Jason Lucas, PhD
200 Hollingsworth Dr.
Easley, SC 29640

2-136 Lee Hall
Clemson University
Clemson, SC 29634

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jlucas2@clemson.edu

EDUCATION:

PhD in Environmental Design and Planning / Construction (August 2012)
Dissertation: "An Integrated BIM Framework to Support Facility Management in Healthcare Environments"
Committee: Walid Thabet, co-chair, Tanyel Bulbul, co-chair, Andrew McCoy, Chimay Anumba
Virginia Polytechnic Institute and State University, Blacksburg, Virginia

MS Building Construction Science and Management (December 2008)
Thesis: "Improving Conveyor Belt Safety Training Through the use of Virtual Reality"
Committee: Walid Thabet, Chair, Brian Kleiner, Ki-hong Ku
Virginia Polytechnic Institute and State University (VT), Blacksburg, Virginia – GPA 3.83

B Arch (May 2004), Summa Cum Laude, New Jersey School of Architecture (rank 2 of 70)
New Jersey Institute of Technology (NJIT), Newark, New Jersey – GPA 3.86

HONORS/ AWARDS:

Graduate Student of the Year (Department of Building Construction), April 2008, VT
International Masonry Institute Competition, Fall 2003, Second Place, NJIT
Dean's List, NJIT (Fall 1999-Spring 2004)
Albert Dorman Honors College, NJIT
Phi Eta Sigma National Collegiate Honors Society, NJIT Chapter

PROFESSIONAL EXPERIENCE:

Clemson University – Nieri Family Department of Construction Science and Management, Clemson, SC
August 2019 – Present – Associate Professor
August 2012 – August 2019 – Assistant Professor

- Teach assigned courses, develop research agendas, and conduct service as appointed by the department

Virginia Tech – Department of Building Construction, Blacksburg, VA
September 2006 – July 2012 – Graduate Research Assistant

- Design advertisements, signs, and publications for department events
- Aid in gathering information for prospective projects and funding
- Conduct Research

Thomas Koontz – Architect, PC, Blacksburg, VA
September 2006 – December 2007 – Architect Intern

- Produce construction and design documents
- Site documentation for renovation/ addition drawings

Toll Architecture, Toll Brothers Inc., Horsham, PA
July 2005 – July 2006 – Job Captain:

- Check drawings produced by CAD techs for accuracy and completeness
- In charge of producing drawings for new model homes
- Responsible for scheduling and administration of team

July 2004 – July 2005 – CAD Technician:

- Produced permit/construction document sets for house orders
- Produced construction documents for community club house

Pennsylvania Department of Transportation, District 4-0, Dunmore, PA
Summer 2003 – Intern, Design and Contract Management

- CAD design for various maintenance projects and proposals

Summer 2000-20002 – Intern, System Technique to Analyze and Manage Pennsylvania Pavement (STAMPP) and Road Management System (RMS)

- Surveyed physical conditions of roads and submit appropriate reports

TEACHING EXPERIENCE:

CSM 4300/6300 Residential Construction Management, Faculty of Record
Nieri Family Department of Construction Science and Management, Clemson University
Developed coursework, assignments, and projects allowing students to explore management practices within residential construction within land development, custom homebuilders, and high volume builders.

CSM 4310/6310 Residential Construction Practices, Faculty of Record
Nieri Family Department of Construction Science and Management, Clemson University
Developed coursework, assignments, and projects allowing students to explore advanced practices in residential construction including ICC 700 standard, Universal Design, Passive House, and Resiliency.

CSM 8680 Emerging Technologies in Design and Construction, Faculty of Record
Nieri Family Department of Construction Science and Management, Clemson University
Developed coursework, assignments, and projects that allow students to explore the use of technologies in the delivery of a building project in an online course environment. The students were able to explore the different types of emerging technologies, adoption strategies, and analyze company workflows to identify potential business process reforms and create an implementation plan.

CSM 3060/3061 Emerging Technologies in Construction, Faculty of Record
Nieri Family Department of Construction Science and Management, Clemson University
Developed coursework, assignments, and projects that allow students to explore the use of technology in throughout a typical construction project. The course consists of a lecture and hands on lab component.

CSM 1000 Introduction to Construction Science and Management, Faculty of Record
Nieri Family Department of Construction Science and Management, Clemson University
The course introduces students to the construction industry sectors, its players, and the types of jobs they would expect to participate in. Developed coursework and assignments prepare students for entry into the workforce. Coordinate meetings with other disciplines for collaborative projects

CSM 1500 Construction Problem Solving with Critical Thinking, Faculty of Record
Nieri Family Department of Construction Science and Management, Clemson University
As part of the Clemson Thinks 2 initiative, this course is heavily involved with students exploring their beliefs and claims by looking at their thought process. The topic of critical thinking is explored followed by application of critical thinking in the context of construction problem solving, ethics, and formal research.

CSM 2030, CSM 2050, Materials and Method of Construction I and II, Faculty of Record
Nieri Family Department of Construction Science and Management, Clemson University
Redeveloped coursework, assignments, and exams to teach and assess students on the basics of the construction process including material choices, material properties, assemblies, and methods for construction.

CSM 2040 Contract Documents, Guest Instructor
Spring 2013/Spring 2014/Spring 2015 Faculty: Joseph Wintz
Nieri Family Department of Construction Science and Management, Clemson University
Lab sections were developed to introduce the topic of Building Information Modeling (BIM) to students.

BC 2114, Information Technologies in Design and Construction, Instructor
Supervisor: Walid Thabet
Department of Building Construction, Virginia Tech
Class was conducted in a lecture and lab format and discussed theory and application of technologies.

BC 4064, Construction Principles Lab, and BC 4444 Construction Practices, Guest Instructor
Department of Building Construction, Virginia Tech
Developed and presented introductory modules for using Autodesk's Revit and Navisworks over multiple class periods.

RESEARCH EXPERIENCE:

Roofing Alliance Learning Manual
(Roofing Alliance Grant, $67,514) August 2022 – December 2023
Co-Investigator (50%)
PI: Dhaval Gajjar, Clemson Nieri Family of Construction Science and Management

Phase 1: Business Case for HVAC Tech Licensing Requirement in Colorado
(Rocky Mountain Mechanical Contractors Association, $19,997) August 2021 – September 2021
Co-Investigator (50%)
PI: Dhaval Gajjar, Clemson Nieri Family of Construction Science and Management

Effective Project Close-Out for HVAC/Sheet Metal Contractors: Best Practices
(New Horizon Foundation, $47,229) November 2020 – October 2021
Co-Investigator (40%)
PI: Dhaval Gajjar, Clemson Nieri Family of Construction Science and Management

Developing a DOT Specific UAS Simulator and a Flight Proficiency Exam
(FHWA: STIC: $123,859) August 2020 – July 2021
Co-Investigator (50%)
PI: Joseph Burgett, Clemson Nieri Family of Construction Science and Management

Roofing Alliance Professional Development Certificate
(Roofing Alliance Grant, $136,212) August 2020 – July 2022
Co-Investigator (35%)
PI: Dhaval Gajjar, Clemson Nieri Family of Construction Science and Management

Residential Education Development
(National Housing Endowment – HELP Grant, $100,000) January 2019 – January 2024
Primary Investigator (100%)

Advancing Best Practices for Construction Safety
(Jobsite Safety Institute, $75,233) October 2018 – October 2019
Primary Investigator (60%)
CO-PI: Dennis Bausman, Clemson Nieri Family of Construction Science and Management

CPC Online Tutorials
(American Institute of Constructors, $21,945) June 2018 – November 2018
Co Invesstigator (35%)
PI: Joseph M. Burgett, Clemson Nieri Family of Construction Science and Management

The Practical Application and the Effects of Using BIM and Immersive Virtual Reality in Understanding Three Dimensional Space (Industry Advisory Board Grant, $20,000) July 2016-June 2017
Primary Investigator

Identifying Factors that Affect User Confidence in BIM Accuracy
(Pennell Center Research Grant, $4,628) July 2016-June 2017, Unfunded July 2017-June 2018
Primary Investigator (80%)
CO-PIs: Brandon Ross, Civil Engineering, and Amin Khademi, Industrial Engineering
Clemson University, Clemson, SC

Feasibility Study for the use of Ultra Wideband Sensor Networks in Construction Safety
(URGC Project Initiation Grant, $8,500) July 2015-June 2016
Primary Investigator (40%)
CO-PIs: Joseph M. Burgett, Clemson Nieri Family of Construction Science and Management, Adam Hoover, Holcombe Department of Electrical and Computing Engineering; Clemson University, Clemson, SC

Developing a Building Information Model (BIM) Reliability Model for Automated Processes (CAAH Collaborative Research Grant, $7,480) June 2014 – June 2015
Primary Investigator (80%)
CO-PIs: Brandon Ross, Civil Engineering and Amin Khademi, Industrial Engineering
Clemson University, Clemson, SC

GreenBIM: Beyond Design, Construction, and Commissioning (Faculty Development Grant, $2125)
Primary Investigator
September 2012 – August 2014
Clemson University, Clemson, SC

Measuring the Impact of BIM and Real-Time Facility Information on Healthcare Environments, *Graduate Research Assistant:* July 2011 – May 2012
PI: Tanyel Bulbul
Virginia Tech, Blacksburg, VA

A Pilot Study for Integrating Facility Information with Healthcare Information to Improve Patient Safety, Graduate Research Assistant
August 2010 – September 2011
PI: Chimay Anumba, Tanyel Bulbul (Supervisor), and John Messner
Penn State University, University Park, PA and Virginia Tech, Blacksburg, VA

Department of Building Construction, Graduate Research Assistant
May 2009 – August 2010
Virginia Tech, Blacksburg VA, USA
Supervisor: Walid Thabet

Bentley Applied Research Grant, Graduate Research Assistant
January 2008 – April 2009
Virginia Tech, Blacksburg VA, USA
PI: Walid Thabet

Virtual Environment (VE) Applications to Improve Mining Health and Safety Training, NIOSH Grant #1 R01 Oh0087160-01, Graduate Research Assistant
September 2006 – August 2008
Virginia Tech, Blacksburg VA, USA
PI: Michael Karmis, Steve Shafrik, Walid Thabet (supervisor), Doug Bowman

PROFESSIONAL/ACADEMIC ACTIVITIES

Clemson University, President's Leadership Institute 2022-2023 Cohort
August 2022 – May 2023

The NAHB Student Chapters Advisory Board
Spring 2017 – Present
Chair of Nominations Sub-Committee January 2018 – January 2020

The American Institute of Constructors (AIC), Executive Committee
Elected Term, April 2014 – April 2017
Chair of Publications Committee Position, April 2013 - Present

- Help oversee the operations of the AIC

The Professional Constructor, Journal of the American Institute of Constructors
October 2012 – Present
Editor

- Organize the publication of two issues per year

NAHB Student Chapter, Clemson University
Clemson, SC Fall 2012 – Present
Faculty Advisor

- Oversee workings of student chapter
- Help student chapter officers connect with resources and organize events

NAHB Student Residential Construction Management Competition Team, Clemson University
Clemson, SC: 2013 RCMC, 2015 - Present RCMC
Coach

- Advise students in completing annual competition proposal
- Connect students with needed resources from industry and the community

NSF Panel Reviewer

- Spring 2017, Education & Human Resources (EHR)
- Summer 2018, Education & Human Resources (EHR)

Construction Research Society, Virginia Tech
Blacksburg, VA Fall 2011 – Spring 2012
Vice President

- Organize events to promote research collaboration, cooperation, and networking.
- Serve as point-of-contact for event planning and production.

CIB W78 2010: 27th International Conference – Applications of IT in the AEC Industry
Cairo, Egypt 16-18 November
Conference Coordinator

- Coordinate paper review process with International Scientific Committee of 55 members from 5 continents
- Coordinate conference website, program and presentation schedule
- Coordinate on-site registration

Future Faculty Development Program, Virginia Tech
Blacksburg, VA 11-12 January 2011
Invited Participant (22 member group selected through application process)

- Participated in workshops design to help prepare PhD students and post-doc researchers for faculty life. Topics included an overview of higher education within the United States, the hiring and tenure processes, and the work/life balance.

College of Architecture and Urban Studies Honorifics Committee, Virginia Tech
Blacksburg, VA Fall 2008 – Spring 2009
Department of Building Construction Student Representative

- Attended monthly committee meetings as a voting member to help determine nominations for University and College awards.

PUBLICATIONS:

Journal Publications

Maxaka M., Gajjar, D., and Lucas, J. (2022). Project Close-Out for HVAC Mechanical Contractors: Current Practices, Journal of Construction Engineering and Management (In-Press: Accepted)

Gajjar, D., Lucas, J. and David, D. (2022). Understanding Employee Perception to Promote Management Level Workforce Development for Roofing Contractors. International Journal of Construction Education and Research, https://doi.org/10.1080/15578771.2022.2049663

Lucas, J. and Gajjar, D. (2021). Influence of virtual reality on student learning in undergraduate construction education, International Journal of Construction Education and Research, DOI: 10.108/15578771.2021.1931570

Lucas, J. (2020). Rapid development of Virtual Reality based construction sequence simulations: a case study, ITcon Vol. 25, pg. 72-86, https://doi.org/10.36680/j.itcon.2020.004

Lucas, J. and S.S.N.Vijayarao. (2019) “Effects of Organizational Trust and Project Delivery Variables on BIM User Confidence”, The Professional Constructor, Vol. 44, Issue 2. Pg. 15-29

Lucas, J. (2018) “Immersive VR in the construction classroom to increase student understanding of sequence, assembly, and space of wood frame construction”, ITcon Vol. 23. Pg. 179-194, http:www.itcon.org/2018/9

Lucas, J. (2017) “Identifying Learning Objectives by Seeking a Balance between Student and Industry Expectations for Technology Exposure in Construction Education”, Journal of Professional Issues in Engineering Education and Practice, 143(3):05016013.

Thabet, W. and J. Lucas. (2017) “Asset Data Handover for a Large Educational Institution: Case-Study Approach”, Journal of Construction Engineering and Management, 143(11): 05017017.

Thabet, W. and J. Lucas. (2017) “A 6-Step Systematic Process for Model-Based Facility Data Delivery”, Journal of Information Technology in Construction (ITCon), Vol. 22, pg 104-131.

Zhao, D. and J. Lucas. (2014) “Virtual Reality Simulation for Construction Safety Promotion”, International Journal of Injury Control and Safety Promotion. 1(2014); 1-11. DOI: 10.1080/17457300.2013.061853

Lucas, J. T. Bulbul, W. Thabet (2013) “A Pilot of a Proof of Concept Prototype for Healthcare Facility Information Management.” ITcon, 18 (2013); 76-98.

Lucas, J. T. Bulbul, W. Thabet (2013) “An Object Oriented Model to Support Healthcare Facility Information Management.” J. of Automation in Construction, 31 (2013); 281-291

Lucas, J. T. Bulbul, W. Thabet, and C. Anumba (2013) “Case Analysis to Identify Links between Facility Management and Healthcare Delivery Information in a Hospital Setting.” J. of Architectural Engineering, 19 (2); 134-145.

Lucas, J. T. Bulbul, and C. Anumba (2013) “Gap Analysis on the Ability of Guidelines and Standards to Support the Performance of Healthcare Facilities.” J. of Performance of Constructed Facilities. 27(6), 748-755.

Lucas, J. and W. Thabet. (2008) “Implementation and Evaluation of a Virtual Reality as a Task Based Training Tool for Conveyor Belt Safety Training.” *ITCon* Vol. 13, Special Issue “*Virtual and Augmented Reality in Design and Construction,”* pg 637-659, http://www.itcon.org/2008/40

Lucas, J. W. Thabet, and P. Worlikar. (2008) “A VR-Based Training Program for Conveyor Belt Safety.” *ITCon* Vol. 13, pg 381-407, http://www.itcon.org/2008/25

Conference Publications:

Beates, L. and Lucas, J. (2022). “Case Study: The Effect of Homeowner Behavior on Energy-Efficiency in a High-Performance Home” 6th Residential Building Design & Construction Conference, Pennsylvania Housing Research Center, May 11-12, 2022, State College, PA.

Lucas, J., Gajjar, D., Davis, D., and Loadholt, G.T. (2022). “Evaluating Various job Functions to Map a Typical Career Path in the Roofing Industry” 58th Annual Schools of Construction International Conference, April 20-23, 2022, Antlanta, GA. (Presenting Author)

Lucas, J. and Gajjar, D. (2020). “Effects of Virtual Reality on Student Learning in Materials and Methods Course” 56th Annual Associated Schools of Construction International Conference (Online)

Burgett, J., Lucas, J., and Magxaka, M. (2020). “iDUC: Solution to Address Common Challenges of State Agency Drone Deployment” 56th Annual Associated Schools of Construction International Conference (Online).

Lucas, J., Bausman, D., Magxaka, M., and Haidary, T. (2020). “Advancing Best Practices for Safety in Residential Construction” 2020 Construction Research Congress, March 8-10, 2020, Phoenix Arizona

Lucas, J. and S. Habright-Belue (2019). “Teaching Interdisciplinary Collaboration in Undergraduate Foundation Level Courses” 55th Annual Associated Schools of Construction International Conference, April 10-13, Denver, CO (Presenting Author)

Thabet, W. and J. Lucas (2019). “Using Dynamo for Model-Based Delivery of Facility Asset Data” Creative Construction Conference, CCC2019, 29 June- 2 July, Budapest, Hungary.

Lucas, J. (2018). “Emerging Technology Course Offering: Lessons Learned, Observations, and Ideas for Improvement” Academic Interoperability Coalition, 13th BIM Academic Symposium & Job Task Analysis Review, 11-12 November 2018, Las Vegas, Nevada (Presenting Author)

Lucas, J. and Vijayarao, S.S.N. (2018). “Barriers of Automated BIM Use: Examining Factors of Project Delivery.” 35th CIB W78 2018 Conference, 1-3 October, Chicago IL. (Presenting Author)

Lucas, J. (2018). “Student Perceptions and Initial Response to using Virtual Reality for Construction Education.” 54th ASC Annual International Conference Proceedings, 18-21 April, Minneapolis MN. (Presenting Author)

Lucas, J. and Thabet, W. (2018). “Using a Case-Study Approach to Explore Methods for Transferring BIM-Based Asset Data to Facility Management System.” 2018 Construction Research Congress, April 2-4, New Orleans, LA. (Presenting Author)

Lucas, J. and Addagalla, S.E. (2017). “Building Information Modeling Implementation for Facilities Management on U.S. University Campuses.” 53rd ASC Annual International Conference Proceedings, 5-8 April, Seattle Washington, pg. 483-491. (Presenting Author)

Wetzel, E., J. Lucas, W. Thabet (2017). “The Utilization of an Asset Safety Identification Tool (ASIT) to Support Safety during Facilities Management.” ASCE International Workshop on Computing in Civil Engineering, June 25-27, 2017, Seattle, Washington.

Lucas, J., J. Burgett, A. Hoover, M. Gungor (2016). “Use of Ultra-Wideband Sensor Networks to Detect Safety Violations in Real Time.” 33rd International Symposium on Automation and Robotics in Construction (ISARC 2016), July 18-21, Auburn, AL. (Presenting Author)

Thabet, W. and J. Lucas (2016) “A Case Study for Improving BIM-FM Handover for a Large Educational Institution”, 2016 Construction Research Congress, May 31-June 2, San Juan, Puerto Rico. (Presenting Author)

Lucas, J., A. Khademi, B. Ross, and G. Fulaytar (2015). “A Reliability Model for BIM-Related Automated Processes,” *CIB W78 2015* Proceedings, 26-29 October, Eindhoven, The Netherlands. (Presenting Author)

Lucas, J. (2015). “Student Perceptions of BIM in the Classroom” Proceedings, 51st Annual Associated Schools of Construction Conference, 22-25 April, College Station, TX. (Presenting Author)

Wang, Z., T. Bulbul, and J. Lucas (2015) “A Case Study of BIM-Based Model Adoption for Facility Management – Information Needs Analysis”, *2015 ASCE International Workshop on Computing in Civil Engineering*, June 21-23, Austin, TX.

Lucas, J. (2014). “Deriving Learning Outcomes for BIM Implementation into the CSM Curriculum based on Industry Expectation.” Proceedings, 50th Annual Associated Schools of Construction Conference, 26-29 March, Washington D.C., USA. (Presenting Author)

Brooks, T.J. and J. Lucas. (2014) “A Study to Support BIM Turnover to Facility Managers for use after Construction,” Computing in Civil and Building Engineering (2014): pp. 243-250.

Lucas, J. and T. Bulbul. (2013). “Future Directions for a Healthcare Facility Information Management System.” In: *Riding the Wave: Embracing Virtual Design and Construction*, Proceedings, 10-13 April, San Luis Obispo, California, USA. (Presenting Author)

Lucas, J. T. Bulbul, and W. Thabet. (2011). “A Lifecycle Framework for Using BIM in Healthcare Facility Management.” In: *Computer Knowledge Building: CIB W78 W102 2011* Proceedings, 26-28 October, Sophia Antipolis, France. (Presenting Author)

Lucas J., T. Bulbul, C. J. Anumba, and J. Messner. (2011) “Evaluating the Role of Healthcare Facility Information on Health Information Technology Initiatives from a Patient Safety Perspective.” In: *2011 ASCE International Workshop on Computing in Civil Engineering*, 19-22 June, Miami Fl, USA.

Lucas, J. W. Thabet, and D. Bowman. (2009). “Analyzing Capacities of BIM Tools to Support Data use across Project Lifecycle,” In: *Managing IT in Construction/Managing IT for Tomorrow: Proceedings of the 26th International Conference on IT In Construction and 1st International Conference on Managing Construction for Tomorrow,* 1-3 October 2009. Istanbul, Turkey, pg. 11-19. (Presenting Author)

Zhao, D., J. Lucas, and W. Thabet. (2009) “Using Virtual Environments to Support Electrical Safety Awareness in Construction,” In: *2009 Winter Simulation Conference*. December 13-16, 2009. Austin, TX, USA. (Presenting Author)

Lucas, J. W. Thabet, and D. Bowman. (2008) “Using Virtual Prototyping Techniques for Implementation of a Virtual Construction Environment (VCE),” In: *CIB W78 25th International Conference on Information Technology: Improving the Management of Construction Projects Through IT Adoption: 15-17 July 2008.* Santiago, Chile, pg. 271-279.

Lucas, J., P. Worlikar, and W. Thabet. (2008) “An Evaluation Scheme for Two Safety Training Applications,” In: *CIB W78 25th International Conference on Information Technology: Improving the Management of Construction Projects Through IT Adoption: 15-17 July 2008.* Santiago, Chile, pg. 249-259.

Lucas, J., McMahan, R., Engle, R., Bowman, D., Thabet, W., Schafrik, S., and Karmis, M. (2008) Improving Mining Health and Safety through Conveyor System Training in a Virtual Environment, *International Future Mining Conference & Exhibition*. Sydney, Australia. 161.

Bowman, D., W. Thabet, and J. Lucas. (2008) "Strategies for the Creation of Construction Models: Challenges to the Current State of the Art," In: *12th International Conference on Computing in Civil and Building Engineering & 2008 International Conference on Information Technology in Construction*. October 16-18, Beijing, China.

Lucas, J. and W. Thabet. (2007) "Benchmarking User Performance by using Virtual Reality for Task-Based Training," In: *7th International Conference on Construction Applications of Virtual Reality: October 22-23, 2007.* University Park, PA, USA, pg. 70-79. (Presenting Author)

Lucas, J., W. Thabet, and P. Worlikar. (2007) "Using Virtual Reality (VR) to Improve Conveyor Belt Safety in Surface Mining," In: *24th W78 Conference Maribor 2007 & 5th ITCEDU Workshop and 14th EG-ICE Workshop: Bringing ITC knowledge to work.* Maribor, Slovenia, pg. 431-438.

Other Publications:

Lucas, J. and T. Bulbul (2015) "Ontology to Support Healthcare Facility Management", in *Ontology in the AEC Industry: A Decade of Research and Development in Architecture, Engineering, and Construction,* Issa and Mutis, Eds. ASCE, Reston, VA

GRANTS AND AWARDS

- 2022-2023, Roofing Alliance, $67,514, Roofing Alliance Learning Manual
- 2021, Rocky Mountain Mechanical Contractors Association, $19,997, "Phase 1: Business Case for HVAC Tech Licensing Requirements in Colorado"
- 2020-2021, New Horizon Foundation, $47,229, "Effective Project Close-Out for HVAC/Sheet Metal Contractors: Best Practices"
- 2020-2021, FHWA: STIC, $123,859, "Developing a DOT Specific UAS Simulator and a Flight Proficiency Exam"
- 2020-2022, Roofing Alliance, $136,212, "Roofing Alliance Professional Development Certificate"
- 2019-2024, National Housing Endowment, HELP Grant, $100,000, "Residential Construction Education Development"
- 2018-2019, Jobsite Safety Institute, $75,233, "Advancing Best Practices for Construction Safety".
- 2018, American Institute of Constructors, $21,945, "CPC Online Tutorials".
- 2016-2017 Academic Year, CSM Industry Advisory Board Faculty Development Grant, $20,000, "The Practical Application and the Effects of Using BIM and Immersive Virtual Reality in Understanding Three Dimensional Space", supporting preliminary research for development of educational modules and potential NSF Grant.
- 2016-2017 Academic Year, Pennell Center Research Grant, College of Architecture, Arts, and Humanities, $4628, "Identifying Factors that Affect User Confidence in BIM Accuracy".
- 2015-2016 Academic Year, University Research Grant Committee, Project Initiation Grant, $8,500. "Feasibility Study for the use of Ultra Wideband Sensor Networks in Construction Safety", supporting preliminary research and development of NIOSH Grant.
- 2014-2015 Academic Year, Research Collaborative Grant, College of Architecture, Arts, and Humanities, $7480. "Developing a Building Information Model (BIM) Reliability Model for Automated Processes".
- 2013-2014 Academic Year, Faculty Research Development Program, College of Architecture, Arts, and Humanities, $2150 (plus department match). Travel support for conducting research "*GreenBIM: Beyond Design, Construction, and Commissioning*"
- October 2012, Clemson Advancement Foundation for Design + Building, $500
  Competitive proposal for NAHB Competition Team travel funding.

SERVICE ACTIVITIES

- Spring 2022 – Present, Department of CSM Merger Committee**, Chair**
- Fall 2019 – Present, Department of CSM TPR Review Committee
  - Fall 2021, TPR Committee Chair
- Fall 2015 – Spring 2022, College of Architecture, Arts, and Humanities College Curriculum Committee, Member (Department of CSM Curriculum Committee, Chair)
- Fall 2014 – Spring 2018, College of Architecture, Arts, and Humanities Faculty Honors and Awards Committee, Member
- Spring 2014, Department of Construction Science and Management, Tenure, Promotion, and Reappointment Revision Recommendation Task-force, Member
- Faculty/Staff Search Committees: Staff – Fall 2017, Chair – Fall 2016, Faculty – Spring 2016

SERVICE AWARDS

- April 2015, The American Institute of Constructors Award, by the American Institute of Constructors, In recognition of a young professional's distinguished service to the AIC and dedication to the profession.

RESEARCH INTERESTS

- Residential Construction and improving process efficiency, safety, and overall production.
- Workforce Development through improving operational efficiency, training, and retention.
- Use of Building Information Modeling (BIM) to enhance project information transfer.
- Using Virtual Environments and Virtual Reality Technologies to enhance education and training.

TEACHING INTERESTS

- Use of open ended problems where the student can explore different options and determine the best solution while promoting critical thinking and creativity.

SKILLS:

Proficient in Windows operation systems, Microsoft Office Applications. The use of a computer to develop drawings, digital models, publications, and presentations.

Modeling Programs: AutoCAD (2d & 3D), Autodesk REVIT, Navisworks,

Adobe Photoshop, Adobe Illustrator, Adobe InDesign, Adobe Acrobat, Camtasia, ARCGIS

Also experienced in freehand drawing, digital rendering, water color, and digital photography.