

Rob Whitehead, AIA, LEED® AP

Associate Professor of Architecture,
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INFORMATION

Education

- 1997 **Master of Architecture, Post-Professional**
University of Texas at Austin, Austin, TX
- 1993 **Bachelor of Architecture**
Iowa State University, Ames, IA

Academic Experience

- 2018 **Associate Professor, Iowa State University, Department of Architecture,**
2+2 Appointment, Professional Studios + Seminar/Lecture Instruction & Advising
Courses taught at graduate and undergraduate level within department.
- 2019 **Faculty Fellow for High Impact Practices, Iowa State University**
Center for Excellence in Teaching and Learning (CELT), 2-year term. Develop and coordinate:
Project-Based Learning workshops, Engaged Faculty Institute on Service-learning activities,
CELT monograph series, and open-educational resources
- 2012-2017 **Assistant Professor, Iowa State University, Department of Architecture,**
2+2 Appointment, Professional Studios + Seminar/Lecture Instruction & Advising
Courses taught at graduate and undergraduate level within department.
- 2007-2012 **Lecturer, Iowa State University, Department of Architecture**
Professional Studios + Seminar/Lectures Instruction
Courses taught at graduate and undergraduate level within department.

Professional Practice (Abridged)

- 2007-present **Founding Principal Architect, Whitehead Design Workshop, Des Moines, IA**
Architectural design/build practice specializing in integrated approaches to design and delivery
methodologies for small-scale projects and furniture.
- 2009 **Project Designer, BNIM Architects,**
2010 National AIA Firm of the Year, Des Moines, IA. *Project Designer (Part-Time)* Developed project designs
through technical integration and documentation (part-time employee).
- 1998-2007 **Senior Architect + Firm Associate, Herbert Lewis Kruse Blunck Architecture,**
2001 National AIA Firm of the Year, Des Moines, IA. *Project Designer and Manager.* Led all aspects of design,
production, and administration for a variety of award-winning projects. Managed multiple projects and
teams and collaborated across disciplines.

Licensure

- 2006-present **LEED® Accredited Professional, Leadership in Energy and Environmental Design**
- 1998-present **Licensed Architect, State of Iowa, No. 04002**
- 1993-present **Member, American Institute of Architects, National and state chapters**

SCHOLARSHIP

Books

- 2020 **Constructing Building Enclosures, “Saarinen’s Shells: The evolved influence of engineering and construction,”** Contributing Author. Clifton Fordham, Ed., Routledge (Taylor and Francis Group), 2020
anticipated publication.
- 2019 **Structures by Design: Thinking, Making, + Breaking textbook,** Routledge Books (Taylor and Francis Group).
Author and Illustrator. 15 Chapters, 110,000 words + 625 images and illustrations. *Description: Structural design
instruction for architecture students; project-based design exercises based on original coursework developed for Iowa State
technology sequence.*

- 2014 ***Design-Tech, Building Science for Architects* textbook**, Second Edition, Routledge Books (Taylor and Francis Group), 600 pages, ISBN: 978-0-415-81785-1; *Co-Authors with Tom Leslie & Jason Alread*. Personal Contribution: Part 5 Structural Design, Chapters 20-28, (40,000 words + 100 new illustrations). *Published February 24, 2014*

Honors & Awards

- 2015 **Design Intelligence 30 Most Admired Educators for 2015**, *Design Intelligence Magazine*, Volume 20, Number 6. *Selected by Design Intelligence staff with "extensive input from thousands of design professionals, academic department heads, and students" from architecture, industrial design, interior design, and landscape architecture programs nationwide.*
- 2014 **AIA Iowa Educator Award**, American Institute of Architects, Iowa Chapter, 2014. *Award presented to educators that have, "made a significant contribution to architectural education in Iowa."* Presented at AIA Iowa Fall Convention, September 2014.

Vernon Stone Fund in Architecture, "*Practicing Failures: Making, Breaking, & Innovating Building Designs.*" Selected Recipient, Department of Architecture Faculty Fund for travel and research development. Funding total, \$3,000.

Miller Faculty Fellowship, "Active Collaboration for Sustainable Technological Integration." Rob Whitehead (P.I.), with U. Passe, A. Wheeler, and K. Nelson (ISU). Selected by ISU Center for Excellence in Learning and Teaching (CELT) Board of Directors. *Fellowships provide faculty with "opportunities to enhance their scholarly work in the undergraduate academic programs of the university and to develop innovative approaches to enhance student learning."* Funding for research assistant, travel funding for non-faculty practitioners, and printing/production of results. Funding total, \$9,000.

Scholarship of Teaching and Learning (SoTL) Scholars Program, Iowa State University, Selected Participant, ISU Center for Excellence in Learning and Teaching (CELT); This program selected participants that showed potential for examining specific research questions related to teaching scholarship. The program involved a year-long research program related to teaching methods. Funding Total, \$1,250

- 2013 **Creative Achievement Award**, Association of Collegiate Schools of Architecture (ACSA), "*Think, Make, Break, + Evaluate,*" *Undergraduate Structural Design Sequence at Iowa State University.* The award recognizes a "*specific creative achievement in teaching, design, scholarship, research, or service that advances architectural education.*" Presented at ACSA Annual Convention, March 2013, San Francisco, CA.
- 2011 **Emerging Faculty Award**, Building Technology Educators Society (BTES) *Inaugural award recipient. This award is presented to "...an outstanding, rising educator in building technology education who has demonstrated particular excellence in teaching and innovation during the formative years of their architectural teaching career."* Presented at BTES Bi-Annual National Convention, Toronto, Canada, August 2011.
- 2009 **NCARB Grant for the Integration of Practice and Education in the Academy**, National Council of Architectural Registration Boards (NCARB), December 2009. "Practicing Structures," with Professor Tom Leslie (P.I.). *The national program recognized programs, "... that incorporate architectural practice and education in creative ways... to address significant needs in architecture education."* Funding total: \$11,850 award, highest funding level of all recipients.
- 2009 **Honorable Mention, Excellence in Green Building Education Awards**, Higher Education Category, U.S. Green Building Council (USGBC), Spring 2009
"SCI-TECH: A Technology Sequence for Generation Green," with Professors Tom Leslie and Jason Alread. *The award recognizes "discrete, replicable pedagogical efforts" in curricula that "advance green building ideals of transforming how buildings and communities are designed, built, and operated."*

Journal Articles

- 2009 R. Whitehead, "**Tectonics, Tolerances, and Time: Eero Saarinen and Mies van der Rohe at Drake University,**" *Preservation, Education & Research Journal*, Vol. 2, 2009, The National Council for Preservation Education, pg. 27-40.

Patents

- 2017 **Application Review Process**, "Store Floor," ISURF #04686. Contributors: R. Whitehead (Instructor), E. Johnson, A. Knepper, M. Engel, and N. Becker (ISU alums from Dsn 546 studio). Intellectual Property Disclosure

and Record (IPDR) form submitted for review to Iowa State University Research Foundation (ISURF) for initial review. Submitted August 22, 2017. Inventors declined to proceed.

Funded Projects

- 2019 **Mobile Micro-Grid Disaster Relief Crate**, Iowa Economic Development Authority, Iowa State University (ISU), in collaboration with Sun Crate, PowerFilm Solar and the Iowa Army National Guard will design, construct and deploy a prototype modified 20' shipping "power" crate. *Investigation Team:* Dolf Ivener (Sun Crate), Dan Stieler (Solar Film), Anne Kimber, Chao Hu, Ulrike Passe, Rob Whitehead. *Total Funding:* \$158,396
- 2018 **Wells Concrete Fellow for Construction Research**, Iowa State University, Department of Architecture. Fund for design and construction research related to proposed design for remote water cistern. Funding total: \$10,000.
- 2016 Principal Investigator (co-investigator, S. Doyle), "**Bishop Family Shelter**," funding from the City of Urbandale to ISU Office of Sponsored Projects. Funding for design investigation, prototypes, and construction of the building. Total Funding: \$70,000. Duration of Investigation: November 2015-August 2016.

Conference Papers & Presentations

- 2019 R. Whitehead, "**Structures for Relief & Resiliency: Enhancing Creative Applications of Technical Acumen through Constrained Conditions**" Proceedings, Building Technology Educators' Society (BTES), Integration + Innovation 2019 Conference. Eds. C. Brause, N. Darling, and P. Clouston. U. Mass Amherst, MA. Paper published and presented.
- R. Whitehead & S. Doyle, "**The Lore, Lessons, and Limits of Building Experience.**" Presentation and discussion of design-build and service learning in architectural education. Building Technology Educators' Society (BTES), Integration + Innovation 2019 U. Mass Amherst,
- R. Whitehead, "**Frei Otto's Pneumatic Humanitarian Design Experiments: The ideology and technology of lightness and adaptability.**" International Association for Shell and Spatial Structures, "Form and Forces" conference, 2019. Barcelona, Spain. October 7-10, 2019. Abstract peer-reviewed and selected for presentation.
- 2018 R. Whitehead, "**Portentous, and Predictable: Eero Saarinen, Ammann & Whitney, and the Damaging Failures of Kresge Auditorium (1950-1955)**" Proceedings of the IASS Symposium 2018, Creativity in Structural Design, C. Mueller and S. Adriaenssens (eds), July 16-20, 2018. MIT, Cambridge, MA
- 2017 R. Whitehead & S. Doyle, "**The Lore of Building Experience: Deconstructing Design-Build,**" 33rd Annual, National Conference on the Beginning Design Student (NCBDS), University of Utah, Salt Lake City, UT, March 9-11, 2017. Paper published and presented.
- 2016 R. Whitehead, "**Model Behavior: The Evolving Use of Physical Prototypes in Structural Shell Design, 1959-1974,**" 104th Association for Collegiate Schools of Architecture (ACSA) Annual Meeting, Seattle, WA, March 17-19, 2016. Paper published and presented.
- R. Whitehead, "**Supporting Students: Using Anthropomorphic Structures to Enhance Early Structures Education,**" 32nd Annual, National Conference on the Beginning Design Student (NCBDS), University of Cal Poly San Luis Obispo, Feb. 25-28, 2016. Paper published and presented.
- R. Whitehead & C. Rogers, "**All Hands on Deck: Instructors as Collaborators and the Modified Dynamics of Design Build Instruction,**" 32nd Annual, National Conference on the Beginning Design Student (NCBDS), University of Cal Poly San Luis Obispo, Feb. 25-28, 2016. Paper published and presented.
- 2015 R. Whitehead, "**Ten Concrete Buildings: Donald Judd's Incomplete Integrations of Art & Engineering,**" International Association for Shell and Spatial Structures (IASS), Symposium 2015, Future Visions, Amsterdam, The Netherlands, August 17-20, 2015. Paper published and presented.

- R. Whitehead, **“Pedagogical Progressions: Reflections from an “Integrated” Technology Sequence,”** Building Technology Educators Society (BTES), 2015 International Conference, Intersections & Adjacencies, Salt Lake, UT, June 24-27, 2015. Paper published and presented.
- R. Whitehead, **“Formative Experiences: Saarinen’s Shells and the Evolutionary Impact of Construction Challenges,”** 5th International Congress on Construction History (5ICCH), *Construction History Society of America*, Chicago, June 2015. Paper published and presented.
- R. Whitehead, **“Comprehensive and Creative Conclusions: Enhancing Structural Design Educational Opportunities in Labs for Architecture Students,”** 6th Biennial Professional Conference 2015 of the Architectural Engineering Institute (AEI), *American Society of Civil Engineers (ASCE) & Milwaukee School of Engineering (MSOE)*, Milwaukee, WI, March 24-27, 2015. Paper published and presented.
- R. Whitehead, **“Building a Framework: Rethinking Structural Design in an Architectural Curriculum”** Structures Congress 2015, *Structural Engineering Institute (SEI) of the American Society of Civil Engineers (ASCE)*, Portland, OR, April 23-25, 2015. Paper published and presented.
- 2014 R. Whitehead, **“Saarinen’s Shells: The Evolution of Engineering Influence,”** International Association for Shell and Spatial Structures + 6th Latin-American Symposium on Tension Structures, (IASS-SLTE 2014) International Symposium, Historical Spatial Structures Working Group (WG 17), *Brasilia, Brazil, Sept. 15-19, 2014*. Paper published and presented.
- K. Nelson & R. Whitehead, **“Brick by Brick: Improved Outcomes Through Linked Learning Objectives in Beginning Technology Labs”** National Conference for Beginning Design Student (NCBDS), *Illinois Institute of Technology, Chicago, IL, April 3-5, 2014*. Paper published and presented.
- 2013 R. Whitehead, **“(RE)Covering Shelter: Enhancing Structural Design Pedagogy by Designing for Disaster Relief,”** ACSA Regional Fall Conference, Sub-Tropical Cities 2013, Ft. Lauderdale, FL, October 17-19th, 2013. Paper published and presented.
- R. Whitehead, **“Supporting Students Structurally: Engaging Architectural Students in Structurally Oriented Haptic Learning Exercises,”** AEI 2013, 5th Biennial Professional Conference for Architectural Engineering Institute, American Society of Civil Engineers (ASCE) and Penn State University, Department of Architectural Engineering, *State College, PA, April 3-5, 2013*. Paper published and presented.
- R. Whitehead, **“Breaking (A)way: The Role of Productive Failures in a New Structural Design Pedagogy”** 101st Association for Collegiate Schools of Architecture (ACSA) Annual Meeting, *San Francisco, CA, March 21-24, 2013*. Paper published and presented.
- 2012 R. Whitehead, **“Impediments to Integration: The Divergent Intentions and Convergent Expressions of the Dymaxion House and Demountable Space Structural Designs”** 2012 ACSA Fall Conference + Modular Building Institute, Regional Industry Meeting, Off-Site: Theory & Practice of Architectural Production, *Temple University, Philadelphia, PA, September 27-29, 2012*. Paper published and presented.
- 2010 R. Whitehead, **“Finding Space to Fail: Making Cracks into Breakthroughs,”** American Institute of Iowa (AIA Iowa) Fall Convention, AIA Iowa Diversity Committee Academic Paper Symposium, *Des Moines, IA, September, 2010*.
- L. Paxson, C. Rogers, and R. Whitehead, Iowa State University, **“Places, Spaces, and Faces: Combining Architecture and Landscape Architecture Studios and the Challenges of Integrated Pedagogy,”** 98th ACSA Annual Meeting, “Teaching Architecture-Perfecting Pedagogy Session,” Paper published after blind peer review of abstract was accepted.
- 2009 R. Whitehead, **“Making Marfa: Technical Encumbrances and Creative Resistance in Donald Judd’s Ten Concrete Buildings”** 2009 ACSA Southeast Regional Fall Conference, Art + Architecture, *Savanna, GA, October 8-10, 2009*.
- 2008 R. Whitehead, **“Midwestern Modern Failures: Building Envelope Detailing, Performance, and Remediation Challenges at Drake University,”** Construction History Society of America, Inaugural Conference, *Atlanta, GA, November 2008*.

Conference Abstracts & Presentations

- 2016 R. Whitehead, **“Saarinen’s Seating and Sculptural Shells: The Enduring Influences of Early Furniture Designs,”** Construction History Society of America, CHSA, 5th Biennial Meeting, Structural Shells Session, Austin, Texas, May 26-28, 2016.
- 2014 R. Whitehead, **“Pedagogical Progressions: Reflections from an “Integrated” Technology Sequence”** 102nd Association for Collegiate Schools of Architecture (ACSA) Annual Meeting, Miami, FL., April 2014.
- 2012 R. Whitehead, Presentation, **“Productive Failures in the Creation and Analysis of Surface-active Structural Systems”** *International Conference on the Constructed Environment*, Vancouver, Canada, October 2012.

Symposia, Workshops, & Panels

- 2017 Co-Chair / Host, **Building Technology Educator’s Society (BTES) 2017 International Conference, “Poetics & Pragmatism,”** Iowa State University, June 8-10, 2017. Co-chairs: S. Doyle, T. Leslie, & R. Whitehead (ISU). Selected by BTES board from several options of competing institutions.
- Workshop Coordinator / Moderator, “Integration, Consolidation, or Inertia? The Role of Building Technology Courses in Changing Curricula,”** Panelists: Jason Alread (Univ. of Florida), Erin Carraher, & Pat Tripeny (Univ. of Utah). Building Technology Educator’s Society (BTES) 2017 International Conference, “Poetics & Pragmatism,” Iowa State University, June 8-10, 2017.
- 2015 **Invited Panel Participant, “Tea Anyone? A Story of Disaster and Resilience at Younkers,”** AIA Iowa Chapter, Spring Conference Symposia, March 2015. Co-panelists: Tim Monson, PE and Erin Olson-Douglas (City of DM). Symposium discussed the fire damage, recovery, and restoration process of historic Younkers Building in Des Moines, Iowa.

Exhibits & Installations

- 2017 Invited Contributor & Exhibit Evaluator, **“Mies / Weese at Drake: Where We Live and Work,”** Anderson Gallery, Drake University, November 2017. *Exhibit curated by Professor Maura Lyons, Drake University.* Contributions include production of 3D representations of Drake University building models and evaluation of exhibition content.
- 2011 Curator, **“Innovative Objects of Design,”** Figge Art Museum, Mary Waterman Gildehaus Community Gallery, Davenport, Iowa. Sponsored by Iowa State University College of Design. Exhibit Dates: September 3-October 23, 2011. Exhibit featured work of ten students from Arch 401 course (from Fall 2010). Responsible for the curation of exhibition content, exhibit layout and the writing of the exhibition didactic.

Posters

- 2015 Selected Exhibitor, **“Active Collaborations for Sustainable Technological Integration,”** *CELT Miller Faculty Fellowship Exhibition*, Iowa State University, October 26, 2015. University-wide winners of Miller Fellowships present results of their work as posters; Q&A discussions. Poster created by R. Whitehead based on work compiled by U. Passe, A. Wheeler, and K. Nelson. Presented by R. Whitehead.
- Selected Exhibitor, **“Comprehensive & Creative Conclusions: Coordinating Capstone Exercises with Enhanced Learning Methods to Improve Structural Design Education,”** *SoTL Scholars Program, Center for Excellence in Learning and Teaching (CELT), Morrill Professor Panel and Teaching Poster Symposium.* Iowa State University. March, 2015. University-wide recipients of SOTL Scholars grants present posters with Q&A. Poster created and presented by R. Whitehead.
- 2014 Selected Exhibitor, **“Think, Make, Break + Evaluate,”** Center for Excellence in Learning and Teaching (CELT), *Teaching Poster Symposium*, Iowa State University. March 31, 2014. Poster selected from an open solicitation. Final poster described undergraduate technology course sequence teaching methodologies. Poster created and presented by R. Whitehead.
- 2013 Selected Exhibitor (with Bart Phillips & Nathan Scott), **“Once Built Structure,”** *ACADIA 2013 Conference*, Association for Computer Aided Design in Architecture (ACADIA). “Adaptive Architecture.” Cambridge, Ontario, Canada.

- 2011 Selected Exhibitor (with Tom Leslie), **“Practicing Structures NCARB Prize,”** National Council of Architectural Registration Boards (NCARB), January 2011. *Displayed at 2011 National AIA Convention.*
- 2010 Selected Exhibitor, **“Sci-Tech: An Architectural Technology Sequence for Generation Green,”** Iowa State University, 2010 Symposium on Enhancing Sustainability at Iowa State University. *Poster designed, submitted and accepted for inclusion in Symposium. Work done with Tom Leslie and Jason Alread.*

Peer-Review Activities

- 2019 **Technology / Architecture + Design (TAD) Journal**, Reviewer. Routledge publishing, Taylor and Francis Group
- Paper & Abstract Reviewer**, Building Technology Educators’ Society (BTES), “Integration + Innovation” 2019 Conference.
- 2018 **History of Postwar Architecture Journal**, Reviewer
- Scientific Committee Member**, Abstract and Paper reviewer, Building Technology Educator’s Society (BTES) 2019 International Conference, University of Massachusetts Amherst
- 2017 **Scientific Committee Member**, Abstract and Paper reviewer, Building Technology Educator’s Society (BTES) 2017 International Conference, “Poetics & Pragmatism,” Iowa State University, June 8-10, 2017.
- Session Moderator**, Building Technology Educator’s Society (BTES) 2017 International Conference, “Poetics & Pragmatism,” Iowa State University, June 8-10, 2017. Session: “Structural Design Pedagogy,” Presenters: M. Hu, Univ. Maryland, C. Brause, U. Mass Amherst, B. Wrightsman, K. State Univ., M. Uihlein, Univ. of Ill., P. Tripeny, Univ. of Utah, & D. Oakley, UNLV.
- 2016 **Paper Reviewer**, Abstracts, 33rd Annual, National Conference on the Beginning Design Student (NCBDS), “Begin w/ Why,” University of Utah, Salt Lake City, UT, March 9-11, 2017.
- Session Moderator**, National Conference on the Beginning Design Student (NCBDS), University of Cal Poly San Luis Obispo, Feb. 25-28, 2016. Session: “Academy: Community,” Presenters / panelists: B. Deal & M. Lasala, La. Tech Univ., P. Russell, SUNY, & K. Nagle & P. Pettigrew, IIT.
- 2015 **Consulted Author**, “Eero Saarinen: The Architect Who Saw the Future,” PBS Documentary. Contacted by research assistant to Director Peter Rosen for information about Abba Tor (engineer); shared research paper and correspondence. September 2015. December 2016, Film Aired.
- Paper Reviewer**, 2015 Building Technology Educator Society (BTES) Conference, Materials & Construction session, Salt Lake City, UT, June 2015.
- Session Moderator**, 2015 Building Technology Educator Society (BTES) Conference, Materials & Construction session, Salt Lake City, UT, June 2015. Panelists: C. Brause, U. Mass Amherst, T. Sprague, Univ. Wash., L. Hancock, La Tech Univ., & E. McGlohn, Miss. St. Univ.
- 2014 **Book Referee**, Routledge Publishing (Taylor & Francis Group), Proposed Book, “Embracing Failures” by Lisa Huang, University of Florida. Selected as Book Referee.
- Paper Reviewer**, 6th Biennial Professional Conference 2015 of the Architectural Engineering Institute (AEI), American Society of Civil Engineers (ASCE) & Milwaukee School of Engineering (MSOE), Milwaukee, WI, March 2015. Reviewed two final papers and provided feedback to authors and conference organizers.
- Session Moderator**, 6th Biennial Professional Conference 2015 of the Architectural Engineering Institute (AEI), American Society of Civil Engineers (ASCE) & Milwaukee School of Engineering (MSOE), Milwaukee, WI, March 2015. Panelists: E. Kamel, Penn St., B. Wentz & C. Raebel, MSOE, E. Weber, UNLV., & S. Baur, Missouri S&T.
- 2014 **Journal Paper Reviewer**, *Journal of Civil Engineering and Architecture*, David Publishing. Reviewed journal papers submitted for publications on topics related to structural design, civil engineering, and historical building analysis.

- 2010 **Journal Paper Reviewer**, *Preservation, Education & Research Journal*, The National Council for Preservation Education. Reviewed full papers submitted for publication on topics related to restoration and preservation of historic structures. Editor: Anat Geva, Texas A&M

Invited Lectures & Reviews

- 2016 **Invited Studio Critic**, School of Architecture and Planning, SUNY, University of Buffalo. Final Review, Diploma Projects for Asst. Prof., Georg Rafailidis, & Integrated Studio for Prof. Kenneth Mackay. Spring 2016.
- 2012 **Lecturer**, “*Innovative Object Museum Design Summary*,” Indiana University, IUCA + D, Columbus, Indiana. Presentation at newly opened design school in Columbus, IN, to students, teachers, and community leaders describing Arch 401 studio work and field trips to Columbus. Panel discussion with Gregory Palermo, Iowa State Univ.
- 2011 **Invited Lecturer**, “*Eponymous Exhibition: Developing Innovative Objects of Design*,” Figge Art Museum Art Talks, Davenport, Iowa. September 24, 2011. Presentation invited as part of an opening to “Innovative Objects of Design” exhibit of Arch 401 student work (2.07-2011).
- 2010 **Guest Juror for Final Reviews**, *Fourth Year Architecture Students*, The Catholic University of America, School of Architecture + Planning, Washington, D.C.

EXTENSION / PROFESSIONAL PRACTICE

Creative Activities: Design / Build Projects (Abridged)

- 2019 Designer, “**Matthes Residence Addition**” Design and construction management of unique mid-century private residence. Cost: Withheld.
- 2016 Project Architect & Builder, w/ Shelby Doyle, “**Bishop Family Shelter,**” **Design-Build Pavilion**, Professional design work completed in advance of, and during, Arch 581 Design-Build activities included client meetings, budget negotiations, project development, construction drawings, permitting, and construction administration oversight. Submitted to ACSA Design-Build Design Awards, 2016. Cost: \$70,000. Client: City of Urbandale Parks. Summer 2016.
- 2015 Project Architect & Builder w/ Carl Rogers, “**DM Social Club Outdoor Stage,**” Design-Build Project, Professional design work completed in advance of, and during, Arch 581 Design-Build activities included client meetings, budget negotiations, permit drawings, and project development. Cost: \$7,000. Client: DM Social Club. Summer 2015.
- Designer / fabricator, “**Free Little Library,**” Designed and constructed a free standing book repository for the “Free Little Library” program to be auctioned for charity (Des Moines Public Schools). Raised funds for the project, all work donated. Cost: \$500.
- 2014 Project Architect & Builder, “**Fishing Docks,**” Story County Conservation, West Peterson Park. Professional design work completed in advance of, and during, Arch 581 Design-Build activities included client meetings, budget negotiations, and project development. Cost: \$5,000. Client: Story County Conservation. Summer 2014.
- 2013 Project Architect & Builder, “**Lakeside Shelter,**” Story County Conservation, West Peterson Park. Professional design work completed in advance of, and during, Arch 581 Design-Build activities included client meetings, budget negotiations, permit drawings, and project development. Cost: \$4,000. Client: Story County Conservation. Summer 2013.
- Furniture Design / Fabrication: “**Single Ply Seat + Ottoman.**” Designed and constructed a prototype chair and ottoman constructed using digital design + fabrication techniques (CNC). All components for ergonomically sculpted chair were cut out of single sheet of 4 x 8 x 3/4” plywood. Work donated for charity, Des Moines Downtown School PTA Auction. Spring 2013.
- Designer / Builder: Kitchen Remodel, “**Brown Camp Loft Remodel,**” Budget: \$20,000. Client: Jayme Jacobi. This design + build project consisted of redesigning a kitchen, dining room, and stairway in a historic warehouse building in downtown Des Moines, Iowa.

- 2012 Designer / Builder: Bathroom Remodel, **“Ridge Road Bath and Bedroom.”** This design + build project remodeled an outdated bathroom and master bedroom suite for an 1899 house in a historic neighborhood of Des Moines—non-negotiable restrictions in project budget and time were met with design + build delivery process. Cost withheld.

Professional & Academic Affiliations

- 2014- Working Groups Member, **Structural Pedagogy & Historical Spatial Structures, WG 17**, *International Association for Shell and Spatial Structures (IASS)*. Activities included participation in on-line community activities and preparation for conference activities.
- 2014-16 Director (Elected), **Building Technology Educators Society (BTES)**. This position (chosen out of a pool of 4 candidates) is for the position of Director this International association of educators. Activities included the regular maintenance of association business, coordinating bi-annual conferences, coordinating and facilitating awards competitions (educators and book awards), and general communication of building technology issues relevant to educators. Term 2014-2016.
- 2010- Member, **Construction History Society of America (CHSA)**
- 2011- Member, **Building Technology Educators Society (BTES)**

Publications of Professional Work

- 2015 Profile, **“Rob Whitehead, AIA Iowa Educator Award,”** by Hannah Gilman, *Iowa Architect (Official Magazine of AIA Iowa)*, Winter 2015, pg. 9.
- 2014 Featured Design, **“Old House, New Bath,”** by Kelly Roberson, Kitchen and Bath Makeovers national magazine, Spring 2014, *BHG Publications (Meredith, Des Moines, 2014)*, pgs. 90-94. Remodeled Bathroom design / build project by R. Whitehead, / *whitehead design workshop*.
- 2013 TV Broadcast Report, **“Story County Park Shelter,”** KCCI-TV 8 news, August 6th Evening Broadcast. Story described the design process and final shelter design completed by Arch 581 Design Build / Service Learning course.
- 2010 Newspaper Article, **“Turning Beliefs into Action,”** *Des Moines Register*, April 18, 2010. Article described the Bredeson Garage and Studio design by R. Whitehead / *whitehead design workshop*
- 2009 Newspaper Article, **“Considerate Design,”** *Des Moines Register*, November 2009. Article described a remodeled office attic space; design / build project by R. Whitehead / *whitehead design workshop*

TEACHING AND ADVISING

Courses Taught

Design Studios

Arch 603 / Arch 403, NAAB Integrated Studio. Undergraduate + Graduate students. Theme: “Museum Design: Times, Spaces, and Places,” *Fall 2014-19*.

Arch 507, Graduate Studio (5cr.). Theme: “Historic Preservation Studio & Design Communication,” Summer 2012. Research and design projects based on historic buildings in Des Moines by Eero Saarinen and Mies Van Der Rohe.

Arch 401, Comprehensive Studio, Theme: “Museum for Innovative Objects,” *Studio Level Co-Coordinator, Fall 2010-13*. Developed content and tours for all sections with co-coordinators, D. Naegele and G. Palermo.

Arch 302, Theme: “Urban Housing Studio,” Spring 2007-14. *Studio Co-Coordinator, Spring 2009-Spring 2014*. Developed content and tours for all sections with co-coordinators, C. Lewis, D. Naegele, J. Alread, T. Leslie, G. Palermo and P. Goche.

Arch 301, Theme: “Architecture + Landscape Design Collaborative Studio,” Fall 2007-09. *Studio Co-Coordinator, Fall 2008-2009*. In collaboration with co-coordinators (L. Paxson & C. Rogers (LA)), initiated and produced new, original course content for cross-disciplinary architecture/landscape architecture design studios.

Independent Study Option Studios

Students: Graham Hansen + Paolo Orlando, "Urban Greenhouse Market," ACSA Steel Design Competition Entry, Spring 2017

Student: Bart Phillips, "Manifold Shelter Design" Competition for Sunbrella Fabrics,

Student: Elissa Bruggman, "Glidden Cemetery, Columbarium, & Sacred Landscape," Spring 2013,

Students: Nathan Scott & Bart Phillips, "Experiments in Form and Fabrication," Spring 2013,

Student: Steph Sereg, "Zambia Orphanage, Education and Cultural Center," Spring 2012,

Student: Ryan Rogers, Project: Yele Haiti Music School, Spring 2010

Design 102, 4 credits, CORE Program Studios, Fall 2007, 2008, & 2009

Design + Build Studios

Design Studios (Dsn S) 546, Interdisciplinary Option Studio, Theme: "Structures in Service: Designing for Disaster Relief," Prototypes and full-scale design-build installations. Sp. 2015, Sp. 2017-Sp. 2018 (ongoing).

Arch 581, Design – Build + Service Learning. Theme "Small Scale Design-Build for Non-profits," Summer 2008, Summer 2013-16 (5 cr.). Responsible for oversight of project design, development of details, and participation and instruction during all phases of student construction process. Collaboration with Owner, Structural Engineer, and Contractor. Co-taught S. Doyle ('16) and C. Rogers ('15).

Structural Technology Courses

Summary: Unless noted, courses are 5-week modules of both lecture & lab activities. Responsibilities include the design, development, and delivery all original course content (see Curricular Development above). Classes average 65-85 students. Primarily undergraduate students until 2015, then combination undergraduate and graduates. Some initial course content produced before tenure-track appointment (2010-2012). Coursework and development is on-going. Examples included in portfolio.

Arch 245 (renamed Arch 345), *Structural Technology in Practice I*, 3 cr. Introduction to structural design principles. Fall 2010-18 (co-taught F' 10 with Tom Leslie).

Arch 341 (renamed Arch 346), *Structural Technology in Practice II*, 5 cr. Form-Active structures. Spring 2011-18.

Arch 342 (renamed Arch 347), *Structural Technology in Practice III*, 5 cr. Section-Resistant structures. Fall 2011-Fall 2018.

Arch 343 (renamed Arch 348), *Structural Technology in Practice IV*, 5 cr. Structures, Construction, and Integration. Spring 2012-Spring 2018.

Arch 445, *Structural Technology in Practice V*, 3 cr. Long Span Structures. Fall 2012-Fall 2018.

Graduate Building Technology Courses (Structures, Materials/Assembly, & Env. Systems)

Summary: Course content primarily developed by J. Alread and T. Leslie. Responsibilities included the development and delivery of updated coursework including lectures and labs. Shared teaching responsibilities as noted. Graduate students, approximately 8-15 per course.

Arch 541, SCI-TECH I, Fundamental Human Comfort, Climate, and Building Technology Systems. Fall 2009-10. Co-Taught with Jason Alread (each taught ½ classes).

Arch 542, SCI-TECH II, Building Systems and Structural Technology. Spring 2008, Spring 2010-11. Co-Taught with Jason Alread (each taught ½ classes).

Arch 641, SCI-TECH III, Advanced Building Technology and Services-Utilities, Codes, Circulation Systems, and Curtainwall. Fall 2009-Fall 10. Co-Taught with Jason Alread (each taught ½ classes).

Arch 644, SCI-TECH IV, Building Systems and Structural Technology. Spring 2008, Spring 2010-2011. Building Systems and Structural Technology. Co-Taught with Jason Alread (each taught ½ classes).

Curricular Development

2017 **Graduate Building Technology Program Integration.** Developed catalog changes (with DoGE, T. Leslie) & new coursework content to integrate graduate students into existing undergraduate building technology course sequence. Coursework revisions included new and revised labs for 4 courses (18 total). Catalog changes completed as part of Technology Substantive area chair and curriculum committee member.

2012- **Undergraduate Structural Design Curriculum.** Envisioned, developed, and delivered five new structural design courses (Arch 245, 341, 342, 343, & 445) based on revised "integrated" curriculum. Work developed includes 50 new lectures, 45+ new labs, fieldtrips, associated tests, rubrics, and overseeing teaching assistant activities. 5 courses, 5 weeks per course / per semester. Lecture and lab activities for nearly every class period.

Course work for Arch 245 developed with T. Leslie (ISU) & K. Dong (Cal-Poly). *Work recognized for impact with ACSA Creative Achievement Award and NCARB Prize (see scholarship)*

- 2010 **Integrated Undergraduate Building Technology Curriculum.** Assisted U. Passe (chair of Technology Substantive Area), T. Leslie, & B. Bassler, in developing the framework for revised building technology curriculum for Department of Architecture. Personal contribution: Developed outline for revised structural sequence (with T. Leslie)

Graduate Review Committees

- 2017 Brad Wicks, "Co-Creation in Architecture," Master of Science in Architecture and Industrial Design. Tejas Dhadphale, Major Professor. Beginning Fall 2017.
- 2015- Sijia Lu, "Performance-Based Design Procedure for a Novel Semi-Active Cladding Connection Applied to Blast Mitigation." Master of Science in Structural Engineering. Simon Laflamme, Major Professor. Fall 2015-Fall 2016.
- Kelly Kalvelage, "Task-based paradigm for the design of office occupant-building interactions," Doctor of Philosophy, Human Computer Interaction, Michael Dorneich, Major Professor. Spring 2015-2017.

Undergraduate Advising

- 2013- **Undergraduate Advising**, 16-20 B. Arch students from their 2nd year through graduation. Advising activities include: course information and advice, on career options, educational goals (minors), and personal issues.
- 2012- **American Institute of Architectural Students (AIAS) Faculty Adviser**, advise student group about membership, activities, and finances while serving as an intermediary between the student group and the faculty.
- 2008- **Intern Development Program Mentor (IDP)**, advisor for the professional development of architects, overseen by NCARB, has defined a series of professional activities that architectural interns must complete before becoming registered.

Student Awards/Honors/Competitions

- 2019 Winner, **Construction Specifier's Institute (CSI) Prize: 2nd place**, Nick Jackson & Mohan Ummadiesetty
- 2017 Competition Entry: R. Whitehead & Dsn S 546, Spring 2017 students (13), "**Chombo: Mobile-Market and Microcredit Program**," Competition Entry, "Place and Displacement: A Marketplace in Refugee Settlements Competition, Sponsored by International Development in Action, Entry #6262
- 2016 Competition Award: **Construction Specifier's Institute (CSI) Prize: 2nd place**, Cally Niess, MJ Johnson, John Vandercar
- Competition Entry: "Seattle Maritime and Flight Museum," **AIA Committee on the Environment Design Competition**, Shruti Venkat and Anna Krull. Spring 2016.
- 2015 **Honorable Mention**, Jaehee Hwang, "Deployable Ebola Quarantine Shelter," 2015 UIA-PHG International Student Competition, Mobile Health Clinic Design Competition.
- Competition Award: **Construction Specifier's Institute (CSI) Prize: 2nd place**, Ben Kruse & Brandon Fettes 2015
- 2014 Competition Entries: **Design Marfa Housing Competition Entries**, Arch 403 studio, 8 entries. 150 submitted entries from competing architecture schools and architectural practices nationwide.
Competition Award: **BWBR Design Competition, Finalists (2 / 5): Abdullah AlQabandi & Tianhui Hou.**
- 2013 Competition Award: Finalist, **BWBR Design Competition (1 / 5): Mike Gray.**
- 2012 Competition Award: Finalist, **BWBR Design Competition (1 / 5): Adam Blatner.**
- 2011 Competition Award: Winners, **BWBR Design Competition**, Justin Wang & Jasmine Singh.
Curated Exhibitor, "**Innovative Objects of Design**," Andrew Holcombe. *Figge Art Museum, Mary Waterman Gildehaus Community Gallery, Davenport, Iowa.*

- 2010 Competition Award Honored Finalist, **International RIBA Design Competition**, Yele Haiti Music School, by Ryan Rogers. *One of 15 selected international finalist designs.*
Finalist, **BWBR Design Competition** (1 of 5 selected), Jason Kruse, Arch 302 competition.
- 2009 Competition Award Winner, **BWBR Design Competition**, William Neal
Competition Award Finalists, **State of Iowa, Holocaust Memorial Competition Runners-up**,
Interdisciplinary Student Design Team (K. Wolgast spokesperson).
- 2008 Competition Award Winner, **Hansen Prize Design Competition**, Clark Colby.
- 2007 Competition Award Winner, **Hansen Prize Design Competition**, Alex Hale.
Competition Award Finalists, **Hansen Prize Design Competition**, Kevin Wagner & Justin Oldenhaus.
Competition Award Winners, **Pella Window Competition**, Kurtis Wolgast, *First Place & Keihly Moore, Second Place.*

EXTENSION / PROFESSIONAL PRACTICE

Creative Activities: Design / Build Projects (Abridged)

- 2016 Project Architect & Builder, w/ Shelby Doyle, **“Bishop Family Shelter,” Design-Build Pavilion**, Professional design work completed in advance of, and during, Arch 581 Design-Build activities included client meetings, budget negotiations, project development, construction drawings, permitting, and construction administration oversight. Submitted to ACSA Design-Build Design Awards, 2016. Cost: \$70,000. Client: City of Urbandale Parks. Summer 2016.
- 2015 Project Architect & Builder w/ Carl Rogers, **“DM Social Club Outdoor Stage,”** Design-Build Project, Professional design work completed in advance of, and during, Arch 581 Design-Build activities included client meetings, budget negotiations, permit drawings, and project development. Cost: \$7,000. Client: DM Social Club. Summer 2015.

Designer / fabricator, **“Free Little Library,”** Designed and constructed a free standing book repository for the “Free Little Library” program to be auctioned for charity (Des Moines Public Schools). Raised funds for the project, all work donated. Cost: \$500.
- 2014 Project Architect & Builder, **“Fishing Docks,”** Story County Conservation, West Peterson Park. Professional design work completed in advance of, and during, Arch 581 Design-Build activities included client meetings, budget negotiations, and project development. Cost: \$5,000. Client: Story County Conservation. Summer 2014.
- 2013 Project Architect & Builder, **“Lakeside Shelter,”** Story County Conservation, West Peterson Park. Professional design work completed in advance of, and during, Arch 581 Design-Build activities included client meetings, budget negotiations, permit drawings, and project development. Cost: \$4,000. Client: Story County Conservation. Summer 2013.

Furniture Design / Fabrication: **“Single Ply Seat + Ottoman.”** Designed and constructed a prototype chair and ottoman constructed using digital design + fabrication techniques (CNC). All components for ergonomically sculpted chair were cut out of single sheet of 4 x 8 x 3/4” plywood. Work donated for charity, Des Moines Downtown School PTA Auction. Spring 2013.

Designer / Builder: Kitchen Remodel, **“Brown Camp Loft Remodel,”** Budget: \$20,000. Client: Jayme Jacobi. This design + build project consisted of redesigning a kitchen, dining room, and stairway in a historic warehouse building in downtown Des Moines, Iowa.
- 2012 Designer / Builder: Bathroom Remodel, **“Ridge Road Bath and Bedroom.”** This design + build project remodeled an outdated bathroom and master bedroom suite for an 1899 house in a historic neighborhood of Des Moines—non-negotiable restrictions in project budget and time were met with design + build delivery process. Cost withheld.

Professional & Academic Affiliations

- 2014- Working Groups Member, **Structural Pedagogy & Historical Spatial Structures, WG 17**, *International Association for Shell and Spatial Structures (IASS)*. Activities included participation in on-line community activities and preparation for conference activities.
- 2014-16 Director (Elected), **Building Technology Educators Society (BTES)**. This position (chosen out of a pool of 4 candidates) is for the position of Director this International association of educators. Activities included the regular maintenance of association business, coordinating bi-annual conferences, coordinating and facilitating awards competitions (educators and book awards), and general communication of building technology issues relevant to educators. Term 2014-2016.
- 2010- Member, **Construction History Society of America (CHSA)**
- 2011- Member, **Building Technology Educators Society (BTES)**

Professional Practice Communications

- 2012- R. Whitehead, **“Think + Make + Break”** Blogspot website. Blog entries outlining research activities, teaching, and practice activities. International readership with thousands of page views each year.
- 2015 R. Whitehead, **“Tom Leslie, 2015 AIA Iowa Educator Award,”** *Iowa Architect* magazine, Spring 2016.
- 2014 R. Whitehead, **“Reforming Recreation,”** *Iowa Architect (Magazine of AIA Iowa)*, Spring 2014, pgs. 16-21. Selected to write article about Iowa State University new recreation building.
- 2013 R. Whitehead, **“Play it Again: The Rise, Fall, and Revival of the Iconic Paramount Theatre in Cedar Rapids,”** *Iowa Architect (Magazine of AIA Iowa)*, Fall 2013, pgs. 26-31. Selected to write article about post-flood renovation of Paramount Theatre.

R. Whitehead, **“Trade Craft: Enhancing Education through Technological Integration,”** *Iowa Architect (Magazine of AIA Iowa)*, Spring 2013, pgs. 24-27. Selected to write article about new Northeast Iowa Community College Industrial Technology building.
- 2012 R. Whitehead, **“Building Character,”** *Iowa Architect (Magazine of AIA Iowa)*, Fall 2012, pgs. 28-29. Selected to write article about new Carver Hawkeye Arena renovations.

Publications of Professional Work

- 2015 Profile, **“Rob Whitehead, AIA Iowa Educator Award,”** by Hannah Gilman, *Iowa Architect (Official Magazine of AIA Iowa)*, Winter 2015, pg. 9.
- 2014 Featured Design, **“Old House, New Bath,”** by Kelly Roberson, *Kitchen and Bath Makeovers* national magazine, Spring 2014, *BHG Publications (Meredith, Des Moines, 2014)*, pgs. 90-94. Remodeled Bathroom design / build project by R. Whitehead, / *whitehead design workshop*.
- 2013 TV Broadcast Report, **“Story County Park Shelter,”** KCCI-TV 8 news, August 6th Evening Broadcast. Story described the design process and final shelter design completed by Arch 581 Design Build / Service Learning course.
- 2010 Newspaper Article, **“Turning Beliefs into Action,”** *Des Moines Register*, April 18, 2010. Article described the Bredeson Garage and Studio design by R. Whitehead / *whitehead design workshop*
- 2009 Newspaper Article, **“Considerate Design,”** *Des Moines Register*, November 2009. Article described a remodeled office attic space; design / build project by R. Whitehead / *whitehead design workshop*

INSTITUTIONAL SERVICE

Iowa State University

- 2017 Faculty Senate Representative (elected), **Iowa State Athletic Council**. *The Iowa State University Athletics Council is charged with advising the President of the University and the Athletics Director on matters related to intercollegiate athletics.* Term 2017-2020.
- 2016- Board Member (invited), **Center for Excellence in Learning and Teaching, (CELT)**. 10 total members. This group discusses policies and funding opportunities and awards offered by CELT at the University level.

Board Member (invited), **Active-Classroom Task Force**, *Center for Excellence in Learning and Teaching*, (CELT). This group studies classrooms at Iowa State University and develops recommendations for the design and use of “active-learning” classroom environments.

2013- Board Member (invited), **Live Green Initiative, Office of Sustainability**, Iowa State University. The board reviews proposals submitted to the Live Green fund for programs intended to initiate sustainable practices in education, research, and/or facilities services and operations.

2015 **College of Design representative** (invited), Iowa State University Enrollment Focus Group.

College of Design

2017 **Academic Affairs Council**, Department of Architecture Curriculum Committee representative.

2017 **NCARB (National Council Architectural Registration Board) Advisor**, Official liaison and representative of NCARB at Iowa State. Role includes advising students about licensure requirements.

2012-16 **American Institute of Architectural Students (AIAS) Faculty Adviser**, advise student group about membership, activities, and finances while serving as an intermediary between the student group and the faculty.

2014-15 **Portfolio Reviewer**, CORE Program.

2009 **Committee Member**, “30 and Beyond” Exhibition Committee, College of Design. Reviewed proposals to the exhibition, facilitate exhibit arrangement, and opening.

Department of Architecture

2017- Chair (Elected), **Curriculum Committee**, coordinate meetings and curriculum business. Represent department at collegiate level.

2015- Chair (Elected), **Technology Substantive Area**, the technology substantive area is one of several curricular committees run by department of architecture faculty; the responsibilities of the chair position include participation on the departmental curriculum committee, identification/development of curricular issues about technology courses, and convening/running meetings of the full technology committee.

2015-16 **Faculty Search Committee**, Digital Design and Fabrication, ISU Presidential High-Impact Hire. Search Chair: K. Zarecor.

2015-16 **Year-Level Coordinator**, Third Year Architecture

Committee Member, *Departmental Substantive Committees: Technology, Practice, & Design Committees.*

2014 **Studio Co-Coordinator**, Arch 302. Appointed by D. Hauptmann.

2013 **Interim Chair**, *Technology Committee*, nominated by Department Chair as temporary replacement for U. Passe. Served on Curriculum committee as a result.

Elected Member, Promotion & Tenure Committee, Assistant Professor. Elected by faculty. 2013-2015 term.

Selected Member, Graduate Committee, 2012-2013. Discussed curricular issues and course assignments, and review applicants to the program.

Studio Co-Coordinator, Arch 401 & 302. Appointed by G. Palermo.

2010 **Elected Member**, Promotion & Tenure Committee, Lecturer. Elected by faculty. 2008-2010 term.

Studio Co-Coordinator, Third Year Studios (Arch 301 & Arch 302) & Fourth year Studio (Arch 401). Appointed by Department Chairs: Lewis, Palermo, and Hauptmann, *11 semesters of studio coordination*. See 4.01.