

**CONTACT**

Name: Joseph M. Burgett  
Title: Associate Professor  
Address: Clemson University  
3-109 Lee Hall  
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**EDUCATION**

- Ph.D. Building Construction. May 2013. University of Florida; College of Design Construction and Planning.
- Masters of Science in Building Construction. May 2011. University of Florida; M.E. Rinker Sr. School of Building Construction.
- Bachelor of Science in Building Construction. May 2002. University of Florida; M.E. Rinker Sr. School of Building Construction.

**RESEARCH INTERESTS**

- Unmanned Aircraft Systems (drones) in construction and infrastructure
- Artificial intelligence
- Online education

**CERTIFICATIONS, LICENSES AND AWARDS**

- AUVSI Trusted Operator Level 3
- Thermographer Level 3
- APSA NIST sUAS Test Methods Proctor
- 2018 Clemson Alumni Master Teacher Award
- Remote Pilot Airman Certificate with a Small UAS Rating
- Certified General Contractor: CG C1506115
- AIC Certified Professional Constructor: 11593
- 2018 American Institute of Constructor Young Member Award
- 2017 ASC Region 2 National Excellence in Teaching Award
- 2016 ASC Region 2 Excellence in Teaching Award
- LEED Accredited Professional
- The John D. Doran Jr. Memorial Customer Service Award. (2008)

**PROFESSIONAL EXPERIENCE****2013 – Present:**      **Clemson University** Associate Professor

- Courses taught:
  - CSM4210: Applied Drone use in the Built Environment
  - CSM8690: Advanced Drone Mapping and Modeling
  - CSM8900: Applied Drone Technology
  - CSM3040: Environmental Systems 1
  - CSM3050: Environmental Systems 2
  - CSM3070: Principles and Practices of Sustainable Construction
  - CSM2040: Contract Documents
  - CSM8670: Green Building Delivery

**2011 – 2014:**      **National Labor College** Adjunct Instructor

- Courses taught:
  - CMGT4050: Fundamentals of the Construction Industry I.
  - CMGT4051: Fundamentals of the Construction Industry 2.
  - CMGT4100: Project Building Systems.
  - CMGT4200: Project Administration.
  - CMGT4220: Construction Project Planning and Scheduling.
  - CMGT4700: Construction Cost Accounting, Estimating and Finance.
- Courses Developed
  - CMGT4700: Cost Accounting, Estimating and Finance

**2003 – 2010:**      **The Weitz Company****Project Manager**

- Responsible for the overall management of multiple commercial construction projects.
- Projects ranged in size from 250K to 25 million dollars.
- Primary responsibilities included:
  - Cost management.

- Contract administration.
- Owner relations.
- Staff development.
- Project types include biomedical research, health care, retirement campuses, municipal complexes, courthouses and libraries.

**2002 – 2003:**

**Peter R. Brown Construction** Project Engineer

- Supported project management in commercial construction projects.
- Project size ranged from 250K – 5 million dollars.
- Project types include health care, municipal complexes, and courthouses.

## **REFEREED JOURNAL AND BOUND PUBLICATIONS**

Lawal, Nurudeen and Burgett, Joseph. (2024). From Ground to Air: Developing a Drone Curriculum for Law Enforcement Education. Journal of Advanced Technological Education. (Accepted)

Burgett, Joseph. (2023). METAR SMS Text Message Service to Support Part 107 Compliance: A Classroom Lab Exercise. Journal of Advanced Technological Education. Volume 3(1)

Burgett, Joseph and Dumpati, Cheran. (2023). Status of Drone Education in Construction Management Programs at 2-year Community Colleges. Professional Constructor: Journal of the American Institute of Constructors.

Burgett, Joseph. (2023). UAS Law Enforcement Technicians in South Carolina: An Exploration of Supply and Demand. Journal of Advanced Technological Education. Volume 2(1)

Dees, Colin and Burgett, Joseph. (2023). A Data-Driven Flight Proficiency Benchmark for Small Unmanned Aircraft Systems Curriculum at Two-Year Institutions of Higher Education. Journal of Advanced Technological Education.

Burgett, Joseph. (2023). Status of Law Enforcement Drone Education at Two-Year Community College. *Journal of Criminal Justice Education*. DOI: 10.1080/10511253.2023.2183227

Dees, Colin and Burgett, Joseph. (2022) Using Flight Simulation as a Convenient Method for UAS Flight Assessment for Contractors. *Professional Constructor: Journal of the American Institute of Constructors*.

Burgett, Joseph and Comert, Gurcan. (2021). Case Study of Using Unmanned Aircraft Systems to Support Bridge Inspections. *Professional Constructor: Journal of the American Institute of Constructors*.

Burgett, Joseph, Lytle, Blake, Bausman, Dennis, Shaffer, Scott, Stuckey, Eric. (2021). Accuracy of Drone-Based Surveys: Structured Evaluation of a UAS-Based Land Survey. *Journal of Infrastructure Systems; ASCE*.

Bausman, Dennis, Burgett, Joseph, Jadhav, Ajay, Shaffer, Scott & Stuckey, Eric. (2020). State Department of Transportation sUAS Program Development and Operational Deployment. *Professional Constructor; Journal of the American Institute of Constructors*.

Adjidjonu, Denise & Burgett, Joseph. (2020). Assessing the Accuracy of a Unmanned Aerial Vehicles Photogrammetric Survey. *International Journal of Construction Education and Research*. DOI: 10.1080/15578771.2020.1717683

Burgett, Joseph, Shaffer, Scott, & Stuckey, Eric. (2019). Accuracy of Drone Based Surveys to Measure Stockpile Volume. *Professional Constructor; Journal of the American Institute of Constructors*.

Usher, Todd. & Burgett, Joseph. (2019). Consumer Perception and Willingness to Pay for Extended new Home Warranties: *Professional Constructor; Journal of the American Institute of Constructors*

Burgett, Joseph. & Sharp, Julia. (2018). Impact of Motivation and Preparation on AC Exam Scores. *Professional Constructor; Journal of the American Institute of Constructors* 1(2018) page 5 – 14.

Burgett, Joseph., Perrenoud, Anthony, & Smith, James. (2017). Identification and Prioritization of Critical Subject Matter within Mechanical Systems Curriculum in Construction Education. *International Journal of Construction Education and Research*. ISSN: 1557-8771

Burgett, Joseph. (2017) Measures to Motivate and Prepare Students Taking the AC Exam: A Survey of University Department Heads. *Professional Constructor; Journal of the American Institute of Constructors* 2(2017) page 5 – 15..

Burgett, Joseph. (2016). *American Institute of Constructors' Associate Constructors Study Guide*. Alexandria, VA.

Burgett, Joseph., Smith, James., & Lavang, Yamini. (2016). A Comparison between Industry's and Academia's Perceptions of a Career in Construction Education. *International Journal of Construction Education and Research*. ISSN: 1557-8771

Burgett, Joseph & Sharp, Julia. (2015). HERS Standards Plug-Load Interaction Model Exploration: Incorporating the Interaction of Independent Variables to Improve the HERS Standards Plug-Load Models. *Journal of Energy Systems*. DOI: 10.1007/s12667-016-0200-1

Burgett, Joseph. (2015). Fixing the American Energy Leak: The effectiveness of a whole-house switch for reducing standby power loss in U.S. residences. *Energy Research & Social Science* 6(2015) page 87 – 94. DOI: 10.1016/j.erss.2014.12.006.

- Paper cited in Washington Post, "Energy and Environment" on February 6<sup>th</sup>, 2015 (Article: Your home is full of devices that never turn off. And they're costing you a lot of money. By Chris Mooney).

Burgett, Joseph. & Chini, Abdol. (2015). Using Building and Occupant Characteristics to Predict Residual Miscellaneous Electrical Loads: A Comparison between an Asset Label and an Operational Model. *Journal of Building Performance Simulation* (Feb 2015). DOI: 10.1080/19401493.2014.999122

Burgett, Joseph, Chini, Abdol & Oppenheim, Paul. (2013). Specifying Residential Retrofit Packages for 30% Reductions in Energy Consumption in Hot-Humid Climate Zones. *Energy Efficiency* 6(3) page 523 - 543. DOI: 10.1007/s12053-012-9190-6

- Paper featured in Renewable Energy Global Innovations Series (ISSN 2291-2460)

Burgett, Joseph & Chini, Abdol. (2012). Effective Energy Efficiency Measures for Existing Residential Homes in the Florida Market. Published in the International Journal of Construction Education and Research, 9 page 61 - 80.  
DOI:10.1080/15578771.2012.677966.

### **REFEREED CONFERENCE PROCEEDING PUBLICATIONS**

Burgett, Joseph. (2023). An Online Drone Course for Construction Management Students: Curriculum, Simulation, and Certifications. Proceedings of the Associated Schools of Construction Annual Conference.

Burgett, Joseph and Dees, Colin. (2023). Quantifying a Scoring Limitation of a Federal UAS Flight Proficiency Exam. Proceedings of the Associated Schools of Construction Annual Conference.

Burgett, Joseph. (2021) An Industry Focused Course to Address Barriers and Benefits of Drones in Construction. Proceedings of the Associated Schools of Construction Annual Conference.

Magxaka, Marchell, Lucas, Jason, Burgett, Joseph. (2020). iDUC: Solution to Address Common Challenges of State Agency Drone Deployment. Proceedings of the Associated Schools of Construction Annual Conference.

Adjidjonu, Denise & Burgett, Joseph. (2020). Accuracy of Drone Image Based Volumetric Surveys. Proceedings of the Associated Schools of Construction Annual Conference.

Gajjar, Dhaval & Burgett, Joseph. (2020). Evaluating the Use of Unmanned Aerial Systems (UAS) to Perform Low-Slope Roof Inspections. Proceedings of the Associated Schools of Construction Annual Conference.

Adjidjonu, Denise & Burgett, Joseph. (2019). Optimal UAS Parameters for Aerial Mapping and Modeling. Proceedings of the Associated Schools of Construction Annual Conference; Denver, CO.

Smith, James & Burgett, Joseph. (2019). Review of the Current State of Hiring International Engineering Students. Proceedings of the Associated Schools of Construction Annual Conference; Denver, CO.

Bausman, Dennis., Burgett, Joseph., Chowdhury, Mashrur., and Greider, Phillip. (2019). State Department of Transportation Unmanned Aircraft Systems Policy Development. Proceedings of the Transportation Review Board Annual Meeting; Washington DC.

Burgett, Joseph. (2018). Perception of the AC Exam by Pass or Fail Status. Proceedings of the Associated Schools of Construction Annual Conference; Minneapolis, MN.

Burgett, Joseph & Greene, Daniel. (2018). Quantifying the Cache: The Premium for Solar Homes is Not Explained by Reduced Energy Costs. Proceedings of the Associated Schools of Construction Annual Conference; Minneapolis , MN.

Smith, James & Burgett, Joseph. (2018). Work Values of Millennial Construction Management Students. Proceedings of the Associated Schools of Construction Annual Conference; Minneapolis , MN.

Lucas, Jason., Burgett, Joseph., Hoover, Adam., & Gungor, Mehmet. (2016). Use of Ultra-Wideband Sensor Networks to Detect Safety Violations in Real Time. Proceedings of 33<sup>rd</sup> International Symposium on Automation and Robotics in Construction (ISARC 2016); Auburn, AL.

Burgett, Joseph. (2016). Leveraging Immersion Technologies in Construction Management Education: A National Electrical Code 3D Simulation Tool. Proceedings of the Associated Schools of Construction Annual Conference; Provo, UT.

Burgett, Joseph. (2015). Using 3D Simulation to Improve Construction Management Education: A Pilot Study to Teach the NFPA70-National Electrical Code. Proceedings of the 15<sup>th</sup> International Conference on Construction Applications of Virtual Reality (CONVR2015); Banff, Canada.

Burgett, Joseph. (2014). Can “Flipping the Classroom” Improve the Educational Experience in Construction Management Courses: A Case Study in Teaching HVAC Psychrometrics. Proceedings of the Associated Schools of Construction Annual Conference; Washington, DC.

Burgett, Joseph & Chini, Abdol. (2014). Energy Modeling as Part of a Comprehensive Residential NZE Strategy. Proceedings of the iiSBE Net Zero Built Environment 2014 17th Rinker International Conference. March 6-7, Gainesville, Florida.

Burgett, Joseph & Chini, Abdol. (2013). Reducing Residential Miscellaneous Electrical Loads with a Whole-House Switch. Proceedings of the Associated Schools of Construction Annual Conference; San Luis Obispo, CA.

## **FUNDED RESEARCH**

2024 - UAS Operations Practical Skills Pilot Program for State DOTs. – PI. \$200,000.  
Sponsor: National Academy of Sciences

2024 – Transfer of Unmanned Aircraft Systems Technology to SCDOT for Enhanced Bridge Inspection. – PI. \$212,296. Sponsor: SCDOT/C2M2

2024 – UAS Research and Administrative Services to Support SCiDUC’s Mission. – PI. \$12,000. Sponsor: SCiDUC

2021 – College of Education ADR Internal Grant. Using drone after school programs to engage students in informal STEM learning and career experiences. – Co-Investigator. \$14,987. Sponsor: Clemson University – College of Education.

2021 – Integrating Dispersed Big Data into a Single Smart Water and Infrastructure Management System. – Co-Investigator. \$10,000. Sponsor: Clemson University R-Initiatives

2020 - Developing a DOT Specific UAS Simulator and a Flight Proficiency Exam. – Principal Investigator. \$123,960. Sponsor: SCDOT.

2020 – Creating an SC Inter-Agency Drone Users Consortium (SCiDUC) to Foster Drone Research with State Agencies. – Principal Investigator. \$20,772. Sponsor: Pennell Center at Clemson University.

2019 – Rapid Deployment of Drone Technology and Software to Support SCDOT Operations. – Principal Investigator. \$125,015 Sponsor: SCDOT.



2019 – Creation of a KCI Drone Bridge Inspection Program. – Principal Investigator.  
Sponsor: KCI Technologies.

2018 – Unmanned Aircraft Systems Impact on Operational Efficiency and Connectivity.  
– Principal Investigator. \$44,000. Sponsor: USDOT.

2018 – The Viability of Using Unmanned Aircraft Systems (UAS) in Transportation  
Infrastructure Asset Maintenance. – Principal Investigator. \$49,893. Sponsor: SCDOT.

2018 – Certified Professional Constructor Online Preparation Course. – Principal  
Investigator. \$21,944. Sponsor: American Institute of Constructors.

2018 – Revised AC Exam Study Guide Practice Test. – Principal Investigator. \$1,896.  
Sponsor: American Institute of Constructors.

2015 – Provide Enhanced Preparation Material for the Associate Constructor Exam  
Phase Two – Principal Investigator. \$23,895. Sponsor: American Institute of  
Constructors.

2015 – Provide Enhanced Preparation Material for the Associate Constructor Exam  
Phase One – Principal Investigator. \$21,796. Sponsor: American Institute of  
Constructors.

2015 – University Research Grant Committee Project Initiation Grant – Co-Principal  
Investigator. \$8,500. Sponsor: University Research Grant Committee at Clemson  
University.

2014 – Department of Construction Science & Management Industry Advisory Board  
Faculty Research Grant - Interactive 3D Training Simulation for Electrical Code Violations  
– Principal Investigator. \$20,000. Sponsor: CSM Industry Advisory Board at Clemson  
University.

2014 – Pennell Research Grant - Improving the HERS Index's Model of Residential  
Miscellaneous Electrical Loads – Principal Investigator. \$5,000. Sponsor: Pennell  
Center at Clemson University.

2014 – AAH Faculty Research Grant - Alternative Methods of Modeling Residential Miscellaneous Electrical Loads – Principal Investigator. \$3,000. Sponsor: College of Architecture Arts and Humanities at Clemson University.

### **PRESENTATIONS**

Associated Schools of Construction Annual Conference. (2023). An Online Drone Course for Construction Management Students: Curriculum, Simulation, and Certifications.

Associated Schools of Construction Annual Conference. (2023). Quantifying a Scoring Limitation of a Federal UAS Flight Proficiency Exam.

Burgett, Joseph. (2023). Strategic Deployment of Drone Technology and Software to Support SCDOT Operations. FHWA EDC7 Annual Conference.

Cassule, Leonildo, Sarasua, Wayne, Burgett, Joseph, Bible, Joe. Fooladi-Mahani, Maziar, Shams, Alirza, Davis, Williams, & Famili, Afshin. (2022). A Comparison of Mobile LiDAR and Low Altitude Unmanned Aerial Vehicle Photogrammetry for Collecting Highway Cross Slope Measurements. Proceedings of the Transportation Review Board.

Carolinas AGC – CAGC Construction Technology Workshop. (2022). Drones in Construction.

Federal Highway Administration – West Virginia Unmanned Aerial Systems (UAS) Workshop. (2022). UAS Simulator for State DOT.

Federal Highway Administration – South Dakota Unmanned Aerial Systems (UAS) Workshop. (2022). UAS Simulator for State DOT.

Federal Highway Administration – Alaska Unmanned Aerial Systems (UAS) Workshop. (2022). UAS Simulator for State DOT.

Federal Highway Administration – Tennessee Unmanned Aerial Systems (UAS) Workshop. (2022). UAS Simulator for State DOT.

Associated Schools of Construction Annual Conference. (2021) An Industry Focused Course to Address Barriers and Benefits of Drones in Construction.

Associated Schools of Construction Annual Proceedings Magxaka, Marchell, Lucas, Jason, Burgett, Joseph. (2020). iDUC: Solution to Address Common Challenges of State Agency Drone Deployment.

Associated Schools of Construction Annual Conference. (2020). Accuracy of Drone Image Based Volumetric Surveys.

Associated Schools of Construction Annual Conference. (2020). Evaluating the Use of Unmanned Aerial Systems (UAS) to Perform Low-Slope Roof Inspections.

Associated Schools of Construction Annual Conference. (2019) Optimal UAS Parameters for Aerial Mapping and Modeling.

2019 Highway Engineers Conference (SCDOT); Columbia, SC. (2019) Drones and the SCDOT: Where we are and where we are going.

South Carolina Information Technology Directors Association; Columbia, SC. (2018) Use of Unmanned Aerial Systems to Augment Bridge Inspections.

Associated Schools of Construction Annual Proceedings; Minneapolis, MN. (2018) Perception of the AC Exam by Pass or Fail Status.

Associated Schools of Construction Annual Proceedings; Minneapolis, MN. (2018) Quantifying the Cache: The Premium for Solar Homes is Not Explained by Reduced Energy Costs.

Associated Schools of Construction Annual Proceedings; Minneapolis, MN. (2018) Discussion Round Table Leader for Improvement of the Instruction of Construction Estimating.

American Council for Construction Education; Atlanta, GA. (2016) Presentation of New Associate Constructors Study Guide and Online Preparation Classes.

Associated Schools of Construction Annual Proceedings; Provo, UT. (2016) Leveraging Immersion Technologies in Construction Management Education: A National Electrical Code 3D Simulation Tool.

Associated Schools of Construction Annual Proceedings; Provo, UT. (2016) Discussion Round Table Leader for Improvement of the Instruction of HVAC and Electrical Systems.

American Institute of Constructors Annual Forum; San Diego, CA. (2016) Presentation of Revised Associated Constructor Exam Study Guide.

15<sup>th</sup> International Conference on Construction Applications of Virtual Reality (CONVR2015); Banff, Canada. (2015) Using 3D Simulation to Improve Construction Management Education: A Pilot Study to Teach the NFPA70-National Electrical Code.

Associated Schools of Construction Annual Proceedings; Washington, DC. (2014) Can “Flipping the Classroom” Improve the Educational Experience in Construction Management Courses: A Case Study in Teaching HVAC Psychrometrics.

iiSBE Net Zero Built Environment 2014. 17th Rinker International Conference. Gainesville, FL. (2014) Energy Modeling as Part of a Comprehensive Residential NZE Strategy.

Associated Schools of Construction Annual Proceedings; San Luis Obispo, CA. (2013) Reducing Residential Miscellaneous Electrical Loads with a Whole-House Switch.

## **SERVICE**

2023 – 2024. CSM Faculty Search and Screening committee (member)

2023 – 2024. CSM Faculty Search and Screening committee (chair)

2023 – 2024. Chair of FAA Collegiate Training Initiative’s Curriculum Committee

2023 – Present. FAA UAS Collegiate Training Initiative Program (member)

2022 – Present. Clemson University Distance Education Advisory Board (member)

2024 – Present. Executive Director of the South Carolina Interagency Drone Users Consortium (SCiDUC)

2022 – Present. Member of the FAA Collegiate Training Initiative

2022 – 2024. Treasurer of the South Carolina Interagency Drone Users Consortium (SCiDUC)

2019 – 2022. Director and Founding President of the South Carolina Interagency Drone Users Consortium (SCiDUC)

2015 – Present. AIC/CCC Associate Constructor Exam Writing Committee (member)

2019 – Present. CSM Tenure, Promotion and Review committee (member)

2014 – Present. CSM Departments Faculty Honors and Awards Committee (chair)

- 2013 – Present. Faculty Advisor for AGC Student Chapter
2019. CSM Department Chair Review Committee. (chair)
- 2018 – 2019. CSM Faculty Search and Screening committee. (member)
- 2019 – 2022. CAAH Faculty Research and Development Program (member)
- 2015 – 2019. American Institute of Constructor Board Member
- 2015 – 2019. ASC Region 2 Student Commercial Competition Coach
- 2019 – Best Presentation
  - 2018 – 3<sup>rd</sup> Place
  - 2017 – 2<sup>nd</sup> Place and Best Presentation
  - 2016 – 2<sup>nd</sup> Place and Best Presentation Shadow Competition
  - 2015 – 2<sup>nd</sup> Place and Best Presentation
- 2014 – 2015. College of AAH Faculty Honors and Awards Committee (member)
- 2016 – 2017. CSM Department Chair Search and Screening Committee (chair)
- 2015 – 2016. CSM Faculty Search and Screening committee.
- 2014 – 2015. CSM Department Chair Reappointment Committee (member)
- 2013 – 2014. CSM Bylaws Revision Committee (member)
2014. Faculty advisory for Dept. of Energy Student Challenge Home Competition.  
(subject matter expert award received at competition)

**MEMBERSHIPS**

South Carolina Interagency Drone Users Consortium (SCiDUC)  
Airborne Public Safety Association  
The Honor Society of Phi Kappa Phi  
American Institute of Constructors