Daniel Castro-Lacouture, Ph.D., P.E.
Curriculum Vitae

I. Earned Degrees

Ph.D.	2003	Purdue University, Civil Engineering (specialization in Construction Engineering and Management)
MSc.	1999	University of Reading (UK), Construction Management
BSc.	1994	Universidad de Los Andes (Colombia), Civil Engineering

II. Employment History

Chair	School of Building Construction Georgia Institute of Technology	7/2011 - Present
Executive Director	Professional Masters Program Occupational Safety and Health Georgia Tech Professional Education	7/2016 - Present
Professor	School of Building Construction Georgia Institute of Technology	3/2015 - Present
Adjunct Faculty	School of Civil and Environmental Engineering Georgia Institute of Technology	10/2014 – 12/2019
Interim Chair	School of Building Construction Georgia Institute of Technology	7/2010 - 6/2011
Associate Professor	School of Building Construction Georgia Institute of Technology	2/2009 - Present
Assistant Professor	Building Construction Program Georgia Institute of Technology	8/2006 - 2/2009
Consultant	Imatek Consulting	6/2005 – 7/2010
Assistant Professor	Department of Civil Engineering Ohio University	8/2003 - 6/2006
Graduate Assistant	Construction Engineering and Management Purdue University	1/2000 - 5/2003
Research Fellow	Advanced Construction Technologies Center University of Reading, UK	6/1999 - 12/1999
Consultant	Schal Limited, UK	5/1999 - 7/1999
Project Engineer	Drummond Limited, Colombia	12/1994 - 8/1998
Civil Engineer	General Comptrollership, Colombia	2/1994 - 12/1994
Graduate Assistant	Department of Civil Engineering Universidad de Los Andes, Colombia	1/1994 - 5/1994
Student Intern	Intercor, Colombia	1/1992 - 7/1992

III. Honors and Awards

Best Paper Award with Yuqing Hu and Chuck Eastman, *2020 Construction Research Congress*, ASCE, Tempe, AZ, March 2020.

Selected as Fellow of the Atlantic Coast Conference Academic Leaders Network (ACC ALN) program, July 2, 2019.

Thank a Teacher Certificate. Center for the Enhancement of Teaching and Learning, Georgia Institute of Technology, April 22nd, 2014.

2nd Prize with Jorge Sefair, Laura Florez, and Andres Medaglia, Sustainability Poster Session. Brook Byers Institute for Sustainable Systems, Georgia Institute of Technology, April 2008.

Class of 1969 Teaching Fellow, 2008-2009, Georgia Institute of Technology, Atlanta, Georgia, May 2008.

Best Paper Award with Angelica Ospina-Alvarado, *COBRA Conference*, awarded by the Royal Institution of Chartered Surveyors (RICS), September 2007.

Nominee for the Goizueta Foundation Junior Faculty Rotating Professorship, 2007.

Journal article “Supply Chain Optimization Tool for Purchasing Decisions in B2B Construction Marketplaces” was selected as ScienceDirect's Top 25 Hottest Articles of *Automation in Construction*, ranked 2nd in June 2007.

Nominee for the Sloan Industry Studies Fellowship, 2006.

Nominee for the Russ Outstanding Undergraduate Teaching Award (Ohio University), 2006.

Excellence in Civil Engineering Education (ExCEEd) Fellow, July 2005.

COLFUTURO Scholar, 1999 - 2003.

IV. Research, Scholarship, and Creative Activities

An asterisk (*) indicates those that resulted from work done at Georgia Tech; names of student co-authors are in **boldface**.

A. Published Books, Book Chapters, and Edited Volumes

A1. Books

*Yates, J.K., and Castro-Lacouture, D. (2016). Sustainability in Engineering Design and Construction, CRC Press, Taylor & Francis Group, ISBN: 1498733913, 452 pages.

A2. Refereed Book Chapters

*Castro-Lacouture, D. (2014). "Resource Management and Closed-Loop Systems: Advancing Sustainable Performance Metrics," in *Measurement Science for Sustainable Construction and Manufacturing*, Bilal M. Ayyub, Richard Wright, Gerald Galloway (Eds.), Reston, VA: National Institute of Standards and Technology (NIST)/American Society of Civil Engineers (ASCE).

***Ospina-Alvarado, A.M.**, Castro-Lacouture, D., and Roper, K.O. (2010). "Relationship between AEC+P+F Integration and Sustainability," in *Industrialised, Integrated, Intelligent Sustainable Construction (I3CON)*, Ian Wallis, Lesya Bilan, Mike Smith and Abdul Samad Kazi (Eds.), London: BSRIA and I3CON.

*Castro-Lacouture, D. (2009). "Construction Automation," in *Handbook of Automation*, Shimon Nof (Ed.), Berlin: Springer.

A3. Other Parts of Books

*Preface of the *Proceedings of ASCE Construction Research Congress 2014*: *Construction in a Global Network*, Construction Institute of the American Society of Civil Engineers, Daniel Castro-Lacouture, Javier Irizarry, and Baabak Ashuri (Eds.), Atlanta, Georgia, May 19-21, 2014, 11 pages.

Castro-Lacouture, D. (2005). "Sensing Applications for Sustainable Construction," in *Construction and the Environment: Research Foci for a Sustainable Future*, University of South Carolina, Liv Haselbach and Christine Fiori (eds.). January 14, 2005.

A4. Edited Volumes

**Proceedings of the 2014 ASCE Construction Research Congress: Construction in a Global Network*, Construction Institute of the American Society of Civil Engineers, Daniel Castro-Lacouture, Javier Irizarry, and Baabak Ashuri (Eds.), Atlanta, Georgia, May 19-21, 2014, 2405 pages.

**Proceedings of the Fourth Pan American Conference on Construction Management and Economics (ELAGEC IV)*, Harrison Mesa and Daniel Castro-Lacouture (Eds.), Santiago, Chile, October 4-5, 2014.

B. Refereed Publications and Submitted Articles

B1. Published and Accepted Journal Articles

1. *__Chang, S.__, Castro-Lacouture, D., and Yamagata, Y. (2020). "Estimating Building Electricity Performance Gaps with Internet of Things Data Using Bayesian Multilevel Additive Modeling," *Journal of Construction Engineering and Management*, ASCE,146(12), 05020017. https://doi.org/10.1061/(ASCE)CO.1943-7862.0001930

2. *__Hu, Y.__, Castro-Lacouture, D., Eastman, C. M., and Navathe, S. B. (2020). "Automatic clash correction sequence optimization using a clash dependency network," *Automation in Construction*, 115, 103205. https://doi.org/10.1016/j.autcon.2020.103205

3. *__Chang, S.__, Castro-Lacouture, D., and Yamagata, Y. (2020). Decision support for retrofitting building envelopes using multi-objective optimization under uncertainties," *Journal of Building Engineering*, 101413. https://doi.org/10.1016/j.jobe.2020.101413

4. *Du, J., Dong, P., Sugumaran, V., and Castro-Lacouture, D. (2020). "Dynamic decision support framework for production scheduling using a combined genetic algorithm and multiagent model," *Expert Systems*, e12533. https://doi.org/10.1111/exsy.12533

5. *__Chang, S.__, Saha, N., Castro-Lacouture, D., and Yang, P. P. J. (2019). "Multivariate relationships between campus design parameters and energy performance using reinforcement learning and parametric modeling," *Applied Energy*, Vol. 249, p. 253-264.

6. *__Hu, Y.__, Castro-Lacouture, D., and Eastman, C. M. (2019). "Holistic clash detection improvement using a component dependent network in BIM projects," *Automation in Construction*, 105, 102832. https://doi.org/10.1016/j.autcon.2019.102832

7. *Kim, S., __Chang, S.__, and Castro-Lacouture, D., (2019). "Dynamic modeling for analyzing impacts of skilled labor shortage on construction project management," *Journal of Management in Engineering*, ASCE, 36(1), 04019035.

8. *Du, J., Jing, H., Choo, K. K. R., Sugumaran, V., and Castro-Lacouture, D. (2019). "An Ontology and Multi-Agent Based Decision Support Framework for Prefabricated Component Supply Chain," *Information Systems Frontiers*, 1-19, https://doi.org/10.1007/s10796-019-09941-x

9. *Du, J., Jing, H., Castro-Lacouture, D., and Sugumaran, V. (2019). "Multi-agent simulation for managing design changes in prefabricated construction projects," *Engineering, Construction and Architectural Management*, DOI 10.1108/ECAM-11-2018-0524

10. *__Hu, Y.__, and Castro-Lacouture, D. (2018). "Clash Relevance Prediction Based on Machine Learning," *Journal of Computing in Civil Engineering*, ASCE, 33(2), 04018060.

11. *Yang, P. P.-J., Quan, S.-J., Castro-Lacouture, D., and Stuart, B. (2018). "A Geodesign method for managing a closed-loop urban system through algae cultivation," *Applied Energy*, Vol. 231, No. 1, p. 1372–1382.

12. *__Yarmohammadi, S.__, and Castro-Lacouture, D. (2018). "Automated performance measurement for 3D building modeling decisions," *Automation in Construction*, Vol. 93, p. 91-111.

13. *Afsari, K., Eastman, C. M., and Castro-Lacouture, D. (2017). "JavaScript Object Notation (JSON) data serialization for IFC schema in web-based BIM data exchange," *Automation in Construction*, 77, 24-51.

14. *__Ilbeigi, M.__, and Castro-Lacouture, D. (2017). "Effects of Price-Adjustment Clauses on Number of Bidders and Dispersion of Bid Prices in Highway Construction," *Journal of Management in Engineering*, ASCE, 33(4), 04017013.

15. *__Ilbeigi, M.__, Castro-Lacouture, D., and Joukar, A. (2017). "Generalized Autoregressive Conditional Heteroscedasticity Model to Quantify and Forecast

Uncertainty in the Price of Asphalt Cement," *Journal of Management in Engineering*, ASCE, 33(5), 04017026.

16. *__Yarmohammadi, S.__, Pourabolghasem, R., and Castro-Lacouture, D. (2017). "Mining implicit 3D modeling patterns from unstructured temporal BIM log text data," *Automation in Construction*, 81, 17-24.

17. *Dutt, F., Quan, S. J., Woodworth, E., Castro-Lacouture, D., Stuart, B. J. and Yang, P. P.-J. (2017). "Modeling Algae Powered Neighborhood through GIS and BIM Integration." *Energy Procedia*, Vol. 105, May 2017, p. 3830-3836.

18. *__Chang, S__., Castro-Lacouture, D., Dutt, F., and Yang, P. P.-J. (2017). "Framework for evaluating and optimizing algae façades using closed-loop simulation analysis integrated with BIM." *Energy Procedia*, 143, 237–244. DOI: 10.1016/j.egypro.2017.12.677

19. *Quan, S. J., Igou, T. K., **Chang, S.**, Dutt, F., Castro-Lacouture, D., Chen, Y., and Yang, P. (2017). "Decentralized algal energy system design at various urban densities and scales." *Energy Procedia*, 143, 767–773. DOI: 10.1016/j.egypro.2017.12.760

20. *__Ospina-Alvarado, A.__, Castro-Lacouture, D., and Roberts, J.S. (2016). "Unified Framework for Construction Project Integration," *Journal of Construction Engineering and Management*, ASCE, 10.1061/(ASCE)CO.1943-7862.0001131, 04016019.

21. *Juan, Y.-K., Chen, Y.-C., Perng, Y.-H., and Castro-Lacouture, D. (2016). "Optimal Decision Model for Sustainable Hospital Building Renovation—A Case Study of a Vacant School Building Converting into a Community Public Hospital." *International Journal of Environmental Research and Public Health*, 13(7):630.

22. * Yang, P. P. J., Quan, S. J., Castro-Lacouture, D., Rudolph, C., and Stuart, B. (2014). "Performance metrics for designing an algae-powered eco urban district: A Geodesign perspective." *Energy Procedia*, 61, 1487-1490.

23. *__Florez, L.__, Castro-Lacouture, D., and Medaglia, A.L. (2013). "Sustainable Workforce Scheduling in Construction Program Management," *Journal of the Operational Research Society*, Vol. 64 No. 8, p. 1169-1181.

24. *__Florez, L.__, and Castro-Lacouture, D. (2013). "Optimization Model for Sustainable Materials Selection Using Objective and Subjective Factors," *Materials and Design*, Vol. 46 No. 1, p. 310-321.

25. *__Florez, L.__, Castro-Lacouture, D., and Irizarry, J. (2013). "Measuring Sustainability Perceptions of Construction Materials," *Construction Innovation: Information, Process, Management*, Vol.13 No. 2, p. 217-234.

26. *__Florez, L.__, Irizarry, J., Castro-Lacouture, D., **Abdollahipour, S.**, and Jeong, H. (2012) "Feasibility of Implementing a Computer-Assisted PCC Rehabilitation Decision Support System in Georgia and Oklahoma," *International Journal of Construction Education and Research*, Vol. 8, p. 291-300.

27. *Zhou, H. and Castro-Lacouture, D. (2011). "Key Performance Indicators for Infrastructure Sustainability –A Comparative Study between China and the United States," *Advanced Building Materials*, Vols. 250-253 (2011), p. 2984-2992.

28. *__Ospina-Alvarado, A.__ and Castro-Lacouture, D. (2010). “Holistic Analysis of Fuel Cells for Residential Construction in the Rural United States,” *Construction Innovation: Information, Process, Management*, Vol. 10 No. 1, p. 60-74.

29. *__Riecke-Smith, V.R.__, Castro-Lacouture, D., and Oberle, R. (2010) “Influence of Delivery Methods and Legislative Impediments on Project Performance Information,” *Journal for the Advancement of Performance Information and Value*, Vol. 2 No. 1, p. 1-12.

30. *__Juan, Y-K.__, Roper, K.O., Castro-Lacouture, D., and **Kim. J.H.** (2010). “Optimal Decision Making on Urban Renewal Projects,” *Management Decision*, Vol. 48 No. 2, p. 207-224.

31. *__Juan, Y-K.__, Castro-Lacouture, D., and Roper, K. (2010). “A Hybrid Decision Support Approach Based on Multiple Objectives and Resources for Assessing the Relocation Plan of Dangerous Hillside Aggregations,” *European Journal of Operational Research*, Vol. 202 No. 1, p. 265-272.

32. *Castro-Lacouture, D., Süer, G.A., **Gonzalez-Joaqui, J.**, and Yates, J.K. (2009). “Fuzzy Mathematical Models for Construction Project Scheduling with Time, Cost, and Material Restrictions,” *Journal of Construction Engineering and Management*, ASCE, Vol. 135 No. 10, p. 1096-1104.

33. *Castro-Lacouture, D. and Roper K. (2009). “Renewable Energy in US Federal Buildings,” *Facilities*, Vol. 27 No. 5, p. 173-186.

34. *Castro-Lacouture, D., **Sefair, J.A.**, **Florez, L.**, and Medaglia, A.L. (2009). “Optimization Model for the Selection of Materials Using a LEED-based Green Building Rating System in Colombia,” *Building and Environment*, Vol. 44 No. 6, p. 1162-1170.

35. *__Juan, Y-K.__, Perng, Y-H., Castro-Lacouture, D. and Lu, K-S. (2009). “Housing Refurbishment Contractors Selection Based on a Hybrid Fuzzy-QFD Approach,” *Automation in Construction*, Vol. 18 No. 1, p. 139-144.

36. *Augenbroe, G., Castro-Lacouture, D., and **Ramkrishnan, K.** (2009). “Decision Model for Energy Performance Improvements in Existing Buildings,” *Journal of Engineering Design and Technology*, Special Issue on Green Construction, Vol. 7 No. 1, p. 21 – 36.

37. *__Juan, Y-K__., Kim. J.H**.**, Roper, K., and Castro-Lacouture, D. (2009). “Genetic Algorithm-Based Decision Support System for Housing Condition Assessment and Refurbishment Strategies,” *Automation in Construction*, Vol. 18 No. 1, p. 394-401.

38. *Castro-Lacouture, D., **Ospina-Alvarado, A.M.**, and Roper, K.O. (2008) “AEC+P+F Integration with Green Project Delivery and Lean Focus,” *Journal of Green Building*, Vol. 3 No. 4, p. 154-169.

39. *__Tatari, O.__, Castro-Lacouture, D., and Skibniewski, M.J. (2008). “Performance Evaluation of Construction Enterprise Resource Planning Systems,” *Journal of Management in Engineering*, ASCE, Vol. 24 No. 4, p. 198-206.

40. *__Garner, B., Richardson, K.__, and Castro-Lacouture, D. (2008). “Design-Build Project Delivery in Military Construction: Approach to Best Value Procurement,” *Journal for the Advancement of Performance Information and Value*, Vol. 1 No. 1, p. 33-47.

41. *Castro-Lacouture, D. and **Ramkrishnan, K.** (2008). “Fuzzy Logic Method for Measuring Building Quality,” *Journal of Quality*, Vol. 15 No. 2, p. 117-129.

42. *__Tatari, O.__, Castro-Lacouture, D., and Skibniewski, M.J. (2007). “Current State of Construction Enterprise Information Systems: Survey Research,” *Construction Innovation: Information, Process, Management*, Vol. 7 No. 4, p. 310-319.

43. *Bosscher, P., Williams II, R. L., Bryson, L. S., and Castro-Lacouture, D. (2007). "Cable-Suspended Robotic Contour Crafting System,” *Automation in Construction*, Vol.17 No. 1, p. 45-55.

44. *Castro-Lacouture, D., Medaglia, A.L., and Skibniewski, M.J. (2007). “Supply Chain Optimization Tool for Purchasing Decisions in B2B Construction Marketplaces,” *Automation in Construction*, Vol. 16 No. 5, p. 569-575.

45. *Medaglia, A.L., Cohen, M., and Castro-Lacouture, D. (2006). “Optimizing B2B Transactions Using the Marketplace Competitive Analyzer,” *International Journal of Management Science and Engineering Management*, Vol. 1 No. 1, p. 37-46.

46. *Castro-Lacouture, D. and Skibniewski, M.J. (2006). “Implementing a B2B e-Work System to the Approval Process of Rebar Design and Estimation,” *Journal of Computing in Civil Engineering*, ASCE, Vol. 20 No. 1, p. 28-37.

47. Castro-Lacouture, D. and Skibniewski, M.J. (2005). “Quantitative Assessment of Web-based Construction Management Systems: Application in Rebar Design and Estimation,” *Journal of Information Technology in Construction*, ITCon, Vol. 10, p. 229-244.

48. Kong, S., Li, H., Hung, T., Shi, J., Castro-Lacouture, D., and Skibniewski, M.J. (2004). “Enabling Information Sharing between e-Commerce Systems for Construction Materials Procurement,” *Automation in Construction*, Vol. 13 No. 2, p. 261-276.

49. Castro-Lacouture, D. and Skibniewski, M.J. (2003). “Implementation of e-Work Models for the Automation of Construction Materials Management Systems,” *Production Planning and Control*, Vol. 14 No. 8, p. 789-797.

50. Li, H., Cao, J., Castro-Lacouture, D., and Skibniewski, M.J. (2003). “A Framework for Developing a Unified B2B e-Trading Construction Marketplace,” *Automation in Construction*, Vol. 12 No. 2, p. 201-211.

B2. Conference Presentation with Proceedings (Refereed)

1. *__Hu, Y.__, Castro-Lacouture, D., and Eastman, C. M. (2020). “BIM-enabled Clash Resolution Optimization based on a Clash Dependent Network,” Proceedings of the ASCE 2020 Construction Research Congress. Tempe, AZ, March 8-10, 2020. Best paper award.

2. *__Chang, S.__, Yoshida, T., Binder, R.B., Yamagata, Y., and Castro-Lacouture, D. (2020) “Energy networks integrating buildings and vehicles tangled in spatial and

temporal changes," Proceedings of the 2020 ASCE Construction Research Congress, Tempe, AZ, March 8-10, 2020.

3. *__Hu, Y.__, Castro-Lacouture, D., and Eastman, C. M. (2019). "Holistic Clash Resolution Improvement Using Spatial Networks," *Proceedings of the ASCE 2019 International Conference on Computing in Civil Engineering* (i3CE), Atlanta, GA, June 17-19, DOI: 10.1061/9780784482445.027

4. *__Chang, S.__, Castro-Lacouture, D., Matsui, K., and Yamagata, Y. (2019). "Planning and Monitoring of Building Energy Demands under Uncertainties by Using IoT Data". *Proceedings of the ASCE 2019 International Conference on Computing in Civil Engineering* (i3CE). Atlanta, GA, June 17-19, DOI: 10.1061/9780784482445.027

5. *__Garcia, L.__, and Castro-Lacouture, D. (2019). "Cast-in-Place Reinforced Concrete Project Model Exchange Standards: Technology Challenges and Process Automation," *Proceedings of the ASCE 2019 International Conference on Computing in Civil Engineering* (i3CE). Atlanta, GA, June 17-19, DOI: 10.1061/9780784482445.027

6. *__Chang, S.__, Yoshida, T., Matsui, K., Castro-Lacouture, D., and Yamagata, Y. (2019). "An Ontology to Sustainability Provision System of Energy Demands and Indoor Thermal Comfort by Integrating Building Energy Models with IoT – Focusing on Residential Building in Kyojima, Tokyo", *Proceedings of the CIB World Building Congress*, Hong Kong, June 17-21, 2019.

7. *__Tijo-Lopez, S.__, and Castro-Lacouture, D (2018). "Use of System Dynamics for the Integration of Sustainable Parameters in Housing Project Delivery," 2018 IISE Annual Conference & Expo, Orlando, FL, May 19 –22, 2018,"

8. *__Hu, Y.__, and Castro-Lacouture, D. (2018). "Clash Relevance Prediction in BIM-based Design Coordination Using Bayesian Statistics," *Proceedings of the 2018 Construction Research Congress* (CRC), ASCE, New Orleans, LA, April 2-4, 2018.

9. *__Chang, S.__, Saha, N., Castro-Lacouture, D., and Yang, P. P.-J. (2018). "Generative design and performance modeling for relationships between urban built forms, sky opening, solar radiation and energy," *Proceedings of the 10th International Conference on Applied Energy* (ICAE2018), 22-25 August 2018, Hong Kong, China.

10. *Quan, S.J., Igou, T.S., **Chang, S.**, Dutt, F., Castro-Lacouture, D., Chen, Y., and Yang, P. P.-J. (2017). "Decentralized algal energy system design at various urban densities and scales," *Proceedings of the World Engineers Summit – Applied Energy Symposium & Forum: Low Carbon Cities & Urban Energy Joint Conference*, WES-CUE 2017, 19–21 July 2017, Singapore.

11. *__Chang, S.__, Castro-Lacouture, D., Dutt, F., and Yang, P. P.-J. (2017), "Framework for evaluating and optimizing algae façades using closed-loop simulation analysis integrated with BIM," *Proceedings of the World Engineers Summit – Applied Energy Symposium & Forum: Low Carbon Cities & Urban Energy Joint Conference*, WES-CUE 2017, 19–21 July 2017, Singapore.

12. *__Tijo-Lopez, S.__, and Castro-Lacouture, D. (2016). "A System Dynamics Model for the Selection of Construction Parameters in Energy Efficient Housing," *Proceedings of ELAGEC 2016*, November 15-18. p. 211-219.

13. *__Wasmi, H.A.__, and Castro-Lacouture, D. (2016). “Potential Impacts of BIM-Based Cost Estimating in Conceptual Building Design: A University Building Renovation Case Study.” *Proceedings of the 2016 Construction Research Congress*, ASCE, DOI: http://dx.doi.org/10.1061/9780784479827.042

14. *__Tijo-Lopez, S.__, and Castro-Lacouture, D. (2016). “Selection of the Design and Construction Parameters for Energy Efficient Housing Using System Dynamics.” *Proceedings of the 2016 Construction Research Congress*, ASCE, DOI: http://dx.doi.org/10.1061/9780784479827.125#sthash.bUNGO6us.dpuf

15. *Fandino, J.F., Castro-Lacouture, D., and Arango, D. (2015). “Incorporation of LEED Criteria into Architectural Design Process: A Strategy to Increase Construction Quality.” *Proceedings of the International Congress on Rehabilitation of Structures* (CONPAT 2015), Lisbon, Portugal, September 8-10, 2015.

16. *__Florez, L.__, and Castro-Lacouture, D. (2015). “Modeling and Quantifying Crew Design Rules in Masonry Construction.” *Proceedings of the 12th North American Masonry Conference*, Denver, Colorado, May 17-20, 2015.

17. *Luo, S., and Castro-Lacouture, D. (2015). “Holistic Modeling of Microalgae for Powering Residential Communities.” *Proceedings of the Applied Energy Symposium and Summit 2015: Low-Carbon and Urban Energy Systems* (CUE 2015), Fuzhou, China, November 15-17, 2015.

18. *Zhou, H., and Castro-Lacouture, D. (2015). Integrated Ecological Assessment of Engineering Projects Based on Emergy Analysis.” *Proceedings of the Applied Energy Symposium and Summit 2015: Low-Carbon and Urban Energy Systems* (CUE 2015), Fuzhou, China, November 15-17, 2015.

19. *Castro-Lacouture, D., Quan, S.-J., and Yang, P. P.-J. (2014). “GIS-BIM Framework for Integrating Urban Systems, Waste Stream and Algal Cultivation in Residential Construction.” *Proceedings of the 31st International Symposium on Automation and Robotics in Construction*, ISARC, Sydney, Australia, July 9-11, p. 576-583.

20. *__Florez, L.__, and Castro-Lacouture, D. (2014). “Decision Support System for Sustainable Labor Management in Masonry Construction,” *Proceedings of the 31st International Symposium on Automation and Robotics in Construction*, ISARC, Sydney, Australia, July 9-11, p. 536-543.

21. *__Florez, L.__, Castro-Lacouture, D., and Gentry, R. (2014). “Workflows in Masonry Construction: Analysis of Labor Requirements,” *Proceedings of the 9th International Masonry Conference*, Guimarães, Portugal, July 7-9, 2014.

22. *__Thomas, A.__, Irizarry, J., Ryherd, E. E., Castro-Lacouture, D., and Porter, R. (2014). “Aircraft Sound Transmission in Homes Categorized by Typical Construction Type,” *Proceedings of the 2014 ASCE Construction Research Congress*, Atlanta, GA, USA, May 19-21, p. 1586-1595.

23. *__Florez, L.__ and Castro-Lacouture, D. (2014). “Optimal Crew Design for Masonry Construction Projects Considering Contractor’s Requirements and Workers’ Needs,” *Proceedings of the 2014 ASCE Construction Research Congress*, Atlanta, GA, USA, May 19-21, p. 1149-1158.

24. *Yang, P. P., **Quan, S. J.,** Castro-Lacouture, D., Rudolph, C., and Stuart, B. (2014). GIS-based Planning Support System for Waste Stream and Algal Cultivation in Residential Construction, *Proceedings of the 2014 ASCE Construction Research Congress*, Atlanta, GA, USA, May 19-21, p. 2385-2394.

25. *Wang, G., Liu, S., Yang, Y., and Castro-Lacouture, D. (2013). "Key technology research of open BIM-based construction engineering management integrated information cyber-infrastructure (CEMIC)," *Proceedings of the 30th CIB W78 International Conference*, Beijing, China, October 9-12, p. 270-279.

26. ***Florez, L.** and Castro-Lacouture, D. (2013). Spanish. "Modelo de Asignación de Recursos Humanos con Objetivos Sociales Sostenibles," *Proceedings of the Fifth Pan American Conference on Construction Management and Economics (ELAGEC V)*, Cancún, México, June 19-21.

27. ***Gheisari, M., Florez, L.**, Irizarry, J., and Castro-Lacouture, D. (2012). "Evaluation of Data Requirements for Computerized Constructability Analysis of Pavement Rehabilitation Projects," *Proceedings of the 2011 ASCE Construction Research Congress*, West Lafayette, Indiana, USA, May 21-23, p. 129-138.

28. ***Florez, L.**, Castro-Lacouture, D., and Medaglia, A. (2012). "Maximizing Labor Stability as a Sustainability Performance Indicator in Project Scheduling," *Proceedings of the 2011 ASCE Construction Research Congress*, West Lafayette, Indiana, USA, May 21-23, p. 465-474.

29. ***Granier, M.**, and Castro-Lacouture, D. (2012). "Sustainable Fuel Cells for Residential Construction: Challenges and Opportunities," *Proceedings of the 2011 ASCE Construction Research Congress*, West Lafayette, Indiana, USA, May 21-23, p. 1971-1980.

30. ***Florez, L.**, Castro-Lacouture, D., and Medaglia, M. (2011). "Program Management Optimization Model Using Sustainability Performance," *Proceedings of Operations Research 53 (OR 53)*, Nottingham, UK, September 6-8, p. 99-104.

31. ***Florez, L**., and Castro-Lacouture, D. (2011). Spanish. "Modelo para la Programación de Proyectos Usando Indicadores de Desempeño Sostenible," *Proceedings of the Fourth Pan American Conference on Construction Management and Economics (ELAGEC IV)*, Santiago, Chile, October 4-5, p. 1-9.

32. ***Florez, L.**, Castro-Lacouture, D. and Irizarry, J. (2010). "Impact of Sustainability Perceptions on the Purchasability of Materials in Construction Projects," *Proceedings of the 2009 ASCE Construction Research Congress*, Banff, Canada, May 8-10, p. 226-235.

33. ***Ospina-Alvarado, A.M.**, and Castro-Lacouture, D. (2010). "Interaction of Processes and Phases in Project Scheduling Using BIM for A/E/C/FM Integration," *Proceedings of the 2009 ASCE Construction Research Congress*, Banff, Canada, May 8-10, p. 939-948.

34. ***Florez, L.**, Castro-Lacouture, D., and Irizarry, J. (2010). "Impact of Sustainability Perceptions on Optimal Material Selection in Construction Projects," *Proceedings of the Second International Conference on Sustainable Construction Materials and Technologies*, Università Politecnica delle Marche, Ancona, Italy, June 28 - 30, p. 719-727.

35. *__Ospina-Alvarado, A.M__., Castro-Lacouture, D., and Roper, K.O. (2009). Spanish. "Relación entre Sostenibilidad y Método de Contratación de un Proyecto: Integración de Diseño, Construcción y Operación," *Proceedings of the Third Pan American Conference on Construction Management and Economics (*ELAGEC III), Bogotá D.C., Colombia, September 9-11, p. 57-76.

36. *__Ospina-Alvarado, A.M.__, Castro-Lacouture, D., and Botte, G.G. (2009). "Feasibility of Ammonia Powered Houses in the United States," *Proceedings of the 2009 Conference on Green Building: Towards Eco-City*, Taipei, Taiwan, October 11-14, p. 342-356.

37. *__Barnes, S.__ and Castro-Lacouture, D. "BIM-enabled Integrated Optimization Tool for LEED Decisions," *Proceedings of the 2009 ASCE International Workshop on Computing in Civil Engineering*, Austin, Texas, USA, June 24-27, 2009, p. 258-268.

38. *__Riecke-Smith, V.R.__, Castro-Lacouture, D., and Oberle, R. (2009). "Effects of the Regulatory Environment on Construction Project Delivery Method Selection," *Proceedings of the 2009 ASCE Construction Research Congress*, Seattle, Washington, USA, April 5-7, p. 211-218.

39. *Castro-Lacouture, D., **Sefair, J.A.**, **Florez, L.**, and Medaglia, A.L. (2009). "Optimization Model for the Selection of Materials Using the LEED Green Building Rating System," *Proceedings of the 2009 ASCE Construction Research Congress*, Seattle, Washington, USA, April 5-7, p. 608-617.

40. *__Sefair, J.A.__, Castro-Lacouture, D., and Medaglia, A.L. (2009). "Material Selection in Building Construction Using Optimal Scoring Method (OSM)," *Proceedings of the 2009 ASCE Construction Research Congress*, Seattle, Washington, USA, April 5-7, p. 1079-1086.

41. *__Ospina-Alvarado, A.M., Phillips, D.__, and Castro-Lacouture, D. (2008). "Feasibility Model for Renewable Energy Selection in the Housing Industry," *Proceedings of the 42nd Annual HERA Conference*, Indianapolis, Indiana, October 7-10, p. 114-116.

42. *__Ospina-Alvarado, A.M.__, Castro-Lacouture, D., and Roper, K.O. (2008). "Emerging Framework for A/E/C/FM Integration," *Proceedings of the International Conference on Construction and Real Estate Management*, ICCREM 2008, Toronto, Canada, October 4-5.

43. *Roper, K.O., Castro-Lacouture, D., and **Ospina-Alvarado, A.M.** (2008). "Sustainable Buildings with AEC+Planning+Facility Management," *Proceedings of the COBRA 2008 Conference*, Royal Institution of Chartered Surveyors (RICS), Dublin, Ireland, September 4-5, p. 1-22.

44. *Castro-Lacouture, D., **Sefair, J.A.**, **Florez, L.**, and Medaglia, A.L. (2008). Spanish. "Modelo de Optimización para la Selección de Materiales de Construcción en Edificios Verdes en Colombia Usando un Sistema Basado en LEED," *Proceedings of the XIV Latin Ibero-American Congress on Operations Research (CLAIO)*, Cartagena de Indias, Colombia, September 9-12, p. 126-126.

45. *__Ramkrishnan, K.__, Castro-Lacouture, D., and Augenbroe, G. (2008). "Investment Strategy for Energy-Efficient Building System Retrofitting," *Proceedings of the Fifth*

International Engineering and Construction Conference, IECC'5, Irvine, California, USA, August 27-29, p. 779-786.

46. *Irizarry, J., Arboleda, C.A., and Castro-Lacouture, D. (2008). "Improvement of Research in Construction Safety: a Proposal for the Application of Quantitative Approaches," *Proceedings of the CIB W99 International Conference*, Gainesville, Florida, USA, March 9-11, p. 625-638.

47. ***Ospina-Alvarado, A.** and Castro-Lacouture, D. (2007). "Sustainable Performance of an Alternative Energy System for Rural Houses in the United States," *Proceedings of the COBRA 2007 Conference*, Royal Institution of Chartered Surveyors (RICS), Atlanta, Georgia, USA, September 5-6, 10 pages. Best paper award.

48. *Castro-Lacouture, D., Bryson, L.S., **Maynard, C.**, Williams, R.L., and Bosscher, P. (2007). "Concrete Paving Productivity Improvement Using a Multi-Task Autonomous Robot," *Proceedings of the Twentieth International Symposium on Automation and Robotics in Construction*, ISARC, Cochi, Karala, India, September 19-21, p. 223-228.

49. ***Ramkrishnan, K.**, Roper, K., and Castro-Lacouture, D. (2007). "Green Building Rating and Delivery Systems in Building Construction: toward AEC+P+F Integration," *Proceedings of the Fifteenth Annual Conference of the International Group for Lean Construction*, IGLC-15, East Lansing, Michigan, USA, July 18-20, p. 332-342.

50. *Teizer, J. and Castro-Lacouture, D. (2007). "Combined Ultra-Wideband Positioning and Range Imaging Sensing for Productivity Monitoring in Building Construction," *Proceedings of the International Workshop on Computing on Civil Engineering*, *Information Technology Support to Advance Infrastructure Systems Management*, Pittsburgh, Pennsylvania, USA, July 24-27, p. 681-688.

51. *Castro-Lacouture, D., Irizarry, J., and Arboleda, C. A. (2007). "Ultra Wideband Positioning System and Method for Safety Improvement in Building Construction Sites," *Proceedings of the ASCE/CIB Construction Research Congress*, CRC, Grand Bahama Island, Bahamas, May 6-8, 10 pages.

52. *Bryson, L.S., Castro-Lacouture, D., **Maynard, C.**, Williams, R.L., and Bosscher, P. (2007). "Productivity Analysis of a Multi-task Autonomous Robot for Concrete Paving," *Proceedings of the ASCE/CIB Construction Research Congress*, CRC, Grand Bahama Island, Bahamas, May 6-8, 10 pages.

53. *Bosscher, P., Williams, R.L., Bryson, L.S., and Castro-Lacouture, D. (2006). "Cable-Suspended Robotic Contour Crafting System," *Proceedings of the IDETC/CIE ASME 2006 International Design Engineering Technical Conferences and Computers and Information in Engineering Confere*nce, Philadelphia, Pennsylvania, USA, September 10-13, 10 pages.

54. Castro-Lacouture, D., Bryson, L.S., and **Gonzalez-Joaqui, J.** (2006). "Real-Time Positioning Network for Intelligent Construction," *Proceedings of the ASCCBE/ASCE/CIB Joint International Conference on Computing and Decision Making in Civil and Building Engineering*, Montreal, Canada, June 14-16, p. 77-86.

55. **Maynard, C.**, Williams, R.L, Bosscher, P., Bryson, L.S., and Castro-Lacouture, D. (2006). "Autonomous Robot for Pavement Construction in Challenging Environments," *Proceedings of the Tenth Biennial ASCE Aerospace Division*

International Conference on Engineering, Construction, and Operations in Challenging Environments, League City/Houston, Texas, USA, March 5-8, 8 pages.

56. Bryson, L.S., **Maynard, C**., Castro-Lacouture, D., and Williams, R.L. (2005). "Fully Autonomous Robot for Paving Operations," *Proceedings of the 2005 ASCE Construction Research Congress*, San Diego, California, USA, April 5-7, p. 188-197.

57. Sargand, S., Swanlund, M., Bendana, J., and Castro-Lacouture, D. (2005). "Evaluation of HPC Pavement in Nelsonville, Ohio, Using Non-destructive Methods," *Proceedings of the Eighth International Conference on Concrete Pavements*, International Society for Concrete Pavements, Colorado Springs, Colorado, USA, August 14-18, p. 980-994.

58. Castro-Lacouture, D. and Skibniewski, M. (2005). "Methods of Evaluating Web-based Alternatives for Estimating and Procurement Practices," *Proceedings of the CIB W92/T23/W107 International Symposium on Procurement Systems: The Impact of Cultural Differences and Systems on Construction Performance*, Las Vegas, Nevada, USA, February 10-12, p. 305-314.

59. Castro-Lacouture, D. and Skibniewski, M. (2002). "Development of an e-Business Solution for the Integration of Steel Reinforcement Supply Chain in Construction Projects," *Proceedings of the First International Conference on Construction in the 21st Century*, CITC2002, Miami, Florida, USA, April 25-26, p. 197-204.

60. Castro-Lacouture, D. and Skibniewski, M. (2002). "E-Work: The Next Iteration in Construction Materials Management Systems," *Proceedings of the Nineteenth International Symposium on Automation and Robotics in Construction*, ISARC, Gaithersburg, Maryland, USA, September 23-25, p. 65-72.

B3. Other Refereed Material

***Chang, S.**, and Castro-Lacouture, D. (2019). "Energy sharing boundaries for buildings and vehicles," *Poster*, Georgia Tech 2019 Sustainability Showcase, Atlanta, GA.

***Hu, Y.**, Castro-Lacouture, D., and Vengazhiyil, R. (2017). "Clash Prediction Based on Space Gridding by Bayesian Analysis in BIM Projects," *Poster*, Digital Building Lab Symposium, Atlanta, GA.

[*]**Florez, L**., Gentry, T.R., and Castro-Lacouture, D. (2013). "Using Optimization to Balance Workers' and Contractor's Needs in Masonry Construction," *Poster*, Georgia Tech Research and Innovation Conference (GTRIC), Atlanta, GA.

[*]**Florez, L.**, and Castro-Lacouture, D. (2012). "Maximizing Labor Stability as a Sustainability Performance Indicator in Project Scheduling," *Poster*, 2012 ASCE Construction Research Congress, Purdue University, West Lafayette, IN.

[*]**Florez, L.**, and Castro-Lacouture, D. (2012). "Maximizing Sustainability Performance in Construction Projects by Consciously Scheduling Workforce," *Poster*, Georgia Tech Research and Innovation Conference (GTRIC), Atlanta, GA.

[*]Castro-Lacouture, D., Sefair, J.A., **Florez, L.**, and Medaglia, A.L. (2008). "Optimization Model for the Selection of Materials Using a Proposed Green Building Rating System in Colombia," *Poster*, Sustainability Poster Session. Brook Byers Institute for Sustainable Systems, Georgia Institute of Technology, Atlanta, GA.

C. Other Publications and Creative Products

*U.S. Patent Application No. 62/848,098, “Clash Detection and Resolution Optimization Based on Graph Theory”. Filed: May 15, 2019, with **Yuqing Hu**, Charles Eastman and Sham Navathe.

*Brew, J., Castro-Lacouture, D., Dooley, R., Eisenberg, D., Hammond, B., Holsten, R., Kerr., J., Reichard, G., Stack, K., Sullivan, J., Torres, M., and Williford, D. (2013). Green Advantage Compendium 2013, Version II, 242 pages.

*Jeong, D, **Abdollahipour, S., Florez, L.**, Irizarry, J., and Castro, D. (2010). Evaluation of construction strategies for PCC pavement rehabilitation projects, Technical Report OTCREOS7.1-23-F, Oklahoma Transportation Center (OkTC).

*Irizarry, J., Castro-Lacouture, D., and Arboleda, C. (2008). “Constructability of PCC Pavements,” Final Report to Georgia Department of Transportation, Technical Report SPR00-0008-00-632, September 5, 2008.

Castro-Lacouture, D. (2003). “B2B e-Work Design for Rebar Supply Interactions,” Dissertation, presented to Purdue University at West Lafayette, Indiana, in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Castro-Lacouture, D. (1999). “Methods of Measuring Architectural Quality for International Comparison,” Thesis, presented to the University of Reading at Reading, Berkshire, UK, in partial fulfillment of the requirements for the degree of Master of Science.

Castro-Lacouture. D., (1994). Spanish. “Propuesta de Normatividad para la Ubicación de Tanques de Gas Licuado del Petróleo en Construcciones Residenciales en Bogotá,” Thesis, presented to Universidad de Los Andes at Bogota DC, Colombia, in partial fulfillment of the requirements for the degree of Bachelor of Science.

D. Presentations

*Keynote Speaker at the *1st International Congress on Construction 4.0*, organized by Instituto Tecnológico de Monterrey, Mexico, October 30, 2020.

*Keynote Speaker at the *6th International Technical Symposium on the Applications of BIM Technology in Design, Construction, and Real Estate Enterprise Collaborative Work*, Shanghai, China, September 27, 2019.

*Keynote Speaker at the *2019 Chinese National Research Congress on Construction Management*, Shanghai, China, September 26, 2019.

*Keynote Speaker at *BIM Bolivia*, La Paz, Bolivia, August 23, 2019.

*Keynote Speaker at the *Creative Construction Conference 2018*, Ljubljana, Slovenia, July 1st, 2018.

*Keynote Speaker at the *7th Latin American Conference on Construction Management and Economics* (ELAGEC 2016), Bogota, Colombia, November 17, 2016.

*Keynote Speaker at the *Shanghai Construction Innovation Summit 2016*, Shanghai, China, October 26, 2016.

*Panelist at the Round Table Session on BIM, *4th International Technical Symposium on the Applications of BIM Technology in Design, Construction, and Real Estate Enterprise Collaborative Work*, hosted by Prof. Zhang Jinyue, Beijing, China, October 27, 2016.

*Keynote Speaker at the *4th International Technical Symposium on the Applications of BIM Technology in Design, Construction, and Real Estate Enterprise Collaborative Work*, Beijing, China, October 27, 2016.

*Keynote Speaker at the *9th Brazilian Symposium on Construction Management and Economics/6th Latin American Conference on Construction Management and Economics* (SIBRAGEC ELAGEC 2015), Sao Carlos, Brazil, October 9, 2015.

*Keynote Speaker at the *First International Seminar on Construction Innovation and Delivery* (seIN2co). Spanish. "Gestión de Proyectos con Lean, BIM y BEM," Bogota, Colombia, July 8, 2015.

*Keynote speaker at Book Launch. Spanish. "Gerencia de Proyectos. Aplicación a Proyectos de Construcción de Edificaciones," by Jorge García Reyes, Diego Echeverry Campos, and Harrison Mesa Hernández, Universidad de Los Andes, July 17, 2013.

*Presented seminar at Universidad de Los Andes. Spanish. "BIM para Presupuesto, Programación y Control de Proyectos," Departamento de Ingeniería Civil, Universidad de Los Andes, Bogotá, Colombia, July 15-19, 2013.

*Presented seminar at Universidad de Ibagué. Spanish. "Construcciones Sostenibles," Facultad de Ingeniería, Universidad de Ibagué, Ibagué, Tolima, Colombia, June 11-15, 2013.

*Presented to delegation of National Cheng Kung University (NCKU) from Taiwan, "School of Building Construction at Georgia Tech," Atlanta, Georgia, October 11, 2012.

*Guest Lecturer at Xiamen University, "Emerging Research and Practice in Integrated Project Delivery: Trends and Opportunities," School of Architecture and Civil Engineering, Xiamen University, Xiamen, China, July 4th, 2012.

*Guest Lecturer at Tongji University, "Research Initiatives in Integrated Project Delivery," School of Economics and Management, Tongji University, Shanghai, China, July 3, 2012.

*Presented seminar at Universidad de Los Andes. Spanish. "BIM para Presupuesto, Programación y Control de Proyectos," Departamento de Ingeniería Civil, Universidad de Los Andes, Bogotá, Colombia, June 17-23, 2012.

*Presented seminar to GE Energy, "Advanced Construction Management Techniques," Florence, Italy, May 9-11, 2012.

*Presented to delegation of Auburn University, "School of Building Construction at Georgia Tech," Atlanta, Georgia, May 30, 2012.

*Presented to delegation of the City University of Hong Kong from China, "School of Building Construction at Georgia Tech," Atlanta, Georgia, December 8, 2011.

*Invited lecturer at MGT 8803: Real Estate Practicum II, “Construction: Role of the Contractor and Innovations,” with Scott Jennings from Holder Construction, Atlanta, Georgia, February 9th, 2012.

*Presented seminar at Universidad de Los Andes. Spanish “Gestión de Proyectos de Construcción Sostenibles,” Departamento de Ingeniería Civil, Universidad de Los Andes, Bogotá, Colombia, July 5-9, 2011.

*Keynote speaker at the *Environmental Trade Mission ETM 2010*, “Fuel Cells and Algae Power for Closed-loop Renewable Energy in Buildings,” Atlanta, Georgia, November 18, 2010.

*Panelist at the *Associated Owners and Developers National Conference*, “Designing and Construction in Green: Risk Shifting - LEED Contract Provisions - Climate Change,” Atlanta, Georgia, September 20, 2010.

*Presented to delegation from King Saud University, Saudi Arabia, “Teaching for Learning in Building Construction,” Center for the Enhancement of Teaching and Learning (CETL), Georgia Institute of Technology, Atlanta, Georgia, July 26, 2010.

*Presented seminar at Universidad de Los Andes. Spanish. “Gestión de Proyectos de Construcción Sostenibles,” Departamento de Ingeniería Civil, Universidad de Los Andes, Bogotá, Colombia, June 28 – July 3, 2010.

*Panelist at the Renewable Energy educational session of the symposium “Energy Evolution: Transforming the Future of Power,” sponsored by Eaton Corporation, Atlanta, Georgia, April 19, 2010.

*Guest speaker at the COA Ph.D. Seminar, “Integration Protocols for Performance and Sustainability Improvement in Construction Projects,” Atlanta, Georgia, April 7, 2010.

*Keynote speaker at the COA Research Forum, “Feasibility of Ammonia-Powered Houses,” Atlanta, Georgia, February 26, 2009.

*Speaker at the *Global Center of Excellence in Energy Sciences*, delegation from the Tokyo Institute of Technology, “Ammonia Fuel Cells for Residential Construction,” Atlanta, Georgia, February 27, 2009.

*Panelist at the *Smart Planet Roundtable*, sponsored by IBM and Georgia Tech Hispanic Alumni Network, Atlanta, Georgia, March 5, 2009.

*Speaker at the *Construction Expo*, “Best Value, Green and Lean Construction: an Integrated Approach for Successful Project Delivery,” Atlanta, Georgia, May 14, 2008.

*Speaker at the WinterGreen Group Meeting, “Integrated Optimization Tool for LEED Decisions in A/E/C/FM Projects,” Atlanta, Georgia, April 16, 2008.

*Panelist at the *Design-Build for Water/Wastewater Conference*, “Educating Tomorrow’s Design-Build Leaders,” Design-Build Institute of America, Atlanta, Georgia, February 15, 2008.

*Invited lecturer at COA 1060, “Delivery Systems and Construction Success,” Georgia Institute of Technology, Atlanta, Georgia, November 26, 2007.

*Panelist at the workshop “Successful Contracting: Secrets from the Experts,” Associated General Contractors of America Georgia Branch, Atlanta, Georgia, November 6, 2007.

*Speaker at the *Annual College of Architecture Development Council Meeting*, “Feasibility of Developing Self-sustainable Buildings Powered by Fuel Cells,” Georgia Institute of Technology, Atlanta, Georgia, December 8, 2006.

Speaker at the *Ohio Transportation Engineering Conference*, “Autonomous Robot for Paving Operations: Implications on Productivity and Safety,” Columbus, Ohio, October 28, 2005.

E. Grants and Contracts

E1. As Principal Investigator

*Title of Project: Sustainable Housing through Holistic Waste Stream Management and Algal Cultivation
Agency/Company: National Science Foundation (SEP Program), via Ohio University
Total Dollar Amount: $800,000
Role: PI
Collaborators: Charles Rudolph (co-PI), Perry Yang (co-PI)
Period of Contract: 9/1/2012 – 8/30/2016
Candidate’s Share: ~50% ($400K)

*Title of Project: BIM Enabled Approach to Scheduling and Cost Automation
Agency/Company: Construction Sciences Research Foundation
Total Dollar Amount: $99,791
Role: PI
Period of Contract: 8/1/2008 – 7/31/2011
Candidate’s Share: 100% ($99,791)

*Title of Project: Wireless Technologies for Productivity, Safety and Resource Monitoring
Agency/Company: Georgia Tech Foundation
Total Dollar Amount: $7,000
Role: PI
Period of Contract: 8/1/2007 – 06/30/2008
Candidate’s Share: 100% ($7K)

*Title of Project: Integrated Sustainable Building Instructional Laboratory
Agency/Company: Georgia Tech, Technology Fee Fund
Total Dollar Amount: $39,790
Role: PI
Period of Contract: 8/1/2007 – 06/30/2008
Candidate’s Share: 100% ($7K)

E2. As Co-Principal Investigator

*Title of Project: Zero Energy Housing Prototype
Agency/Company: Architecture for Humanity / San Francisco, CA
Total Dollar Amount: $129,900
Role: Co-PI

Collaborators: Michael Gamble (PI), Godfried Augenbroe (Co-PI), Russell Gentry (Co-PI)
Period of Contract: 08/05/13 – 01/31/2016
Candidate's Share: ~5% ($7K)

*Title of Project: Evaluation of Data Requirements for Computerized Constructability Analysis of Pavement Rehabilitation Projects
Agency/Company: Georgia Department of Transportation
Total Dollar Amount: $352,657
Role: Co-PI
Collaborators: Javier Irizarry (PI)
Period of Contract: 5/1/2011 – 4/30/2013
Candidate's Share: ~50% ($150K)

*Title of Project: Evaluation of Construction Strategies for PCC Pavements
Agency/Company: Oklahoma Transportation Center
Total Dollar Amount: $400,000
Role: Co-PI
Collaborators: Hyung-Seok Jeong (PI) and Javier Irizarry (Co-PI)
Period of Contract: 8/1/2008 – 5/1/2010
Candidate's Share: ~12.5% ($50K)

*Title of Project: Constructability and Scheduling of PCC Pavements
Agency/Company: Georgia Department of Transportation
Total Dollar Amount: $250,000
Role: Co-PI
Collaborators: Javier Irizarry (PI) and Carlos Arboleda (Co-PI)
Period of Contract: 9/1/2007 – 8/31/2009
Candidate's Share: ~30% ($77K)

*Title of Project: Feasibility of Developing Self Sustainable-Ammonia Power Houses
Agency/Company: National Science Foundation (PATH Program)
Total Dollar Amount: $273,000
Role: Co-PI
Collaborators: Gerardine Botte (PI) and Scott Miller (Co-PI)
Period of Contract: 8/1/2006 – 7/31/2009
Candidate's Share: ~30% ($82K)

E3. As Senior Personnel or Contributor

*Title of Project: Solar, Installation, Mounting, Production, Labor, and Equipment Balance of System (SIMPLE BoS)
Agency/Company: Department of Energy (DOE) SunShot Initiative via GTRI
Total Dollar Amount: $41,006
Role: Senior Personnel
Collaborators: Baabak Ashuri (PI)
Period of Contract: 01/01/13 – 12/31/2013
Candidate's Share: ~20% ($7K)

F. Other Scholarly Accomplishments

Software: *B2B e-Work Platform for Rebar Supply Interactions (2003)*. This is an Internet-based system for improving the communication, sharing and exchange of information among the rebar supplier, contractor and designer during a construction project.

V. Teaching

A. Courses Taught (last six years)

Semester, Year	Course Number	Course Title	Number of Students
Summer 2020	BCP 6950 (online)	Capstone	19
Spring 2020	BCP 6900 (online)	Risk & Insurance for Safety	19
Spring 2020	BC 8000	PhD Seminar	3
Fall, 2019	BCP 6800 (online)	Leadership & Culture	19
Spring, 2019	BCP 6900 (online)	Risk & Insurance for Safety	21
Fall, 2017	CEE 4100	Const. Eng. & Mgmt	66
Spring, 2017	CEE 4100	Const. Eng. & Mgmt	90
Fall, 2015	CEE 4110	Const. Plans & Estimates	42
Spring, 2014	BC 8000	Ph.D. Seminar	3
Fall, 2013	BC 3600	Construction Cost Mgmt	20
Fall, 2013	ARCH/BC 6731	Zero Energy Housing	26
Fall, 2013	CEE 4120	Construction Operations	55

B. Individual Student Guidance

B1. Ph.D. Students

Leonardo Garcia, “Product Model Exchange Standards for Cast-In-Place Reinforced Concrete: Measuring Value and Predicting Design Indicators,” Ph.D. Candidate, School of Building Construction, Georgia Institute of Technology, supervised since Fall 2017.

Soowon Chang, “Decision Support Framework for Transforming Urban Buildings at Multiple Scales,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated in May 2020. Current position: Assistant Professor at Purdue University.

Yuqing Hu, “Clash Resolution Optimization Based on Component and Clash Dependent Networks,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated in May 2020. Current position: Assistant Professor at Penn State University.

Silvia Tijo, “Decision Support System for the Integration of Sustainable Parameters in Single Family Housing Project Delivery ,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated in December 2019. Current position: Assistant Professor at Universidad Pontificia Bolivariana (Colombia).

Shahaboddin Hashemi Toroghi, “Adoption of Sustainable Energy Technology, Rebound Effect, and Resilience,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated in May 2019. Current position: Data scientist.

Saman Yarmohammadi, “If These Walls Could Talk: Automated Performance Measurement for Building Design Modeling Decisions Using Data Analytics,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated in December 2017. Current position: Principal Consultant - GIS Data Scientist at G2 Integrated Solutions.

Mohammad Ilbeigi, “Material Price Volatility in Transportation Projects: Analysis of Uncertainties and Risk Management Strategies,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated in Summer 2017. Current position: Assistant Professor at Stevens Institute of Technology.

Kia Mostaan, “Stakeholder Alignment Strategies for Highway Infrastructure Public-Private Partnerships,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated in Spring 2017. Current Position: Transportation Analyst at Cambridge Systematics, Inc.

Laura Florez-Perez, “Decision Support System for Masonry Labor Planning and Allocation Considering Productivity and Social Sustainability,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated in Fall 2015. Current position: Lecturer at University College London (UK).

Angelica Ospina-Alvarado, “Unified Framework for Construction Project Integration and its Association with Project Performance,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated in Spring 2011. Current position: Lecturer at Universidad de Los Andes and Technical Director of Consejo Colombiano de Construcción Sostenible (Colombia).

Valerie Riecke-Smith, “Impact to Alternative Contracting Methods Using Multivariate Models in the Regulatory Environment,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated in Summer 2008. Current position: Management Analyst at Office of Inspector General, U.S. General Services Administration.

B2. M.S. Students

Anthony Maddox, “Risk allocation in higher education facility management,” thesis option, School of Building Construction, Georgia Institute of Technology, supervised since Fall 2019.

Monica Sierra-Aparicio, “Conceptual Framework for Incorporating Access for Maintainability Considerations in BIM Coordination,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated in Spring 2020. Current position: Project Manager at Landmark Properties.

Chawin Ngoenchuklin, “Applicability of Prefabrication Technologies in the Thai Housing Market,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated in Summer 2014. Current position: Architect at Smallwood Reynolds Stewart Stewart.

Maria Quinones, “Decision Support System for Building Construction Product Selection Using Life-Cycle Management (LCM),” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated in Summer 2011. Current position: Project Lead, New Market Initiatives, Elevate Energy.

Geetanjali Ningappa, “Use of Lean and Building Information Modeling (BIM) in the Construction Process; Does BIM Make it Leaner?” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated in Spring 2011. Current position: Project Coordinator at Spaceworks Architecture.

Laura Florez, “Measuring Sustainability Perceptions of Construction Materials,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated in Summer 2010.

Karthik Ramkrishnan, “Optimal Investment Strategy for Energy Performance Improvements in Existing Buildings,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated in December 2007. Current position: BIM Project Manager at The Walsh Group.

Birtice Garner, “The Case for Best Value Construction Project Procurement in the Air Force Reserve Command,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated in Summer 2009. Current Position: Design and Construction Program Engineer at U.S. Air Force Reserve.

Kathleen Richardson, “Analysis of Best Practices for Design-Build in the Air Force Reserve Command,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated in Summer 2009. Current Position: Design and Construction Program Engineer at U.S. Air Force Reserve.

Angelica Ospina-Alvarado, “Holistic Analysis of Fuel Cells for Residential Application,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated in December 2007.

Julian Gonzalez, “Fuzzy Mathematical Models for Construction Project Scheduling with Material Restriction,” M.S. Thesis, Civil Engineering, Russ College of Engineering, Ohio University, graduated in May 2007 (Directed from Georgia Institute of Technology). Current position: Project Engineer at Federal Highway Administration.

B3. Undergraduate Students

Richard Harrison, “Feasibility of Recycled Wastewater and Stormwater Feedstock for Net-Zero Houses,” PURA Award, School of Building Construction, Georgia Institute of Technology, Spring 2012.

Angela Rogers, “Project Delivery, BIM and Green Practices in The French Construction Industry: Lessons Learned for the U.S.,” PURA Award, Summer 2011.

Shannon Barnes, “BIM-enabled Integrated Optimization Tool for LEED Decisions in A/E/C/FM Projects,” PURA Award, School of Building Construction, Georgia Institute of Technology, Fall 2008.

Aubrey Winship, “Evaluation of Rehabilitation Strategies for High Performance Green Buildings,” PURA Award, School of Building Construction, Georgia Institute of Technology, Fall 2009.

Olivia Kaye, “Exploring Alternative Energies Used in Buildings Specifically in Paris, France and in Other Countries in Western Europe,” PURA Award, School of Building Construction, Georgia Institute of Technology, Spring 2009.

Jamie Wiedman, “Cost Estimating and Value Engineering of Solar Decathlon House,” School of Building Construction, Georgia Institute of Technology, Spring 2007.

Nathan Green, “Constructability and Scheduling of Solar Decathlon House,” School of Building Construction, Georgia Institute of Technology, Spring 2007.

B4. Service on Thesis or Dissertation Committees

Daniel Paes, “A user-centered analysis of virtual reality in design review: Comparing three-dimensional perception and presence between immersive and non-immersive environments,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated Spring 2020**.**

Arezoo Shirazi, “Embodied life cycle assessment and potential environmental impacts of improvement options for detached single-family houses in Atlanta,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated Spring 2019**.**

Jianli Chen, “Investigation of hybrid ventilation potential of commercial buildings in US,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated Fall 2018.

Sungjin Kim, “User-perceived effectiveness of unmanned aircraft system (UAS) integration in infrastructure construction environments,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated Spring 2018.

Matthew Westcott, “The Effect of Military Construction Transformation on Project Cost and Schedule within the United States Army Corps of Engineers South Atlantic Division,” MS Thesis, School of Building Construction, Georgia Institute of Technology, graduated Fall 2017.

Yihai Fang, “Real-time safety assistance to improve operators' situation awareness in crane lifting operations,” Ph.D. Dissertation, School of Civil and Environmental Engineering, Georgia Institute of Technology, graduated Fall 2016**.**

Mehdi Nourbakhsh, “Scalable Metamodels for the Structural Optimization of Design Alternatives at the Early Stage of Construction Projects,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated Spring 2016**.**

Kereshmeh Afsari, “Interoperability Framework for BIM Data Exchange among Cloud-based Applications,” School of Architecture, Georgia Institute of Technology, graduated Fall 2015.

Louay Ghaziri, “Change order insurance policy (COIP) in the U.S. design and construction industry: Is there any likelihood of acceptance?” MS Thesis, School of Building Construction, Georgia Institute of Technology, graduated Fall 2015.

Masoud Gheisari, “An Ambient Intelligent Environment for Accessing Building Information in Healthcare Facility Management Operations,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated Fall 2013**.**

Hamed Kashani, “A Real Options Model for the Financial Valuation of Infrastructure Systems under Uncertainty,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated Fall 2012**.**

Manu Venugopal, “Formal Specification of Industry Foundation Class Concepts Using Engineering Ontologies,” Ph.D. Dissertation, School of Civil and Environmental Engineering, Georgia Institute of Technology, graduated Fall 2011.

Zhenhua Zhu, “Column Recognition and Defects/Damage Properties Retrieval for Rapid Infrastructure Assessment and Rehabilitation Using Machine Vision,” Ph.D. Dissertation, School of Civil and Environmental Engineering, Georgia Institute of Technology, graduated Summer 2011.

Parminder Juneja, “Auditory Distractions in Open Work Environments: a Multi Attribute Utility Approach to Workspace Decision Making,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated Spring 2010.

Jun Ha Kim, “Artificial Neural Network (ANN) Based Decision Support Model for Alternative Workplace Arrangements (AWA): Readiness Assessment and Type Selection,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated Fall 2009.

Deborah Phillips, “Developing an Employee Engagement Model for the Multi-family Housing Industry,” Ph.D. Dissertation, School of Building Construction, Georgia Institute of Technology, graduated Spring 2009.

Omer Tatari, “Holistic Evaluation of Construction Enterprise Resource Planning Systems,” Ph.D. Dissertation, Department of Civil and Environmental Engineering, Project Management Program, University of Maryland, graduated Spring 2009.

Abraham J. Kruger, “The Impact of Filter Loading on Residential HVAC Performance,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated Fall 2013.

Austin G. Dingwall, “Testing the Impact of Using Cumulative Data with Genetic Algorithms for the Analysis of Building Energy Performance and Material Cost,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated Fall 2012.

Laurie L. Swift, “A Conceptual Framework for the Assessment of Workplace Impact on Productivity,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated Fall 2012.

Arya Sedehi, “Leveraging Radio Frequency Identification Technology for Productivity Analysis in High-Rise Construction,” M.S. Thesis, School of Civil and Environmental Engineering, Georgia Institute of Technology, graduated Spring 2010.

Jason Weeks, “Understanding the Issues of Project Cost and Time in Sustainable Construction from a General Contractor’s Perspective: Case Study,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated Spring 2010.

Joseph Geierman, “Facility Management during The Great Recession: a Snapshot View,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated Spring 2010.

Gregory K. Adams, “Relating Facility Performance Indicators to Organizational Sustainability Performance in Public Higher Education Facilities,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated Spring 2010.

Elizabeth K. Fore, “An Analysis Regarding Energy Efficiency in Metro Atlanta’s Private Office Buildings,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated Summer 2009.

Coretta A. Sweet, “Comparison of Module Usage of Project Management Information System and Success Rate of Construction Projects: Case Study,” M.S. Thesis, School of Building Construction, Georgia Institute of Technology, graduated Summer 2009.

Benjamin Allread, “Real-Time Pro-Active Safety in Construction,” M.S. Thesis, School of Civil and Environmental Engineering, Georgia Institute of Technology, graduated Spring 2009.

B5. Mentorship of Postdoctoral Fellows or Visiting Scholars

Ms. Qi Fang (PhD student, Hubei Engineering Research Center for Virtual, Safe and Automated Construction, Department of Construction Management, Huazhong University of Science & Technology, Wuhan, China), “Automatic Unsafe Behavior Monitoring Using Advanced Deep Learning Methods,” January 2019 to January 2020.

Dr. Rita Du Juan (SHU-UTS SILC Business School, Shanghai University, Shanghai, China), “Multi-agent Simulation-based Design Alteration Risk Management in Prefabricated Construction Projects,” March 2018 to April 2019.

Dr. Dayana Bastos Costa (School of Engineering, Department of Structural and Construction Engineering, Federal University of Bahia, Brazil), “Application of Lean Construction and Integrated Managerial Systems for Construction Process Monitoring,” August 2014 to present.

Dr. Shipeng Luo (School of Civil Engineering and Architecture, Wuhan University of Technology, Wuhan, China), “System Dynamics for Algae-based Closed-Loop Systems in Residential Construction,” September 2013 to August 2014.

Dr. Jianliang Zhou (School of Mechanics and Civil Engineering, University of Mining Technology, Xuzhou, China), “Safety Standards for Algae-based Closed-Loop Systems in Residential Construction,” November 2012 to November 2013.

Dr. Hong Zhou (Civil Engineering and Architecture, Xiamen University, Xiamen, China), “Key Performance Indicators for Infrastructure Sustainability - A Comparative Study between China and the United States,” August 2010 to July 2011.

Dr. Yi-Kai Juan (Department of Architecture, National Taiwan University of Science and Technology, Taipei, Taiwan), “Housing Refurbishment Contractors Selection based on a Hybrid Fuzzy-QFD Approach,” co-mentored with Prof. Kathy Roper, August 2009 to July 2010.

Mr. Jorge Sefair, (Department of Industrial Engineering, Universidad de Los Andes, Bogota, Colombia), “Optimization Model for the Selection of Materials Using a LEED-based Green Building Rating System in Colombia,” January 2008 to July 2008.

C. Other Teaching Activities

New courses developed

BCP 8000, Online, Culture Leadership Influences on Safety and Health

BCP 6900, Online, Risk Management and Insurance for Safety Professionals

BC 8000, Ph.D. Seminar
Introduction to PhD-level research in Building Construction.

BC 4803/8803, Special Topics: Productivity Analysis for Solar Contractors
Fundamentals of PV systems, residential and commercial installations, and building construction methods, such as productivity analysis, cost management, lean construction, etc.

COA 8833, Special Topics: Zero Energy Housing: Design, Simulation and Feasibility
Design, analysis, operation, construction, and cost feasibility of a “zero energy” housing development.

BC 8823, Special Topics: Construction Best Practices
Status of construction research and practice, as documented by the Construction Industry Institute. Focus on the best practices defined and developed by CII over the past 25 years.

BC 8813, Special Topics: Sustainable Energy in A/E/C
Fundamental concepts of sustainable sources of energy to power buildings, technical-economical and environmental aspects of these sources, as well as their sustainability, performance, constructability, combinability, safety, and the requirements to be included in construction documents.

BC 4803, Special Topics: Estimating Workshop
Collaborative working as a project team through hands-on workshop settings simulating the preconstruction process.

BC 8823, Special Topics: Advanced Cost Management
Concepts and applications of: conceptual and detailed estimating; material, labor and equipment pricing; project funding; cash flow, time/cost tradeoffs; and accounting.

Interdisciplinary teaching

COA 8833, Special Topics: Zero Energy Housing: Design, Simulation and Feasibility
Course taught by Architecture and BC faculty. Fall 2008, Spring 2010, Spring 2011, Spring 2012, Spring 2013.

BC 4803/8803, Special Topics: Productivity Analysis for Solar Contractors
Course taught by BC faculty with collaboration from GTRI research engineers. Spring 2013.

ARCH 4803/BC 4900, Special Problems: Construction Management Solar Decathlon House
Course taught through interactions with faculty and students from Architecture, Building Technology and Mechanical Engineering. Spring 2007.

Continuing education courses taught

Instructor, Advanced Estimating (12 PDHs), Atlanta, Georgia, March 3 – 31, 2009, Atlanta Electrical Contractors Association, 15 attendees.

Instructor, Intermediate Estimating: Labor Unit Estimating (12 PDHs), Atlanta, Georgia, September 17 - October 8, 2008, Atlanta Electrical Contractors Association, 15 attendees.

Instructor, Project Management (1.6 CEUs), Marietta, Georgia, August 15-22, 2008, Continuing Education Center, Southern Polytechnic State University, 4 attendees.

Instructor, Constructability of PCC Pavements (8 PDHs), Forest Park, Georgia, September 5, 2008, Office of Materials and Research, Georgia Department of Transportation, 21 attendees.

Instructor, Estimating and Bidding for Contractors (1.6 CEUs), Marietta, Georgia, April 18-25, 2008, Continuing Education Center, Southern Polytechnic State University, 3 attendees.

VI. Service

A. Professional Contributions

Review Panel for Renewal of Accreditation of Bachelor of Science program in Civil Engineering and Master of Science program in Engineering Management, Abu Dhabi University (ADU), UAE, April 22-26, 2018.

Panel Moderator, “Connected living – at home and in the city.” 3rd Annual Internet of Things Global Summit, Washington, D.C., October 26-27, 2015.

Member, Board of Directors, International Association for Automation and Robotics in Construction, since 2014.

Panelist, “How to get published and get your paper noticed,” Faculty Engagement, Library, Georgia Institute of Technology, May 21, 2014.

Chair, *2014 ASCE Construction Research Congress* (CRC2014), sponsored by the Construction Institute of the American Society of Civil Engineers (ASCE) and the School of Building Construction, Georgia Institute of Technology, Atlanta, GA, USA, May 19-21, 2014.

Chair, Prospective and Junior Faculty Panel, ASCE Construction Research Congress, West Lafayette, Indiana, USA, May 19, 2014.

Founding Member, ASCE Construction Institute, North Georgia Chapter, since April 2014.

Editorial Board Member, *Revista Ambiente Construído*, the main Brazilian journal in the field of the Built Environment. This journal is kept by ANTAC, a scientific association in this field, since December 2013.

Associate Editor, *Automation in Construction*, an international research journal published by Elsevier, and one of the two journals in the world with the highest ISI Impact Factors in the field of construction engineering and management. Associate Editor since December 2012.

Chair, Prospective and Junior Faculty Panel, ASCE Construction Research Congress, West Lafayette, Indiana, USA, May 21, 2012.

Technical Chair, Member of the Organizing Committee, Fourth Pan American Conference on Construction Management and Economics, ELAGEC IV, Santiago, Chile, October 4-5, 2011.

Founding Member, CIB Working Commission (W117), “Performance Measurement in Construction,” since 2009.

Founding Member, ASCE Wireless Construction Committee, 2007-2009.

Founding Member, CIB Task Group 61 “Benchmarking Construction Performance Data,” 2006-2009.

Member, ASCE Construction Research Council since 2003.

Reviewer of academic journals: *ASCE Journal of Construction Engineering and Management*, *ASCE Journal of Management in Engineering*, *Automation in Construction, Construction Innovation: Information, Process, Management, Construction Management and Economics, Journal for the Advancement of Performance Information and Value.*

Founding Member, e-Construction Group, University of Maryland, since 2003.

Member, Chi Epsilon National Civil Engineering Honor Society, since 2003.

Member, American Society of Civil Engineers, since 2002.

B. Public and Community Service

Member, International Green Builder Certification Board, since 2011.

Member, Governing Board, Architecture/Construction/Engineering (ACE) Mentor Program of Atlanta, since 2010.

Member of Georgia Department of Education Career Clusters/Pathway Curriculum Revision Project, Architecture and Construction Fundational Courses, since 2012.

Member of the Advisory Board for the 2012 Retail Design and Construction Conference, Atlanta, Georgia, September 13-14, 2012.

Participated in Curriculum Charrette for Greenprints 2013, Southface Eco Office, Atlanta, Georgia, June 7, 2012.

Panelist at the 2008 Design-Build for Water/Wastewater Conference, “Educating Tomorrow’s Design-Build Leaders.” Design-Build Institute of America (DBIA), Atlanta, Georgia, USA, February 15, 2008.

Invited Panelist to the conference “Successful Contracting: Secrets from the Experts”, Organized by AGC Georgia Branch and the College of Architecture, Georgia Institute of Technology, Atlanta, Georgia, USA, November 6, 2007.

Participated in the annual meetings of the Hispanic Contractors Association of Georgia (HCAG). Fall 2006, Spring 2007 and Fall 2007.

Professional Engineer, registered on 7-02-2007 in Ohio. Registration number: 72352.

C. Institute Contributions

Non-Tenure-Track Faculty Institute Promotions Committee, Georgia Institute of Technology, 2016-Present.

Steering Committee, College of Architecture, Georgia Institute of Technology, Steve French, Chair, 2014.

Information Technology Committee, College of Architecture, Subhro Guhathakurta, Chair, 2011-2012.

Institute Undergraduate Curriculum Committee (IUCC), Georgia Institute of Technology, George Riley, Chair, 2008-2011.

College Curriculum Committee, College of Architecture, Bill Drummond, Chair, 2008-2011.

Search Committee for Director of Undergraduate Research and Student Innovation, Office of Undergraduate Studies, Amy Bruckman, Chair, 2010.

Search Committee for School of Architecture Faculty. College of Architecture, Russell Gentry, Chair, 2010.

Advisory Committee, College of Architecture, Athanassios Economou, Chair, 2007-2010.

Technology Committee, College of Architecture, Godfried Augenbroe, Chair, 2008-2009.

Service Learning Committee, Office of Community Service, Georgia Institute of Technology, organizing service learning course for Georgia Tech students in Cusco, Peru. 2007.

Student Construction Association (SCA), Faculty Advisor, 2007-2008.

Ph.D. Committee member for Building Construction, College of Architecture, Chuck Eastman, Chair, 2006-2008.