>th</sup> Design Communication Association Conference*, Muncie, IN, 14 September 2007.

“How the impact of building information modeling (BIM) on the experiential-learning cycle (ELC) in architecture education will affect professional practice,” *Symposium on Architecture for the 21<sup>st</sup> Century*, Baton Rouge, LA, 22 February 2007.

“How the impact of building information modeling (BIM) on the cognitive paradigm may influence the future of architectural education,” *2007 ACSA Annual Meeting*, Philadelphia, PA, 9 March 2007.

REGIONAL  
CONFERENCE  
PRESENTATIONS

“The 2010 Haiti earthquake: Real-time disaster inquiry in the classroom,” *ASEE Midwest Section 2010 Conference*, Lawrence, KS, 23 September 2010.

“ACSINT BIM: From the aviation industry to the built environment,” 2007 ACSA Southeast Regional Conference, Washington, DC, 12 October 2007.

“How the impact of building information modeling (BIM) on the cognitive paradigm may influence the future of architectural education,” 2006 ACSA Northeast Regional Conference, Quebec, Canada, 7 October 2006.

PRESENTATION  
SESSION PROPOSALS  
(ACCEPTED)

“Architects as leaders: Best practices for engaging community after the Joplin tornado,” for 2013 AIA National Convention and Design Expo, Denver, CO, 20 June 2013. Presentation session organizer, **Hedges, K. E.**; Presenters, Sooter, T. D., Chikaraishi, N., & Dake, B. Includes one session abstract and two individual presentations from AIA Springfield and Drury University.

“From CAD to BIM: Exploring the BIM paradigm shift in engineering education through faculty and student perspectives,” for 2008 AEI Building Integrated Solutions, Denver, CO, 26 September 2008. Paper session organizer, **Hedges, K. E.**; Presenters: Denzer, A. S., Livingston, C., Webber, D., & Berwald, S. Includes one session abstract and two paper abstracts from University of Wyoming and two paper abstracts from Montana State University.

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CREATIVE ENDEAVORS – BUILT WORKS ON DISPLAY

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TERRUS REAL ESTATE GROUP &  
PRINCIPAL FINANCIAL GROUP

“Campus sprinkler coverage extension,” for *Principal Financial Group*, Des Moines, IA, 1999-2002. Construction management consulting services for fire and life safety systems upgrades. Created scope of work, procured contractor bids, and executed contracts. Approximate cost \$1,350,000.

“Amendment to the Hillside Planned Unit Development Concept Plan,” for *Principal Financial Group*, Des Moines, IA, 2001-02. Architectural consulting services for the development bordered between Center and Crocker Streets and Eighth and Ninth Streets. The Concept Plan was in conformance with the 2020 Community Character Plan, and vacation and conveyance of particular parcels. Submitted to the City of Des Moines, Community Development Department.

“Ethernet conversion,” for *Principal Financial Group*, Des Moines, IA, 2000. Design development consulting services for communications systems upgrade. Approximate cost \$3,000,000.

“Intermodal Transportation Facility (Park and Ride Project),” for *Principal Capital Management (Principal Real Estate Services, LLC)*, Des Moines, IA, 1994 and 1999. Pre-design (1994) and project closeout consulting services (1999) for 1,831-space parking structure, metro bus station, and day care facility. Approximate cost \$23,377,000.<sup>12</sup>

“Essman & Associates,” for *Principal Capital Management (Principal Real Estate Services, LLC)*, 100 East Grand, Des Moines, IA, 1999. Construction management consulting services for all phases of a 1,527 ft<sup>2</sup> (142 m<sup>2</sup>) tenant improvement.

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<sup>12</sup> Designed by HLKB, 2001 AIA Architecture Firm Award recipient

“HMG,” for *Principal Capital Management (Principal Real Estate Services, LLC)*, Locust Mall, Des Moines, IA, 1999. Construction management consulting services for the schematic and design development phases for base building improvements.

“Greater Des Moines Partnership,” for *Principal Capital Management (Principal Real Estate Services, LLC)*, Locust Mall, Des Moines, IA, 1999. Construction management consulting services for the schematic and design development phases of a tenant improvement.

“CGU Hawkeye Insurance,” for *Principal Capital Management (Principal Real Estate Services, LLC)*, Capital Square, Des Moines, IA, 1999. Construction management consulting services for the design and construction phases of a 50,000 ft<sup>2</sup> (4,650 m<sup>2</sup>) tenant improvement.

“Kemin Foods, L.C.,” for *Principal Capital Management (Principal Real Estate Services, LLC)*, 100 East Grand, Des Moines, IA, 1999. Architectural (schematic design) and construction management consulting services for all phases of a 5,400 ft<sup>2</sup> (502 m<sup>2</sup>) tenant improvement.

“Riedman Insurance,” for *Principal Capital Management (Principal Real Estate Services, LLC)*, River Hills, Des Moines, IA, 1999. Construction management consulting services for tenant improvements.

“Iowa Department of Public Safety,” for *Principal Capital Management (Principal Real Estate Services, LLC)*, River Hills, Des Moines, IA, 1999. Construction management consulting services for tenant improvements.

“Iowa Finance Authority,” for *Principal Capital Management (Principal Real Estate Services, LLC)*, River Hills, Des Moines, IA, 1999. Construction management consulting services for tenant improvements.

“Corporate One elevator modernization,” for *Principal Capital Management (Principal Real Estate Services, LLC)*, Des Moines, IA, 1999. Construction management consulting services for elevator performance upgrade.

“Principal Mutual Life Insurance Company Corporate Expansion [Corporate Four],” for *Principal Financial Group – Facilities Management*, 600 Seventh Street, Des Moines, IA, 1993-95, 1997-99. Construction management consulting services for the design, construction, and project close-out of the 518,000 ft<sup>2</sup> (48,100 m<sup>2</sup>) “Z”-shaped home office building. Published cost is \$65,000,000.<sup>13</sup>

“Terrus Real Estate Group,” for *Principal Capital Management (Principal Real Estate Services, LLC)*, 616 Tenth Street, Des Moines, IA, 1998-99. Architectural (schematic design) and construction management consulting services from pre-design to project close-out of a 31,000 ft<sup>2</sup> (2,880 m<sup>2</sup>) building renovation for new home office. Approximate cost \$2,100,000.

“Corporate One cladding restoration,” for *Principal Financial Group – Facilities Management*, Des Moines, IA, 1993-94. Construction management consulting services for \$500,000 limestone cladding restoration.

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<sup>13</sup> Designed by Murphy/Jahn Architects, Inc., 2005 AIA Architecture Firm Award recipient



BROST ARCHITECTS  
& PLANNERS

“Keck City Center Rehabilitation,” for *Principal Financial Group – Facilities Management*. Des Moines, IA, 1994. Construction management consulting services for \$130,000 maintenance associated with a multi-story precast concrete structure.

“California seismic risk analysis,” for *Principal Financial Group – Investment Commercial Real Estate*, Des Moines, IA, 1994. Evaluated lateral-load-resisting systems of west coast properties for mortgage underwriters associated with the risk management program.

“Rockwell Center Executive Office Park,” Cedar Rapids, IA, 1989. Site development services for 2,500,000 ft<sup>2</sup> (232,000 m<sup>2</sup>) office park.

“Source Data Systems,” Cedar Rapids, IA, 1989. Architectural services for 26,000 ft<sup>2</sup> (2,420 m<sup>2</sup>) computer office building. Recipient of the Varco-Pruden Metal Building Award.

“The Heritage,” Cedar Rapids, IA, 1988. Architectural services for 45,000 ft<sup>2</sup> (4,180 m<sup>2</sup>) retirement community.

“Corporate Center East,” Bloomington, IL, 1988. Architectural services for 18,000 ft<sup>2</sup> (1,670 m<sup>2</sup>) office building.

“Light Company Employees Credit Union,” Cedar Rapids, IA, 1988. Architectural services for 5,000 ft<sup>2</sup> (465 m<sup>2</sup>) banking facility.

“Creative World Day Care,” Iowa City, IA, 1988. Architectural services for day care center.

“Dale Lee Distributors,” Cedar Rapids, IA, 1988. Architectural services for beer distributorship addition.

“Kirkwood Apartments,” Cedar Rapids, IA, 1987. Architectural services for 12-unit apartment complex.

“Jeribek Residence,” Lake of the Ozarks, MO, 1986. Architectural services for an octagonal vacation home.

MORTON  
BUILDINGS, INC.

Architectural services for wood post-and-beam buildings, 1984-1985: Kenneth Lefler, Tonawanda, NY; Ryder Truck Rental, Springfield, MO; Norma J. Nelson, Alexandria, MN; Armand E. Racine, Killeen, TX; and Vincent C. Piscitelli, Caneadea, NY.

## SERVICE

UNIVERSITY  
SERVICE

Higher Learning Commission Steering Committee, Member, Drury University, 2019 – 2020

Faculty Affairs Committee<sup>14</sup>, Member, Drury University, 2017 – 2019

Academic Affairs Committee<sup>14</sup>, Member, Drury University, 2016 – 2017

<sup>14</sup> University standing committee

	Search Committee, HSA Director, Member, Drury University, 2011 – 2012
	Student Affairs Committee <sup>14</sup> , Drury University, 2010 (Member), 2011 (Secretary)
DEPARTMENT SERVICE	Scholarship Committee, Member, Drury University, 2019 – 2020
	Assessment Committee, Drury University, 2017 – 2018 (Chair), 2016 – 2017 (Member)
	Strategic Planning Committee, Member, Drury University, 2016
	Curriculum Committee, Drury University, 2014 – 2016 (Chair), 2009 – 2011 & 2012 – 2014 (Member)
	NAAB Committee, Member, Drury University, 2013 – 2014
	School Advisory Council, Member, Drury University, 2013 – 2014
	Search Committee, HSA Faculty, Member, Drury University, 2011 – 2012
	Alumni Design Awards Ad-hoc Committee, Drury University, 2011 (Chair), 2012 (co-Chair)
	Studio Culture Committee, Member, Drury University, 2010 – 2011
	Curriculum Committee, Member, University of Wyoming, 2005 – 2009
	Student Advisory Board, Member, M.S. / Ph.D. Program Representative, University of Nebraska-Lincoln, 2004 – 2005
STUDENT CHAPTERS	American Institute of Architects, Student Chapter, Faculty Advisor, Drury University, 2011 – 2013
	Architectural Engineering Institute, Student Chapter, Faculty Co-Advisor, University of Wyoming, 2005 – 2008
SCIENTIFIC & PROFESSIONAL SOCIETY MEMBERSHIPS (CURRENT)	American Institute of Architects, Member
	American Society for Engineering Education, Member
	American Society of Civil Engineers, Associate Member (Charter member of the Structural Engineering Institute)
	Building Technology Educators Society, Member, BTES Liaison, 2020
CHAIRING CONFERENCE PAPER SESSIONS	“From Classrooms to Platforms: The Comparisons within Distance Learning Environments,” <u>Session Chair</u> for the <i>2010 Frontiers in Education (FIE) Conference</i> , Arlington, VA, 30 October 2010.
	“The Learners, Instructors, and Tools of Distance Learning,” <u>Session Chair</u> for the <i>2010 Frontiers in Education (FIE) Conference</i> , Arlington, VA, 30 October 2010.
	“Building Information Modeling (BIM),” <u>Session Chair</u> for the <i>Building Integrated Solutions</i> 2008 AEI National Conference, Denver, CO, 26 September 2008.

PEER REVIEWER FOR BOOKS	<p>National Institute of Building Sciences (NIBS) buildingSMART alliance (bSa). (2012). <i>National building information modeling Standard, Version 2</i>. Project Committee Member (appointed), 2010, and Design Workgroup Member (appointed), 2011 – 2012.</p> <p>Ramsey, C. G., Sleeper, H. R., &amp; Bassler, B. (Eds.). (2008). <i>Architectural graphic standards: Student edition</i> (11<sup>th</sup> ed.). Hoboken, NJ: John Wiley &amp; Sons, Inc., Advisory Board Member (appointed), 2006 – 2008.</p>
PEER REVIEWER FOR ARCHIVAL JOURNALS & CONFERENCE PAPERS	<p>ASCE National Conference (2020 three papers, four abstracts; 2015 one paper; 2012 three papers; and 2011 seven abstracts, five papers)</p> <p>Design Principles and Practices: An International Journal (2012 one paper; 2011 two papers)</p> <p>Frontiers in Education International Conference (2013 three papers; 2012 three papers; and 2011 one paper)</p> <p>Journal of Architectural Engineering Technology (2016 one paper; 2012 two papers)</p> <p>Journal of Professional Issues in Engineering Education and Practice (2015 one paper; 2014 one paper; and 2011 one paper)</p> <p>TAD (<i>Technology   Architecture + Design</i>) Journal (2019 one paper)</p>
PEER REVIEWER FOR RESEARCH GRANTS	<p>Canada Foundation for Innovation, Ottawa, Ontario, Canada (Funding stream, Leaders Opportunity Fund; Grant value \$218,803; Area of expertise, BIM, Dec 2008 – Jan 2009)</p>
SUBJECT MATTER EXPERT (SME)	<p>Subject Matter Expert (SME) for John Wiley Publishers for the NCARB ARE Mapping project, 2017-2018: <i>The Architect's Handbook of Professional Practice</i> (15th ed.), <i>Fundamentals of Building Construction Materials and Methods</i> (6th ed.), and <i>Mechanical and Electrical Equipment for Buildings</i> (12th ed.).</p>
COMMUNITY SERVICE	<p><i>Shift Leader</i> (1:00 a.m. – 9:00 a.m.), for the Drury University, Arch 315 Architectural Design V, student construction of the volunteer tribute for the <i>Extreme Makeover Home Edition</i> television show, Cunningham Park, Joplin, MO, October 19 – 26, 2011</p> <p><i>Volunteer</i>, Adopt-an-Urban Garden, Rutledge Wilson Farm Community Park, Springfield, MO, 2011, 2012, 2014</p>

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## RECOGNITION IN THE FIELD

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### Awards and Honors

*Faculty Award for Scholarship*, Drury University, 2018

*President’s Award of Excellence for Community Engagement*, Drury University, 2012

*3<sup>rd</sup> Place Outstanding Paper Award*, ASEE Midwest Section 2010 Conference

*Honorable Mention for Curricular Development*, 2009 AIA TAP BIM Awards

*Award Citation for Curricular Development*, 2008 AIA TAP BIM Awards

NATIONAL

#### Citation Statistics

GOOGLE  
SCHOLAR

MEASURE	SINCE 2016	ALL
<i>Citations</i>	101	193
<i>h-index</i>	5	6
<i>i10-index</i>	3	5

INDIVIDUAL  
QUOTES

#### Media Coverage

Gordon, D. (2013, February). Leading the charge: Design thinking as a community catalyst. *AIArchitect*, p. 37.

DU. (2010). *I am Drury: Drury University self-study*. Prepared for the 2010 Higher Learning Commission comprehensive site visit, p. 19.

Autodesk. (2009). *Teach teamwork*. University of Wyoming Education Success Story.

“University of Wyoming Teaches Teamwork,” (2009, May). *Prosoft Education Newsletter*.

“AIA bestows University of Wyoming with national award,” (2008, June). *Consulting Specifying Engineer*, p. 14.

TEAM  
RECOGNITION

Miller, M. (2012, September 2). Six Drury faculty members recognized for Joplin community service. *Springfield News-Leader*.

Mid-court recognition during the Drury men’s basketball game at the O’Reilly Family Events Center for the work associated with the Volunteer Tribute at Cunningham Park, Joplin, MO, February 18, 2012.

PROJECT  
RECOGNITION

Kropf, A. (2014). Cover page for the Social Resilience and Recovery theme in the *American Journal of Public Health*, 104(4), 575 & 579.

Hagan, S., Kam, C., & Rinella, T. (2011). Award winning BIM: Seven years of AIA TAP BIM Awards. Presentation session AIA11TH224 at the *2011 AIA National Convention* (pp. 21-22, & 25-26). New Orleans, LA.

“Parametrics and IPD,” (2010, Spring). *Architecture California (the Journal of the AIA California Council)*, Professional practice issue 10.1, p. 41.

Hagan, S. (2009). The art of BIM evolves. *AIA Technology in Architectural Practice (TAP) 5<sup>th</sup> Annual BIM Awards*.

Technology in Practice Knowledge Community (2009, Spring). 2009 TAP Building Information Modeling Awards Recipients, *AIA Edges Newsletter*.

Technology in Practice Knowledge Community (2008, Spring). The 2008 AIA TAP BIM Awards, *AIA Edges Newsletter*.

Bordenaro M., & Issa, R. (2008, December 9). BIM education baseline: What's happening in colleges and universities? *Ecobuild America and AEC Science & Technology 2008 Conference* (Workshop W107 Presentation). Washington, DC.

AIA Technology in Architectural Practice (TAP). (2008). *4<sup>th</sup> Annual BIM Awards*.

Livingston, H. (2008, October 9). The institute releases new IPD docs and bestows the '08 BIM Awards. *Cadalyst*.

#### Invited Activities (accepted) – reduced list

#### PRESENTATIONS & WORKSHOPS

“Introduction to the ARE Structures Division,” Speaker for *ARE Exam Study Series* hosted by AIA Springfield, Springfield, MO, 7 June 2012.

“Complying with Wyoming rules and regulations on the practice of architecture and engineering,” Workshop Presenter for *Design Law for Wyoming Architects and Engineers* hosted by Halfmoon LLC, Cheyenne, WY, 15 May 2009.

“Professional conduct and standard of care,” Workshop Presenter for *Design Law for Wyoming Architects and Engineers* hosted by Halfmoon LLC, Cheyenne, WY, 15 May 2009.

“BIM collaborations at the University of Wyoming,” Workshop Presenter for *W207: BIM in Education – Headliners* at the Ecobuild America and AEC Science & Technology 2008 Conference, Washington, DC, 9 December 2008.

“BIM in architectural engineering education,” Workshop Presenter for *Integrated Project Delivery* hosted by Autodesk, Inc., Vancouver, BC, Canada, 15 October 2008.

“The future of BIM inside livable communities,” Keynote Speaker for the *Livable Communities* 2008 AIA Montana Conference, Helena, MT, 19 September 2008.

“The design and construction of the Principal Mutual Life Insurance Company Corporate Expansion [Z-building],” Presenter for and hosted by the Architectural Engineering Institute, Student Chapter, Laramie, WY, 8 November 2005.

“The making of the Durham Research Center: An AIA case study,” Presenter for and hosted by the University of Nebraska Medical Center, Omaha, NE, 26 April 2005.