

B u r ç i n B e c e r i k - G e r b e r
Dean's Professor of Civil and Environmental Engineering
University of Southern California
Sonny Astani Department of Civil & Environmental Engineering
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ACADEMIC APPOINTMENTS

University of Southern California, Sonny Astani Department of Civil and Environmental Engineering	
Center for Risk and Economic Analysis of Threats and Emergencies (CREATE) Senior Fellow	2024-Present
Dean's Professor	2020-Present
Professor (with Tenure)	2019-Present
Associate Professor (with Tenure)	2015-2019
Stephen Schrank Early Career Chair in Civil and Environmental Engineering	2012-2019
Assistant Professor (Tenure Track)	2008-2015

EDUCATION

Harvard University, Graduate School of Design, Cambridge, MA	2006
Doctor of Design	
University of California at Berkeley, Dept. of Civil and Environmental Engineering, Berkeley, CA	2002
Master of Science in Engineering	
Istanbul Technical University, Department of Architecture, Istanbul, TURKEY	2001
Master of Science in Architecture	
Istanbul Technical University, Department of Architecture, Istanbul, TURKEY	1999
Bachelor of Architecture	

PROFESSIONAL EXPERIENCE

Camp Dresser & McKee, Inc., Los Angeles, CA & Cambridge, MA	2006-2008
Project Manager & Business Analyst	
Mehmet Basaran Engineering, Architecture and Interior Design, Istanbul, TURKEY	2001
Designer & Construction Manager	

HONORS & AWARDS

Henry L. Michel Award for Industry Advancement of Research This annual award is intended to recognize and acknowledge leaders of the design and construction industry whose dedication and aggressive vision for the industry have provided the cornerstones for improving the quality of people's lives around the world through research in the design and construction industry.	2024
ASCE Fellow ASCE fellows have made celebrated contributions and developed creative solutions that change lives around the world. It is a prestigious honor held by 3% of ASCE members.	2024
Peurifoy Construction Research Award, ASCE To recognize individuals who have made outstanding contributions to the advancement of construction engineering through research and development of new technology, principles, or practices.	2024
Los Angeles Business Journal's Leaders of Influence: Thriving in their 40s Profile	2023
Computing in Civil Engineering Award, ASCE The award is made annually to a member of the American Society of Civil Engineers who has made an outstanding contribution to the application of computers to the practice of civil engineering.	2023
Academy of Television Arts & Sciences, Los Angeles Area Emmy Received an Emmy for independent programming as a co-producer of "Lives, Not Grades" which features a novel pedagogical approach for engineering education	2022
Elected to National Academy of Construction (NAC) The mission of the National Academy of Construction is to recognize and honor individuals for their distinguished contributions to the industry and to share this reservoir of expertise as a service to the nation.	2021
Outstanding Engineering Merit Award, Orange County Engineering Council Given to engineers who have achieved significant expertise in a particular field of engineering or science and whose engineering experience and contributions stand out above peers in the engineering, technological and scientific community.	2020
Dean's Professor – Appointed as the Dean's Professor	2020

Executive Leadership in Academic Technology, Engineering and Science (ELATES) Fellowship -- a national leadership development program designed to advance senior women faculty in academic engineering, computer science, and other STEM fields into effective institutional leadership roles within their schools and universities.	2020-2021
Outstanding Early Career Researcher, Celebration of Engineering & Technology Innovation Award (CETI) by FIATECH – The Celebration of Engineering & Technology Innovation, or CETI, Awards recognize significant achievements in technology research, development, and implementation in the capital projects industry. As annual awards, the CETIs recognize organizations and individuals: organizations for implementing new and emerging technologies, and individuals for making significant strides in advancing innovation in research and development	2018
Rutherford Visiting Fellowship by Alan Turing Institute – awarded to a vibrant community of data scientists, mathematicians, statisticians, social scientists, computer scientists and software engineers to work together in a cross-disciplinary environment to advance the world-changing potential of data science and AI	2018
Mellon Mentoring Award (faculty mentoring graduate student category) -- honors individual faculty members for helping to build a supportive academic environment. The award recognizes the significant and lasting impact on students, the faculty has chosen to guide and support in their professional development	2017
Junior Research Award , Viterbi School of Engineering, University of Southern California	2016
NSF Early CAREER Award – The Faculty Early Career Development (CAREER) Program is a foundation-wide activity that offers the NSF's most prestigious awards in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations	2014
Selected to participate in National Academy of Engineering (NAE) 2013 U.S. Frontiers of Engineering Symposium : Eighty-one of the nation's brightest young engineers have been selected to take part in the NAE 19 th annual U.S. Frontiers of Engineering symposium	2013
Stephen Schrank Early Career Chair of Civil and Environmental Engineering, University of Southern California	2012
TR 35 Award by MIT Technology Review, Recognizing the world's top 35 technology innovators under the age of 35 – including universities, research labs and corporations	2012
Selected as an innovator to participate in the National Academy of Engineers (NAE) Frontiers of Engineering Education (FOEE)	2010

Donald S. Barrie Award, Project Management Institute, given to the research that best advances the project management body of knowledge in the field of design, procurement, construction by providing a useful contribution to the engineering and construction industry 2004

Wilson-Zells Academic Scholarship, Project Management Institute, Information Systems Specific Interest Group, awarded to a graduate student whose research best contributes directed toward advancing the concepts, tools and techniques of managing project-oriented task with the use of information systems/information technology 2004

RESEARCH INTERESTS

Sustainable Infrastructure

Modeling occupancy and associated energy loads; Behavior driven control of building systems; Energy-aware and comfort-driven built environments; Health and well-being in built environments; User-centered design and operation of built environments for energy efficient infrastructure; High-tech low-income housing.

Responsive and Adaptive Built Environments

Human-built environment interactions; Modeling user preferences; Adjustable/progressive autonomy; Intelligent automation of building systems; Human-built environment collaboration & communication; Disaster-prepared built environments; Robot-worker collaboration.

Situational Awareness for Built Environments

Data-driven engineering; User-centered sensing and learning; Indoor location sensing; Integrated building/infrastructure reality capture systems; Online learning for predicting human & building behavior; People-centered AI for built environments.

Building/Infrastructure Information Modeling & Visualization

Digital twins of buildings and cities; Geometric and semantic built environment information visualization; Building information modeling/visualization; Immersive and interactive environments; Cross-disciplinary, collaborative, geographically distributed engineering.

PUBLICATIONS

Since 2020, my work has received 11,615 citations, contributing to a total of 18,654 citations overall, with an h-index of 69 (55 since 2020) and an i10-index of 155 (130 since 2020).

(If one of the co-authors is my student or post-doc, the name is indicated with an asterisk. The name of the senior author –if not self- is underlined)

Researcher ID: <http://www.researcherid.com/rid/D-6897-2013> (D-6897-2013)

ORCID: <http://orcid.org/0000-0001-8648-0989>

Google Scholar: <https://scholar.google.com/citations?user=9REqw58AAAAJ&hl=en>

Refereed Journal Papers (Published/In Press)

- (1) **Becerik B.** (2004) "A Review on Past, Present and Future of Web-Based Project Management and Collaboration Tools and their Adoption by the US AEC Industry," *International Journal of IT in Architecture, Engineering and Construction*, Vol. 2, Issue 3, October 2004, pp. 233-248, <http://itc.scix.net/cgi-bin/works/Show?itaec-2004-18>
- (2) Allen R K, **Becerik B**, **Pollalis P N**, and Schwegler B R. (2005) "The Promise and Barriers to Technology Enabled and Open Project Team Collaboration," *ASCE Journal of Professional Issues in Engineering Education and Practice*, Vol. 131, No. 4, pp: 301-311, [http://dx.doi.org/10.1061/\(ASCE\)1052-3928\(2005\)131:4\(301\)](http://dx.doi.org/10.1061/(ASCE)1052-3928(2005)131:4(301))
- (3) **Becerik-Gerber B**, Rice S*. (2010) "The Perceived Value of Building Information Modeling in the U.S. Building Industry," *Journal of Information Technology in Construction*, Vol. 15, pg. 185-201, <http://www.itcon.org/2010/15>
- (4) **Becerik-Gerber B**, Kensek K. (2010) "Building Information Modeling in Architecture, Engineering and Construction: Emerging Research Directions and Trends," *ASCE Journal of Professional Issues in Engineering Education and Practice*, Vol.136, No.3, pp: 139-147, [http://dx.doi.org/10.1061/\(ASCE\)EI.1943-5541.0000023](http://dx.doi.org/10.1061/(ASCE)EI.1943-5541.0000023)
- (5) Kent D*, **Becerik-Gerber B**. (2010) "Understanding Construction Industry Experience and Attitudes Toward Integrated Project Delivery," *ASCE Journal of Construction Engineering and Management*, Vol. 136, No. 8, pp: 815-825, [http://dx.doi.org/10.1061/\(ASCE\)CO.1943-7862.0000188](http://dx.doi.org/10.1061/(ASCE)CO.1943-7862.0000188)
- (6) **Becerik-Gerber B**, Jazizadeh F*, Kavulya G*, Calis G*. (2011) "Assessment of Target Types and Layouts in 3D Laser Scanning for Registration Accuracy," *Journal of Automation in Construction*, Vol. 20, pp: 649-658, <http://dx.doi.org/10.1016/j.autcon.2010.12.008>
- (7) Li N*, **Becerik-Gerber B**. (2011) "A Life Cycle Approach for Implementing RFID Technology in Construction: Learning from Academic and Industry Use Cases," *ASCE Journal of Construction Engineering and Management*, Vol. 137, No. 12, pp: 1-10, [http://dx.doi.org/10.1061/\(ASCE\)CO.1943-7862.0000376](http://dx.doi.org/10.1061/(ASCE)CO.1943-7862.0000376)
- (8) Li N*, **Becerik-Gerber B**. (2011) "Performance Based Evaluation of RFID Based Indoor Location Sensing Solutions for the Built Environment," *Journal of Advanced Engineering Informatics*, Vol. 25, pp: 535-546, <http://dx.doi.org/10.1016/j.aei.2011.02.004>
- (9) **Becerik-Gerber B**, Gerber D, Ku K. (2011) "The Pace of Technological Innovation in Architecture, Engineering and Construction Education: Integrating Recent Trends into The Curricula," *Journal of Information Technology in Construction*, Vol. 16, pg. 411-432, <http://www.itcon.org/2011/24>
- (10) Ghassemi R*, **Becerik-Gerber B**. (2011) "Transitioning to Integrated Project Delivery: Potential Barriers and Lessons Learned," *Lean Construction Journal*, Lean and Integrated Project Delivery Special Issue, pp 32-52, ISSN 1555 -1369, http://www.leanconstruction.org/media/docs/lcj/2011/LCJ_11_sp3.pdf
- (11) **Becerik-Gerber B**, Jazizadeh F*, Li N*, Calis G*. (2012) "Application Areas and Data Requirements for BIM Enabled Facilities Management," *ASCE Journal of Construction Engineering and Management*, Vol. 138, No.3, pp: 431-442, [http://dx.doi.org/10.1061/\(ASCE\)CO.1943-7862.0000433](http://dx.doi.org/10.1061/(ASCE)CO.1943-7862.0000433)
- (12) **Becerik-Gerber B**, Ku K., Jazizadeh F*. (2012) "BIM-Enabled Virtual and Collaborative Construction Engineering and Management," *ASCE Journal of Professional Issues in Engineering Education and Practice* – Vol. 138, No. 3, pp: 234-245, [http://dx.doi.org/10.1061/\(ASCE\)EI.1943-5541.0000098](http://dx.doi.org/10.1061/(ASCE)EI.1943-5541.0000098)
- (13) Klein L*, Kwak J, Kavulya G*, Jazizadeh F*, **Becerik-Gerber B**, Varakantham P, Tambe M, (2012) "Coordinating Occupant Behavior for Building and Comfort Management Using Multi-Agent Systems," *Journal of Automation in Construction*, Vol. 22, pp: 515-536, <http://dx.doi.org/10.1016/j.autcon.2011.11.012>
- (14) Li N*, Li S*, **Becerik-Gerber B**, Calis G*, (2012) "Deployment Strategies and Performance Evaluation of a Virtual-Tag-Enabled Indoor Localization Approach," *ASCE Journal of Computing in Civil Engineering*, Vol. 26, No. 5, pp: 574-583, [http://dx.doi.org/10.1061/\(ASCE\)CP.1943-5487.0000161](http://dx.doi.org/10.1061/(ASCE)CP.1943-5487.0000161)
- (15) Klein L*, Li N*, **Becerik-Gerber B**. (2012) "Imaged-Based Verification of As-Built Documentation of Operational Buildings," *Journal of Automation in Construction* Vol. 21, pp: 161-171, <http://dx.doi.org/10.1016/j.autcon.2011.05.023>

- (16) Li N*, Calis G*, **Becerik-Gerber B.** (2012) "Measuring and Monitoring Occupancy with an RFID Based System for Demand-Driven HVAC Operations," *Journal of Automation in Construction*, Vol. 24, pp-89-99, <http://dx.doi.org/10.1016/j.autcon.2012.02.013>
- (17) Jazizadeh F*, Marin M F*, **Becerik-Gerber B.** (2013) "A Thermal Preference Scale for Personalized Comfort Profile Identification via Participatory Sensing," *Journal of Building and Environment*, Vol. 68, pp: 140–149, <http://dx.doi.org/10.1016/j.buildenv.2013.06.011>
- (18) Li N*, Li S*, Calis G*, **Becerik-Gerber B.** (2013) "Improving in-Building Asset Localization By Offset Vector and Convergence Calibration Methods," *ASCE Journal of Computing in Civil Engineering*, Vol. 27, No. 4., pp: 337–344, [http://dx.doi.org/10.1061/\(ASCE\)CP.1943-5487.0000248](http://dx.doi.org/10.1061/(ASCE)CP.1943-5487.0000248)
- (19) Yang Z*, **Becerik-Gerber B.**, Mino L*. (2013) "A Study on Student Perceptions of Higher Education Classrooms: Impact of Classroom Attributes on Student Satisfaction and Performance," *Journal of Building and Environment*, Vol. 70, pp: 171-188, <http://dx.doi.org/10.1016/j.buildenv.2013.08.030>
- (20) Forgues D, **Becerik-Gerber B.** (2013) "Integrated Project Delivery and Building Information Modeling: Refining the Relationship between Education and Practice," *The International Journal of Design Education*, Volume 6, Issue 2, pp: 47-56, ISSN 2325-128X, <http://ijge.cgpublisher.com/product/pub.235/prod.17>
- (21) Jahanshahi M R, Jazizadeh F*, Masri S, **Becerik-Gerber B.** (2013) "Unsupervised Approach for Autonomous Pavement Defect Detection and Quantification Using an Inexpensive Depth Sensor," *ASCE Journal of Computing in Civil Engineering*, Vol. 27, No. 6, pp: 743-754, [http://dx.doi.org/10.1061/\(ASCE\)CP.1943-5487.0000245](http://dx.doi.org/10.1061/(ASCE)CP.1943-5487.0000245)
- (22) Calis G*, **Becerik-Gerber B.**, Goktepe B, Li S*, Li N*. (2013) "Analysis of the Variability of RSSI Values for Active RFID-Based Indoor Applications," *Turkish Journal of Engineering & Environmental Sciences* Vol.37, pp: 186-210, <http://dx.doi.org/10.3906/muh-1208-3>
- (23) Kwak J, Varakantham P, Maheswaran R, Chang Y, Tambe M, **Becerik-Gerber B.**, Wood W. (2014) "TESLA: An Extended Study of an Energy Saving Agent that Leverages Schedule Flexibility," *Journal of Autonomous Agents and Multi-Agent Systems*, Vol: 28, Issue: 4, pp: 605-636, <http://dx.doi.org/10.1007/s10458-013-9234-0>
- (24) Li N*, Yang Z*, Ghahramani A*, **Becerik-Gerber B.**, Soibelman L. (2014) "Situational Awareness for Supporting Building Fire Emergency Response: Information Needs, Information Sources, and Implementation Requirements," *Fire Safety Journal*, Vol. 63, pp: 17–28, <http://dx.doi.org/10.1016/j.firesaf.2013.11.010>
- (25) Jazizadeh F*, Ahmadi-Karvigh S*, **Becerik-Gerber B.**, Soibelman L. (2014) "Spatiotemporal Lighting Load Decomposition Using Light Intensity Signals," *Journal of Energy and Buildings*, Vol. 69, February 2014, pp: 572-583, <http://dx.doi.org/10.1016/j.enbuild.2013.11.040>
- (26) Jazizadeh F*, Ghahramani A*, **Becerik-Gerber B.**, Kichkaylo T, Orosz M. (2014) "Human-Building Interaction Framework for Personalized Thermal Comfort Driven Systems in Office Buildings," *ASCE Journal of Computing in Civil Engineering, Special Issue: Computational Approaches to Understand and Reduce Energy Consumption in the Built Environment*, Vol. 28, No. 1, pp: 2-16, [http://dx.doi.org/10.1061/\(ASCE\)CP.1943-5487.0000300](http://dx.doi.org/10.1061/(ASCE)CP.1943-5487.0000300)
- (27) Jazizadeh F*, Ghahramani A*, **Becerik-Gerber B.**, Kichkaylo T, Orosz M. (2014) "User-Led Decentralized Thermal Comfort Driven HVAC Operations for Improved Efficiency in Office Buildings," *Journal of Energy and Buildings*, Vol. 70, pp: 398-410, <http://dx.doi.org/10.1016/j.enbuild.2013.11.066>
- (28) Li N*, **Becerik-Gerber B.**, Soibelman L, Krishnamachari B. (2014) "A BIM Centered Indoor Localization Algorithm to Support Building Fire Emergency Response Operations," *Journal of Automation in Construction*, Vol 42, pp. 78-89, <http://dx.doi.org/10.1016/j.autcon.2014.02.019>
- (29) Yang Z*, **Becerik-Gerber B.** (2014) "Modeling Personalized Occupancy Profiles for Representing Long Term Patterns by Using Ambient Context," *Journal of Building and Environment*, Vol. 78, pp: 23-35 <http://dx.doi.org/10.1016/j.buildenv.2014.04.003>

- (30) Yang Z*, Becerik-Gerber B. (2014) "The Coupled Effects of Personalized Occupancy Profile Based HVAC Schedule and Room Reassignment on Building Energy Consumption," *Journal of Energy and Buildings*, Vol. 78, pp: 113-122, <http://dx.doi.org/10.1016/j.enbuild.2014.04.002>
- (31) Yang Z*, Li N*, Becerik-Gerber B, Orosz M. (2014) "A Systematic Approach to Occupancy Modeling in Ambient Sensor Rich Office Environments," *Simulation: Transactions of the Society for Modeling and Simulation International, Special Issue: Simulation for Architecture and Urban Design*, Vol 90(8), pp:960-977
<http://dx.doi.org/10.1177/0037549713489918>
- (32) Becerik-Gerber B, Siddiqui M K, Brilakis I, El-Anwar O, El-Gohary N, Mahfouz T, Li S*, Jog G, Kandil A. (2014) "Civil Engineering Grand Challenges: Opportunities for Data Sensing, Information Analysis and Knowledge Discovery," *ASCE Journal of Computing in Civil Engineering*, Vol. 28, No. 4,
[http://dx.doi.org/10.1061/\(ASCE\)CP.1943-5487.0000290](http://dx.doi.org/10.1061/(ASCE)CP.1943-5487.0000290)
- (33) Ghahramani A*, Jazizadeh F*, Becerik-Gerber B. (2014) "A Knowledge Based Approach for Selecting Energy-Aware and Comfort-Driven HVAC Temperature Set Points," *Journal of Energy and Buildings*, Vol. 85, pp: 536-548, <http://dx.doi.org/10.1016/j.enbuild.2014.09.055>
- (34) Jazizadeh F*, Becerik-Gerber B, Berges M, Soibelman L. (2014) "An Unsupervised Hierarchical Clustering Based Heuristic Algorithm for Facilitated Training for Electricity Consumption Disaggregation," *Journal of Advanced Engineering Informatics*, Vol.28, Issue. 4, pp: 311-326, <http://dx.doi.org/10.1016/j.aei.2014.09.004>
- (35) Heydarian A*, Carneiro J P*, Gerber D, Becerik-Gerber B. (2015) "Immersive Virtual Environments, Understanding the Impact of Design Features and Occupant Choice upon Lighting for Building Performance," *Journal of Building and Environment*, Vol.89, pp: 217-228, <http://dx.doi.org/10.1016/j.buildenv.2015.02.038>
- (36) Heydarian A*, Carneiro J P*, Gerber D, Becerik-Gerber B, Hayes T, Wood W. (2015) "Immersive Virtual Environments versus Physical Built Environments: A Benchmarking Study for Building Design and User-Built Environment Explorations," *Journal of Automation in Construction*, Vol.54, pp: 116-126,
<http://dx.doi.org/10.1016/j.autcon.2015.03.020>
- (37) Yang Z*, Becerik-Gerber B. (2015) "A Model Calibration Framework for Simultaneous Multi-Level Building Energy Simulation", *Journal of Applied Energy*, Vol.149, pp: 415-431, <http://dx.doi.org/10.1016/j.apenergy.2015.03.048>
- (38) Ghahramani A*, Tang C*, Becerik-Gerber B. (2015) "An Online Learning Approach for Quantifying Personalized Thermal Comfort via Adaptive Stochastic Modeling," *Journal of Building and Environment*, Vol. 92, pp. 86-96,
<http://dx.doi.org/10.1016/j.buildenv.2015.04.017>
- (39) Li N*, Becerik-Gerber B, Soibelman L, Krishnamachari B. (2015) "A Comparative Assessment of an Indoor Localization Framework for Building Emergency Response," *Journal of Automation in Construction*, Vol. 57, pp: 42-54, <http://dx.doi.org/10.1016/j.autcon.2015.04.004>
- (40) Li N*, Becerik-Gerber B, Soibelman L. (2015) "Iterative Maximum Likelihood Estimation Algorithm: Leveraging Building Information and Sensing Infrastructure for Localization During Emergencies," *Journal of Computing in Civil Engineering*, Vol 29, No. 6, [http://dx.doi.org/10.1061/\(ASCE\)CP.1943-5487.0000430](http://dx.doi.org/10.1061/(ASCE)CP.1943-5487.0000430)
- (41) Li N*, Yang Z*, Becerik-Gerber B, Tang C*, Chen N*. (2015) "Why is the Reliability of Building Simulation Limited as a Tool for Evaluating Energy Conservation Measures?" *Journal of Applied Energy*, Vol. 159, pp. 196-205,
<http://dx.doi.org/10.1016/j.apenergy.2015.09.001>
- (42) Khashe S*, Heydarian A*, Gerber D, Becerik-Gerber B, Hayes T, Wood W. (2015) "Influence of LEED Branding on Building Occupants' Pro-Environmental Behavior," *Journal of Building and Environment*, Vol. 94, pp. 477-488,
<http://dx.doi.org/10.1016/j.buildenv.2015.10.005>
- (43) Ahmadi-Karvigh S*, Becerik-Gerber B, Soibelman L. (2016) "A Framework for Allocating Personalized Appliance-Level Disaggregated Electricity Consumption to Daily Activities," *Journal of Energy and Buildings*, Vol.111, pp. 337-350, <http://dx.doi.org/10.1016/j.enbuild.2015.11.029>

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- (45) Oskouie P*, **Becerik-Gerber B.**, Soibelman L. (2016) "Automated Measurement of Highway Retaining Wall Displacements Using Terrestrial Laser Scanners," *Journal of Automation in Construction*, Vol. 65, pp: 86-101, <http://dx.doi.org/10.1016/j.autcon.2015.12.023>
- (46) Khashe S*, Heydarian A*, **Becerik-Gerber B.**, Wendy Wood. (2016) "Exploring the Effectiveness of Social Messages on Energy Consumption Behavior in Buildings," *Journal of Building and Environment*, Vol. 102, pp: 83-94, <http://dx.doi.org/10.1016/j.buildenv.2016.03.019>
- (47) Yang Z*, Ghahramani A*, **Becerik-Gerber B.** (2016) "Building Occupancy Diversity and HVAC (Heating, Ventilation and Air Conditioning) System Energy Efficiency," *Journal of Energy*, Vol. 109, pp: 641-649, <http://dx.doi.org/10.1016/j.energy.2016.04.099>
- (48) Chen Y, Jahanshahi M, Manjunatha P, Gan W, Abdelbarr M, Masri S, **Becerik-Gerber B.**, Caffrey J. (2016) "Inexpensive Multimodal Sensor Fusion System for Autonomous Data Acquisition of Road Surface Conditions," *IEEE Sensors Journal*, Vol 16, No: 21, pp: 7731-7743, <http://dx.doi.org/10.1109/JSEN.2016.2602871>
- (49) Ghahramani A*, Castro G*, **Becerik-Gerber B.**, Xinran Y*. (2016) "Infrared Thermography of Human Face for Monitoring Thermoregulation Performance and Estimating Personal Thermal Comfort," *Journal of Building and Environment*, Vol. 109, pp: 1-11, <http://dx.doi.org/10.1016/j.buildenv.2016.09.005>
- (50) Heydarian A*, Pantazis E, Carneiro J P*, Gerber D, **Becerik-Gerber B.** (2016) "Lights, Building, Action: Impact of Default Lighting Settings on Occupant Behaviour," *Journal of Environmental Psychology*, Vol 48, pp:212-223, <http://dx.doi.org/10.1016/j.jenvp.2016.11.001>
- (51) Yang Z*, **Becerik-Gerber B.** (2017) "Assessing the Impacts of Real-time Occupancy State Transitions on Building Heating/Cooling Loads," *Journal of Energy and Buildings*, Vol 135, pp: 201-211, <http://dx.doi.org/10.1016/j.enbuild.2016.11.038>
- (52) Ahmadi-Karvigh S*, **Becerik-Gerber B.**, Soibelman L. (2017) "One Size Does Not Fit All: Understanding User Preferences for Building Automation Systems," *Journal of Energy and Buildings*, Vol 145, pp: 163-173, <http://dx.doi.org/10.1016/j.enbuild.2017.04.015>
- (53) Heydarian A*, Pantazis E, Wang A, Carneiro J P*, Gerber D, **Becerik-Gerber B.** (2017) "Towards User Centered Building Design: Identifying End-User Lighting Preferences via Immersive Virtual Environments," *Journal of Automation in Construction*, Vol 81, pp: 56-66, <https://dx.doi.org/10.1016/j.autcon.2017.05.003>
- (54) Ghahramani A*, Yang Z*, Ahmadi-Karvigh S*, **Becerik-Gerber B.** (2017) "HVAC Systems Energy Optimization using an Adaptive Hybrid Metaheuristic," *Journal of Energy and Buildings*, Vol 152, pp: 149-161, <https://dx.doi.org/10.1016/j.enbuild.2017.07.053>
- (55) Khashe S*, Lucas G, **Becerik-Gerber B.**, Gratch J. (2017) "Buildings with Persona: Towards Effective Building-Occupant Communication," *Journal of Computers in Human Behavior*, Vol 75, pp: 607-618, <https://doi.org/10.1016/j.chb.2017.05.040>
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- (57) Oskouie P*, **Becerik-Gerber B.**, Soibelman L. (2017) "Automated Recognition of Façade Elements for Creating As-is Mock-up Building Models," *Journal of Computing in Civil Engineering*, Vol. 31, [http://dx.doi.org/10.1061/\(ASCE\)CP.1943-5487.0000711](http://dx.doi.org/10.1061/(ASCE)CP.1943-5487.0000711)
- (58) Heydarian A*, **Becerik-Gerber B.** (2017) "Use of Immersive Virtual Environments for Occupant Behavior Monitoring and Data Collection," *Journal of Building Performance Simulation*, Special Issue on Fundamental of

- Occupant Behavior Modeling and Simulation, Vol.10, pp:484-497,
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- (28) Kwak J, Varakantham P, Maheswaran R, Tambe M, Hayes T, Wood W, **Becerik-Gerber B**. (2012) "Towards Robust Multi-objective Optimization Under Model Uncertainty in Energy Domains," *3rd International Workshop on Agent Technologies for Energy Systems*, June 5, 2012, Valencia, Spain
- (29) Kwak J, Varakantham P, Maheswaran R, Tambe M, Jazizadeh J*, Kavulya G*, Klein L*, **Becerik-Gerber B**, Hayes T, Wood W. (2012) "SAVES: A Sustainable Multiagent Application to Conserve Building Energy," *Autonomous Agents and Multiagent Systems (AAMAS 2012)*, June 4-8, 2012, Valencia, Spain, <http://dl.acm.org/citation.cfm?id=2343579>, [Acceptance Rate: 20%]
- (30) Kwak J, Varakantham P, Maheswaran R, Tambe M, Jazizadeh J*, Kavulya G*, Klein L*, **Becerik-Gerber B**, Hayes T, Wood W. (2012) "Sustainable Multiagent Application to Conserve Energy," – Demo Paper- *Autonomous Agents and Multiagent Systems (AAMAS 2012)*, June 4-8, 2012, Valencia, Spain
- (31) Jazizadeh F*, **Becerik-Gerber B**. (2012) "Toward Adaptive Comfort Management in Office Buildings Using Participatory Sensing for End User Driven Control of Building Systems," *4th ACM Workshop On Embedded Sensing Systems For Energy-Efficiency In Buildings*, November 6, 2012, Toronto, Canada – Nominated for the best paper award, <http://dx.doi.org/10.1145/2422531.2422533> [Acceptance Rate: 18%]
- (32) Kavulya G*, **Becerik-Gerber B**. (2012) "Understanding the Influence of Occupant Behavior on Energy Consumption Patterns in Commercial Buildings," *ASCE Workshop of Computing in Civil Engineering*, June 17-20, 2012, Clearwater Beach, FL, <http://dx.doi.org/10.1061/9780784412343.0072>
- (33) Jahanshahi M R, Jazizadeh F*, Masri S, **Becerik-Gerber B**. (2012) "A Novel System for Road Surface Monitoring Using an Inexpensive Infrared Laser Sensor," *SPIE (International Society for Optics and Photonics), Smart Structures/NDE*, March 11-15, 2012, San Diego, CA, <http://dx.doi.org/10.1117/12.915427>
- (34) Li N*, **Becerik-Gerber B**. (2012) "An Infrastructure-Free Indoor Localization Framework to Support Building Emergency Response Operations," *19th International Workshop of European Group of Intelligent Computing in Engineering (EG-ICE)*, July 4-6, 2012 in Munich, Germany, <http://www.cie.bv.tum.de/upload/egice/papers/30.pdf>
- (35) Kwak J, Varakantham P, Maheswaran R, Chang Y, Tambe M, **Becerik-Gerber B**, Wood W. (2013) "TESLA: An Energy-Saving Agent that Leverages Schedule Flexibility," *Autonomous Agents and Multiagent Systems (AAMAS 2013)*, May 6-10, 2013, Saint Paul, Minnesota, USA, [Acceptance Rate: 23%]

- (36) Kwak J, Varakantham P, Maheswaran R, Chang Y, Tambe M, **Becerik-Gerber B**, Wood W. (2013) "Why TESLA Works: Energy Saving Agent Leveraging Schedule Flexibility," MASS2013, The 1st International Workshop on Multiagent-based Societal Systems, held in conjunction with *the Ninth International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2013)*, May 6-10, 2013, Saint Paul, Minnesota, USA, <http://dl.acm.org/citation.cfm?id=2485073>
- (37) Li N*, **Becerik-Gerber B**, Krishnamachari B, Soibelman L. (2013) "An Environment-Aware Sequence-Based Localization Algorithm for Supporting Building Emergency Response Operations," *ASCE International Workshop of Computing in Civil Engineering*, June 23-25, 2013, Los Angeles, CA, <http://dx.doi.org/10.1061/9780784413029.069>
- (38) Jazizadeh F*, Ghahramani A*, **Becerik-Gerber B**. (2013) "Personalized Thermal Comfort Driven Control in HVAC Operated Office Buildings," *ASCE International Workshop of Computing in Civil Engineering*, June 23-25, 2013, Los Angeles, CA, <http://dx.doi.org/10.1061/9780784413029.028>
- (39) Li N*, Kwak J, **Becerik-Gerber B**, Tambe M (2013) "Predicting HVAC Energy Consumption in Commercial Buildings Using Multiagent Systems," *The 29th International Symposium on Automation and Robotics in Construction (ISARC)*, August 11-15, 2013, Montreal, Canada, <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.358.9829>
- (40) Jazizadeh F*, **Becerik-Gerber B.**, Berges M, Soibelman L. (2013) "Towards Passive Training for Non-Intrusive Load Monitoring," *20th International Workshop of European Group of Intelligent Computing in Engineering (EG-ICE)*, July 1-3, 2013 in Vienna, Austria
- (41) Li N*, Yang Z*, **Becerik-Gerber B**, Orosz M. (2013) "Towards Energy Savings from a Bimodal Occupancy Driven HVAC Controller in Practice," *International Council for Research and Innovation in Building and Construction – IT in Construction (CIB W78)*, *30th International Conference on Applications of Information Technology in the Architecture, Engineering and Construction Industry*, October 9-12, 2013, Beijing, China
- (42) Li N*, **Becerik-Gerber B**, Krishnamachari B, Soibelman L. (2013) "Evaluation of an Environment-Aware Sequence-Based Localization Algorithm for Building Fire Emergency Scenarios," *International Council for Research and Innovation in Building and Construction – IT in Construction (CIB W78)*, *30th International Conference on Applications of Information Technology in the Architecture, Engineering and Construction Industry*, October 9-12, 2013, Beijing, China – **Charles M Eastman Best PhD Paper Award**
- (43) Mansourifard P, Jazizadeh F*, Krishnamachari B, **Becerik-Gerber B**. (2013) "Online Learning for Personalized Room-Level Thermal Control: A Multi-Armed Bandit Framework," *5th ACM Workshop On Embedded Sensing Systems For Energy-Efficiency In Buildings*, November 13-14, 2013, Rome, Italy, <http://dx.doi.org/10.1145/2528282.2528296> [Acceptance Rate: 39%]
- (44) Heydarian A*, Gerber D, Carneiro J P*, **Becerik-Gerber B**, Hayes T, Wood W. (2014) "Immersive Virtual Environments: Experiments on Impacting Design and Human Building Interaction," *CAADRIA2014, 19th International Conference on the Association of Computer-Aided Architectural Design Research in Asia*, May 14-17, 2014, Kyoto, Japan http://cumincad.scix.net/cgi-bin/works/Show&_id=caadria2010_003/Show?caadria2014_161
- (45) Oskouie P*, **Becerik-Gerber B**, Soibelman L. (2014) "Automated Cleaning of Point Clouds for Highway Retaining Wall Condition Assessment," *International Society for Computing in Civil and Building Engineering (ISCCBE) 2014 & International Council for Research and Innovation in Building and Construction – IT in Construction (CIB W78) 2014*, June 23-25, 2014, Orlando, FL
- (46) Jazizadeh K*, **Becerik-Gerber B**, Berges M, Soibelman L. (2014) "Unsupervised Clustering of Residential Electricity Consumption Measurements for Facilitated User-Centric Non-Intrusive Load Monitoring," *International*

- Society for Computing in Civil and Building Engineering (ISCCBE) 2014 & International Council for Research & Innovation in Building and Construction – IT in Construction (CIB W78) 2014*, June 23-25, 2014, Orlando, FL
- (47) Heydarian A*, Carneiro J P*, Gerber D, **Becerik-Gerber B.** (2014) "Towards Measuring the Impact of Personal Control on Energy Use Through the Use of Immersive Virtual Environments," *The 30th International Symposium on Automation and Robotics in Construction (ISARC)*, July 9-11, 2014, Sydney, Australia
- (48) Yang Z*, **Becerik-Gerber B.** (2014) "Coupling Occupancy Information with HVAC Energy Simulation: A Systematic Review of Simulation Programs," *Winter Simulation Conference*, December 7-10, 2014, Savannah, GA
- (49) Oskouie P*, **Becerik-Gerber B.**, Soibelman L. (2015) "A Data Quality-driven Framework for Asset Condition Assessment Using LiDAR and Image Data," *ASCE International Workshop of Computing in Civil Engineering*, June 21 – 23, 2015, Austin, TX
- (50) Heydarian A*, Pantazis E, Carneiro J P*, Gerber D, **Becerik-Gerber B.** (2015) "Towards Understanding End-user Lighting Preferences in Office Spaces by Using Immersive Virtual Environments," *ASCE International Workshop of Computing in Civil Engineering*, June 21 – 23, 2015, Austin, TX
- (51) Li N*, Yang Z*, Tang C*, Chen N* **Becerik-Gerber B.** (2015) "Impact of Building Occupancy on Assessing the Effectiveness of Energy Conservation Measures," *The 31st International Symposium on Automation and Robotics in Construction (ISARC)*, June 14-18, 2015, Oulu, Finland
- (52) Ghahramani A*, Dutta K*, Yang Z*, Ozelik G*, **Becerik-Gerber B.** (2015) "Quantifying the Influence of Temperature Setpoints, Building and System Features on Energy Consumption," *Winter Simulation Conference*, December 6-9, 2014, Huntington Beach, CA
- (53) Yang Z*, Ghahramani A*, **Becerik-Gerber B.** (2015) "Iterative Reassignment Algorithm: Leveraging Occupancy Based HVAC Control for Improved Energy Efficiency," *Winter Simulation Conference*, December 6-9, 2014, Huntington Beach, CA
- (54) Yang Z*, Ghahramani A*, **Becerik-Gerber B.** (2015) "Effects of Variant Occupancy Transitions on Energy Implications of HVAC Setpoint/Setback Control Policies," *The First International Symposium on Sustainable Human-Building Ecosystems (ISSHBE)*, October 5-6, 2015, Pittsburgh, PA
- (55) Heydarian A*, Carneiro J P*, Pantazis E, Gerber D, **Becerik-Gerber B.** (2015) "Default Conditions: A Reason for Design to Integrate Human Factors," *The First International Symposium on Sustainable Human-Building Ecosystems (ISSHBE)*, October 5-6, 2015, Pittsburgh, PA
- (56) Ghahramani A*, Tang C*, Yang Z*, **Becerik-Gerber B.** (2015) "A Study of Time Dependent Variations in Personal Thermal Comfort via a Dynamic Bayesian Network," *The First International Symposium on Sustainable Human-Building Ecosystems (ISSHBE)*, October 5-6, 2015, Pittsburgh, PA
- (57) Yang Z*, **Becerik-Gerber B.** (2015) "Cross-Space Building Occupancy Modeling by Contextual Information Based Learning," *ACM International Conference on Embedded Sensing Systems for Energy-Efficiency in Buildings*, November 3-4, 2015, Seoul, South Korea [Acceptance Rate: 30%]
- (58) Yang Z*, **Becerik-Gerber B.** (2015) "How Does Building Occupancy Influence Energy Efficiency of HVAC Systems," *CUE Low-Carbon Cities and Urban Energy*, November 15-17, 2015, Fuzhou, Fujian, China
- (59) Heydarian A*, Pantazis E, Gerber D, **Becerik-Gerber B.** (2016) "Defining Lighting Settings to Accommodate End-User Preferences While Reducing Energy Consumption in Buildings," *2016 Construction Research Congress (CRC2016)*, May 31-June 2, 2016, Puerto Rico
- (60) Chen M, Soibelman L., **Becerik-Gerber B.** (2016) "A Proactive Scan Planning Framework for Courtyard Centric Buildings," *ISCCBE2016: 16th International Conference on Computing in Civil and Building Engineering*, July 6 – 8, 2016, Osaka, Japan

- (61) Carneiro JP*, **Becerik-Gerber B** (2017) "Impact of Immersive and Interactive Information Visualization on Occupant's Lighting Choices" *Lean & Computing in Construction Congress (LC3)*, July 4-12, 2017, Heraklion, Greece
- (62) Ozcelik G*, **Becerik-Gerber B**, Ghahramani A*, Wang Y*. (2017) "Can Immersive Virtual Environment be Used for Understanding Occupant-System Interactions Under Thermal Stimuli?" *Lean & Computing in Construction Congress (LC3)*, July 4-12, 2017, Heraklion, Greece
- (63) Khashe S*, Lucas G, **Becerik-Gerber B**, Gratch, J. (2018) "Persuasive Effects of Immersion in Virtual Environments for Measuring Pro-Environmental Behaviors," *35th International Symposium on Automation and Robotics in Construction (ISARC 2018)*, July 20-25, 2018, Berlin, Germany
- (64) Jazizadeh F, Afzalan M, **Becerik-Gerber B**, Soibelman L. (2018) "EMBED: A Dataset for Energy Management through Building Electricity Disaggregation," *the Ninth ACM International Conference on Future Energy Systems (ACM e-Energy 2018)*, June 12-15, 2018, Karlsruhe, Germany [[Acceptance Rate: 31%](#)]
- (65) Moon S*, **Becerik-Gerber B**, Soibelman L. (2018) "Virtual Learning for Workers in Robot Deployed Construction Sites," *35th CIB W78 2018 Conference*, October 1-3, 2018, Chicago, IL
- (66) Zhu R*, Lin J, **Becerik-Gerber B**, Li N. (2018) "Virtual Reality Based Studies of Human Emergency Behavior in Built Environments: A Systematic Review," *CONVR2018, The 18th International Conference on Construction Applications of Virtual Reality*, Nov 21-23, 2018, Auckland, New Zealand
- (67) Aryal A*, Anselmo F, **Becerik-Gerber B.** (2018) "Smart IoT Desk for Personalizing Indoor Environmental Conditions," *International Workshop on Human-in-the-loop Internet of Things Systems (HiL-IoT)*, October 15-18, 2018, Santa Barbara, CA
- (68) **Becerik-Gerber B**, Druhora D, Gerber D, Cracchiola B. (2018) "Engineering Innovation for Global Challenges: Peacebuilding in Refugee Camps: Creating Innovators and Witnesses, WEEF-GEDC 2018 Peace Engineering, November 12-16, 2018, Albuquerque, NM
- (69) Aryal A*, Shah I*, **Becerik-Gerber B.** (2019) "A Novel Method for Monitoring Air Speed in Offices Using Low Cost Sensors," *ASCE International Workshop of Computing in Civil Engineering*, June 17-19, 2019, Atlanta, GA
- (70) Zhu R*, **Becerik-Gerber B**, Lucas G, Southers E, Pynadath D. (2019) "Information Requirements for Virtual Environments to Study Human-Building Interaction during Active Shooter incidents," *ASCE International Workshop of Computing in Civil Engineering*, June 17-19, 2019, Atlanta, GA
- (71) Aryal A*, **Becerik-Gerber B.** (2019) "Skin Temperature Extraction Using Facial Landmark Detection and Thermal Imaging for Comfort Assessment," *6th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation (BuildSys 2019)*, November 13-14, 2019, New York, NY [[Acceptance Rate: 30%](#)]
- (72) Adami P*, Doleck T, **Becerik-Gerber B**, Soibelman S, Copur-Gencturk Y, Lucas G. (2020) "An Immersive Virtual Learning Environment for Human-Robot Collaboration on Construction Sites," *Proceedings of the 2020 Winter Simulation Conference*, December 13-16, 2020, Orlando, FL.
- (73) Zhu R*, **Becerik-Gerber B**, Lin J, Li N. (2021) "Modeling the Impact of Visual Access, and Crowd Flow on Human Indoor Emergency Wayfinding: from Empirical Investigations to Simulations," *ASCE 2021 International Conference on Computing in Civil Engineering (i3CE 2021)*, September 12-14, 2021, Orlando, FL.
- (74) Liu R*, **Becerik-Gerber B**, Lucas G, Busta K. (2023) "Development of a VR Training Platform for Active Shooter Incident Preparedness in Healthcare Environments via a Stakeholder-Engaged Process," *ASCE International Conference on Computing in Civil Engineering*, June 25-28, 2023, Corvallis, Oregon
- (75) Rodrigues P*, **Becerik-Gerber B**, Soibelman L, Roll S, Lucas G. (2023) "Virtual Environment to Study the Effects of Operational and Environmental Sound on Teleoperated Demolition," *ASCE International Conference on Computing in Civil Engineering*, June 25-28, 2023, Corvallis, Oregon

- (76) Awada M*, Seyedrezaei M*, **Becerik-Gerber B**, Lucas G. (2023) "Investigating the Interplay between Indoor Environmental Quality and Workers' Health and Productivity: Preliminary Results," *ASCE International Conference on Computing in Civil Engineering*, June 25-28, 2023, Corvallis, Oregon
- (77) Avramidis K, Feng T, Parga M, Kommineni A, Cabrera A, Lucas G, **Becerik-Gerber B**, Roll S and Narayanan S. (2024) "Unveiling Stress and Behavioral Patterns in Work Environments through Ubiquitous Sensing" CII 2024 (12th International Conference on Affective Computing & Intelligent Interaction)
- (78) Brun A*, Awada M*, **Becerik-Gerber B**. (2024) "Towards Unveiling the Interplay of Occupant Health, Comfort and Building Energy Consumption," *ASCE International Conference on Computing in Civil Engineering*, July 28-31, 2024, Carnegie Mellon University, Pittsburgh, Pennsylvania
- (79) Seyedrezaei M*, **Becerik-Gerber B**, Roll S, Lucas G. (2024) "A preliminary Investigation for Understanding Temperature's Associations with Office Workers' Psychological Well-Being: A Close Look into Anxiety, Motivation and Concertation," *ASCE International Conference on Computing in Civil Engineering*, July 28-31, 2024, Carnegie Mellon University, Pittsburgh, Pennsylvania
- (80) Ruying L*, **Becerik-Gerber B**, Lucas G. (2024) "Investigating Role of Personal Factors in Shaping Responses to Active Shooter Incidents using Machine Learning," *ASCE International Conference on Computing in Civil Engineering*, July 28-31, 2024, Carnegie Mellon University, Pittsburgh, Pennsylvania
- (81) Brun A*, **Becerik-Gerber B**, Lucas G. (2024) "Toward Occupant-Centric Virtual Agents: A framework for Enhancing Office Workers' Well-being and Building Energy Efficiency," *31st EG-ICE International Workshop on Intelligent Computing in Engineering*, Vigo, Spain – July 3-5, 2024.
- (82) Liu R*, Wu W*, **Becerik-Gerber B**, Lucas G. (2024) "Enhancing Building Safety Design for Active Shooter incidents: Insights on Exists from Reinforcement Learning-based Simulations," *31st EG-ICE International Workshop on Intelligent Computing in Engineering*, Vigo, Spain – July 3-5, 2024.
- (83) Parga M, Roll S, Lucas G, **Becerik-Gerber B**, Narayanan S (2024) "Differences in Self-Rated Worker Outcomes across Stress States: An Interim Analysis of Hybrid Worker Data," *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, Denver, CO, August 5 - 6, 2024
- (84) Wang, Z., Rodrigues, PB*, Fang, Y., Soibelman, L., **Becerik-Gerber, B.**, Roll, S.C., Lucas, G.L. (2025) "Understanding Potential Challenges in Demolition Robot Teleoperation to Inform Interface Design: Insights from Industry Professionals", *CIB Conferences: World Building Congress 2025*, 19-23 May 2025
- (85) Seyedrezaei M and **Becerik-Gerber B**, (2025) "Occupant Satisfaction with Building Systems and Thermostat Usage in Energy-Efficient Affordable Housing in Southern California: Preliminary Findings," *CIB Conferences: World Building Congress 2025*, 19-23 May 2025
- (86) Seyedrezaei M, **Becerik-Gerber B**, Reyes M, Roll SC, Lucas GM, Narayanan S. (2025) Longitudinal analysis of IEQ variability in office and home workspaces: Insights for the future of hybrid work. *2025 ASCE International Workshop on Intelligent Computing in Engineering*, May 11-14, 2025
- (87) Brun A*, Lucas G, **Becerik-Gerber B** (2025) Under Pressure: Contextualizing Workplace Stress Towards User-Centered Interventions, CHI EA '25: Proceedings of the Extended Abstracts of the CHI Conference on Human Factors in Computing Systems, <https://doi.org/10.1145/3706599.3719987>

In Review

- (88) Wang Z, Rodrigues PB*, Fang Y, Soibelman L, **Becerik-Gerber B**, Lucas G, Roll S (2026) The Role of Operator Experience in Shaping Sensory Feedback Preferences for Teleoperated Demolition, *Construction Research Congress (CRC) 2026*
- (89) Rodrigues PB*, Wang Z, Fang Y, Lucas G, Roll S, **Becerik-Gerber B**, Soibelman L (2026) A Pan-Tilt-Zoom Camera System for Safe Teleoperation of a Demolition Robot Arm, *Construction Research Congress (CRC) 2026*

- (90) Wang Y, Lucas G, **Becerik-Gerber B**, Ustun V, (2025) Implicit Behavioral Alignment of Language Agents in Crowd-Based Social Simulations, The 2025 Conference on Empirical Methods in Natural Language Processing, Nov 5-9, 2025, Suzhou, China

Books (Published)

- (1) **Becerik B**, Pollalis S. (2006) *"Computer Aided Collaboration for Managing Construction Projects,"* Design and Technology Report Series, No. 2006-2, Harvard Design School, Cambridge, MA. (160 pages). ISBN 0-935617-95-7, April 2006

Book Chapters (Published/In Review)

- (1) **Becerik-Gerber B**. (2010) A chapter titled: *"Business Drivers for IT in Water/Wastewater Utilities"* in the book titled *"Information Technology for Water/Wastewater Utilities: Manual of Practice,"* WEF Press, 344 pages, ISBN 9780071737050, September 2010
- (2) **Becerik-Gerber B**. (2019) A chapter titled: *"Human-Building Interaction"* in the Encyclopedia of Systems and Control, Published in December 2019

Proceedings (Published)

- (1) Irwin D, **Becerik-Gerber B**. [co-edited] (2016) Proceedings of the 3rd ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys 2016), ISBN: 978-1-4503-4264-3
- (2) Brilakis I, Lee S, **Becerik-Gerber B**. [co-edited] (2013) Proceedings of the 2013 ASCE International Workshop on Computing in Civil Engineering, American Society of Civil Engineers, ISBN 978-0-7844-1302-9 (print) – ISBN 978-0-7844-7790-8 (pdf)
- (3) Gkatzogias, K., Lourenço, P., Maloutas, T., Romano, E. et al., *A practical guide to the New European Bauhaus self-assessment method and tool*, Gkatzogias, K.(editor), Romano, E.(editor) and Negro, P.(editor) (2024), European Commission: Joint Research Centre, Publications Office of the European Union, <https://data.europa.eu/doi/10.2760/9581060>

OTHER SCHOLARLY ACTIVITIES

Workshop Papers, Technical Reports, Poster Papers, Extended Abstracts and Other Publications

Papers that are not indexed or peer reviewed.

- (1) **Becerik B**. (2003) "Working in the Virtual Space: Sonae Imobiliária, the Parque Dom Pedro Shopping Mall, and Beyond," *Harvard Graduate School of Design Publications*, September 2003
- (2) **Becerik B**, Menendez, M., (2003) "Project Management Issues: Daniel Patrick Moynihan Courthouse and Ted Weiss Federal Building," *Harvard Graduate School of Design Publications*, September 2003
- (3) **Becerik B**. (2004) "A Study on Electronic Project Management: General Services Administration and Other Federal Agencies' Perspectives," *Harvard Graduate School of Design Publications*, January 2004
- (4) **Becerik B**. (2005) "The Wilkie D. Ferguson Federal Courthouse," *Harvard Graduate School of Design Publications*, January 2005
- (5) Ilich M, **Becerik B**, Aultman B. (2006) "Online Collaboration Tools Are Available and Have Proven Their Value: So Why Are We Not Using Them?" *Means, Methods and Trends*, Publication of Architectural Engineering Institute and the Construction Institute of ASCE, Spring 2006

- (6) **Becerik-Gerber B**, Gerber D, Yang Z*, Heydarian A*, Carneiro J P*. (2014) "Integrated Cyber Social and Physical Systems for Sustainable Built Environments," *Proceedings of the US-Israel Workshop on: Industrial Ecology in Multi Scale Design and Construction of Sustainable Built Environments*, March 9-11, 2014, Tel Aviv, Israel
- (7) Khashe S*, Heydarian A*, **Becerik-Gerber B**. (2015) "Exploration of Building-Occupant Communication Methods for Reducing Energy Consumption In Buildings," Poster presentation, *Human Computer Interaction International 2015*, August 2-7, 2015, Los Angeles, CA
- (8) Heydarian A*, Pantazis E, Gerber D, **Becerik-Gerber B**. (2015) "Use of Immersive Virtual Environments to Understand Human-Building Interactions and Improve Building Design," Poster presentation, *Human Computer Interaction International 2015*, August 2-7, 2015, Los Angeles, CA
- (9) Chen Y, Jahanshahi M R, Manjunatha P, Masri S, **Becerik-Gerber B**, (2018) "Toward a Swarm of Inexpensive Multimodal Sensor Systems for Autonomous and Quantitative Condition Assessment of Roads," *Transportation Research Board, 97th Annual Meeting*, January 7-11, 2018, Washington, D.C.
- (10) Fukumura, Y. E., **Becerik-Gerber, B.**, Lucas, G.M., Roll, S.C. (2020, December 9). Understanding office worker behavior to inform an artificial intelligence workstation [Poster presentation] Health in Buildings Roundtable Conference, National Institutes of Health, Bethesda, MD, United States. (virtual due to the pandemic).
- (11) Fukumura, Y. E., Schott, J. M., Lucas, G. M., **Becerik-Gerber, B.**, Roll, S. C. (2021, May 26). Work from home during COVID-19: A negotiation of time and space [Poster presentation]. Ostrow Research Day 2021, Los Angeles, CA, United States. (virtual due to the pandemic)
- (12) Fukumura, Y. E., Kijel, M. T., **Becerik-Gerber, B.**, Lucas, G. M., Roll, S. C. (2021, June 23-25). Developing an artificial intelligence office workstation to support health and well-being [Poster presentation]. 9th Annual Occupational Therapy Summit of Scholars, Fort Collins, CO, United States. (virtual due to the pandemic)
- (13) Fukumura, Y. E., Roll, S. C., **Becerik-Gerber, B.**, Aryal, A., Xiao, Y., Lucas, G. M. (2021, September 20-23). Using artificial intelligence to monitor postural risk in the workplace [Poster presentation]. XXII World Congress on Safety and Health at Work 2021, Vancouver, B.C., Canada. (accepted for 2020, but postponed to 2021 due to pandemic)
- (14) Fukumura YE, Gray JM, Lucas G, **Becerik-Gerber B**, Roll SC. (2021) Office Worker Perspective on an Artificial Intelligence Workstation: A Qualitative Study. *American Journal of Occupational Therapy*. 2021;75(Supplement_2):7512505154p1. <https://doi.org/10.5014/ajot.2021.75S2-RP154>
- (15) Fukumura Y.E., Kijel M.T., Xiao Y., **Becerik-Gerber B.**, Lucas G.M., Roll S.C. (2022) Artificial intelligence to support worker health, well-being, and participation: Using an occupational lens for workplace technology development. Oral presentation at: World Federation of Occupational Therapists, 2022; Paris, France.
- (16) Fukumura Y.E., Xiao Y., Awada M., **Becerik-Gerber B.**, Lucas G.M., Roll S.C. (2022) Supporting health and well-being when working from home: Lessons learned during the COVID-19 pandemic. Poster presentation at: World Federation of Occupational Therapists, 2022; Paris, France
- (17) Roll S.C., Marchioni M., **Becerik-Gerber B**. (2022) Well-being and inclusion in the built environment: Integrating an occupational perspective into an emerging transdisciplinary field. Presentation at: World Federation of Occupational Therapists, 2022; Paris, France
- (18) Liu R*, **Becerik-Gerber B**. (2022) Human and Building Digital Twins for Virtual Reality Based Building Emergency Training, IEEE DTPI, 2nd Annual International Conference on Digital Twins and Parallel Intelligence, October 16028, 2022, Boston MA
- (19) **Becerik-Gerber, B**. (2025) Workshop: "Ethical, Safe, and Responsible Use of Artificial Intelligence (AI) in Construction: Balancing Innovation and Accountability." IGLC33, Osaka, Japan, June 3rd, 2025

Keynotes/Frontiers Lectures

I have given talks and keynotes in 90 national and international events in 10 different countries.

- (1) "Energy Conservation in Commercial Buildings", Keynote Lecture, A Place at the Table, May 31-June1, 2014, San Diego, CA
- (2) "Investigation of Human-Building Interactions for Adaptive and Responsive Environments," Frontiers in Engineering Lecture, College of Engineering, Pennsylvania State University, April 6, 2015
- (3) "Future of Building Information Modeling: Virtual and Augmented Reality for Architecture, Engineering and Construction," Keynote Lecture at SindusCON, October 22, 2015, Sao Paulo, Brazil
- (4) "Cognitive Built Environments," Keynote Lecture, 2017 International Workshop of EG-ICE (European Group of Intelligent Computing in Engineering), July 10-12, 2017, Nottingham, UK
- (5) "Adaptive and Responsive Built Environments," Keynote Lecture, 2017 ICCEPM, The 7th International Conference on Construction Engineering and Project Management, October 28-31, 2017, Chengdu, CHINA
- (6) "Cognitive Built Environments: Occupant-Building Collaboration for Sustainable and Resilient Infrastructure," Frontiers in Civil Engineering Lecture, Stanford University, Palo Alto, CA, November 16, 2017
- (7) "People Centric AI for Sustainable and Resilient Civil Infrastructure," Keynote Lecture, 13th International Conference on Civil Engineering, Cesme, Izmir, Turkey, 12-13 September 2018
- (8) "Human-Building Interaction: Transforming Learning Spaces," Kortschak Center for Learning and Creativity Research Symposium, Los Angeles, CA, October 25, 2018
- (9) "Intelligent Visualization for Design and Construction," 2019 SBRIC (Intelligent Visualization Construction Project Management Conference), University of Campinas, Brazil, August 19-21, 2019
- (10) "Human-Building Interaction," China's Innovators Under 35, December 3-4, 2020, Deqing, Zhejiang
- (11) "Human-Centered Approaches & Research for the Built Environment," Symposium on Simulation for Architecture and Urban Design (SimAUD), April 15-17, 2021 (virtual due to the pandemic)
- (12) "People centric AI for the Built Environment." Georg Nemetschek Institute Artificial Intelligence for the Built World (GNI), April 20-22, 2021 (virtual due to the pandemic)
- (13) "Intelligent Environments," Architectural Engineering Institute Forum, Megacity 2070: The Future vision for Urban Infrastructure, April 8, 2022 virtual due to the pandemic)
- (14) "Intelligent Environments that Support Well-being, Creativity, and Inclusion," ACM BuildSys, November 9-10, 2022, Boston MA
- (15) "Human-Centered Intelligent Built Environments," ASCE International Conference on Computing in Civil Engineering, June 25-28, 2023, Corvallis Oregon
- (16) "Health in Built Environments," National Academies of Sciences, Engineering and Medicine, Healthy Buildings Roundtable, Virtual, October 24, 2023
- (17) "Maintaining [your] Originality in Research -- Following [your] Research Journey," Peurifoy Construction Research Award Keynote, Pittsburgh, July 28-31, 2024.

Presentations (Talks, Panels and Poster Presentations)

- (18) "Extranet Update: A Study with the U.S. GSA," Conference: Drivers for Design and Real Estate Technology, November 6-7, 2003, Cambridge, MA
- (19) "Lessons learned from GSA's Project Management Practices," GSA Learning from Our Legacy Seminar, 2-3 December 2003, New York City, NY
- (20) "The Tools of Effective Project Management," Executive Education Management Seminars, 18-19 December 2003, Boston, MA

- (21) "Critical Enhancements for Improving the Adoption of Online Project Management Technology," Project Management Institute, North America Global Congress, 23-26 October 2004, Anaheim, LA
- (22) "Value of Online Collaboration and Project Management Systems in Design and Construction," e-Builder 2006 User Conference, November 1-3, 2006, Coconut Grove, FL
- (23) "On-Demand Collaborative Project Management," Autodesk University 2006, 28 November – December 1, 2006, Las Vegas, NV
- (24) "The Value of Enterprise Project Management," Meridian Systems User Conference, 24-26 April 2007, San Diego, CA
- (25) "Bringing Data Together with Dashboards, Schedule Integration and Project Management Systems," Meridian Systems User Conference, 29 April- 1 May 2008, Scottsdale, AZ
- (26) "Implementing BIM: Risks, Challenges and Rewards," 2008 National Collegiate FM Technology Conference, 20-22 August 2008, Los Angeles, CA
- (27) "How is GIS Being Integrated in Your Organization: Thirteen Key Issues to Address in Technology Implementation," Urban and Regional Information Systems Association (URISA), Annual Conference and Exhibition, 7-10 October 2008, New Orleans, LA
- (28) "Extended Use of BIM for an Integrated Construction Management Practice," CMAA 2008 National Conference and Trade Show, "Ahead of The Curve – On Top of the Trends", October 12 – 14, 2008, San Francisco, CA
- (29) "Architecture, Livability and Land Use," USC Megacities Workshop, November 10-11, 2008 – Los Angeles, CA
- (30) "BIM in Education – Headliners," Architecture Engineering and Construction Science and Technology (AEC-ST) Conference, 8-11 December 2008, Washington DC
- (31) "BIM and Higher Education Transformation," Architecture Engineering and Construction Science and Technology (AEC-ST) Conference, 7-10 December 2009, Washington DC
- (32) "Emerging Technologies for Facilities Management," Winter BIMForum: Model-Based Buildings: A model's life both during and after the project, Phoenix, Arizona, January 14 & 15, 2010
- (33) "BIM for Construction Management," Panelist, CMAA Southern California Chapter, Long Beach, California, August 12, 2010
- (34) "Energy Literacy and Adaptive and Behavior-Driven Energy Control," Invited poster presentation, National Academy of Engineers (NAE) National Meeting Symposium, Engineering and Managing the Megacity: Infrastructure, Energy, Environment, Transportation, Natural Hazards and Security, Los Angeles, California, February 10, 2011
- (35) "Continuous and Real-time Sensing of Occupant Satisfaction with Indoor Ambient Factors," Invited presentation, USC Integrated Media Systems Center Symposium, Los Angeles, California, February 10, 2011
- (36) "Energy Security and Resilient Control Systems," Invited presentation, USC Information Sciences Institute (ISI), November 15-16, 2011, Los Angeles, California
- (37) "Building Level Energy Management System (BLEMS) Behavior Driven Building Energy Management," Invited poster presentation with Orosz M, Roesler G, Becerik-Gerber B, Kichkaylo T, Ryutov T, Li N, Jazizadeh F, Kavulya G, Maheswaran R, Chanh Y, Chen J, Touch J, Fern C, Shultenburg C, Marshall P. *Partners in Environmental Technology Technical Symposium & Workshop*, November 29 – December 1, 2011, Washington, DC
- (38) "A Novel Approach for Cost-Effective Defect Detection and Quantification in Pavements," Invited presentation, Federal Highway Administration Turner-Fairbank Highway Research Center, December 2, 2011, Washington DC
- (39) "Towards Cyber-Social-Physical Systems," Invited presentation, Japan Institute of Architecture, December 16, 2011, Tokyo, Japan
- (40) "Adaptive and Sustainable Built Environments," Invited presentation, Toyohashi University of Technology, December 20, 2011, Toyohashi, Japan

- (41) **"Interactive Built Environments,"** Invited presentation, Interactive Architecture Workshop, Hawaii International Conference on Systems Science (HICSS), Jan 4-7, 2012, Maui, Hawaii
- (42) **"Use of 3D Imaging Technologies in Construction and Facilities Management,"** Invited presentation, Using Information Technologies to Support Better Construction Management, Transportation of Research Board, Jan 22, 2012, Washington DC
- (43) **"Autonomous Cost-Effective Condition Assessment of Roads and Transportation Systems,"** Invited presentation, TRB Committee AFD20 on Pavement Monitoring and Evaluation, Transportation of Research Board, Jan 22, 2012, Washington DC
- (44) **"Energy Networks: Awareness Through Information,"** Invited presentation, USC Integrated Media Systems Center Symposium, Los Angeles, California, March 8, 2012
- (45) **"Behavior Driven Building Energy Management: Adaptive and Interactive Cyber-Social-Physical Systems for Building Energy Efficiency,"** Invited presentation, the Sixth USC-Tsinghua Symposium on Green Technology and Energy Informatics, Los Angeles, California, May 2-3, 2012
- (46) **"Simulations of Occupant Behavior and Buildings Systems,"** Invited presentation, the White House – Buildings Technology R&D Subcommittee of the National Science and Technology Council, Washington DC, Nov 29, 2012
- (47) **"Occupancy and Behavior Driven Building Energy Management,"** Invited presentation, Turkish Construction Professionals of Southern California [TCP-CA], Los Angeles, CA, February 1, 2013
- (48) **"Interactive and Sustainable Buildings,"** Invited presentation, Civil and Environmental Engineering Department of University of California, Los Angeles, Los Angeles, CA, February 26, 2013.
- (49) **"Integrated Human-Building Systems,"** Invited presentation at the USC Diploma Innovation Program, Los Angeles, CA, March 7, 2013
- (50) **"A New Paradigm for Integrated Building Systems,"** Invited presentation, Arup, Inc., Los Angeles, CA, March 14, 2013
- (51) **"Interactive and Sustainable Buildings,"** Invited presentation, USC Women in Science and Engineering (WISE) Research Horizons, A Day in Honoring Professor Hanna Reisler, Los Angeles, CA, March 27, 2013
- (52) **"Home for Everyone",** USC Engineering/Social Work Collaborative Retreat, Los Angeles, CA, April 23, 2013
- (53) **"The Flipped Campus, Reimagining Learning Spaces, Places and Motion,"** Panelist, 2013 Teaching with Technology Conference, USC, Los Angeles, CA, May 6, 2013
- (54) **"Integrated Sensor Systems for Building Energy Efficiency,"** Invited presentation, Robotics and Automation School of Tsinghua, Beijing, China, October 8, 2013
- (55) **"Adaptive and Responsive Built Environments",** Invited presentation, Middle East Technical University, Ankara, Turkey, December 27, 2013
- (56) **"Automation and Responsive Environments",** Invited presentation, Istanbul Technical University, Department of Civil and Environmental Engineering, Istanbul, Turkey, January 3, 2014
- (57) **"Use of Immersive Virtual Environments and Simulation in Building Design and Operation,"** Invited presentation, Technion, Carnegie Mellon University, University of Southern California Research Workshop, Haifa, Israel, March 12, 2014
- (58) **"Making the Transition to Assistant Professor,"** Invited presentation, USC Center for Excellence in Teaching, Los Angeles, CA, March 30, 2014
- (59) **"A Framework for Facilitated Training of Smart Electricity Sensing Systems in Buildings,"** Invited poster presentation, IEEE International Conference on Distributed Computing in Sensor Systems 2014 (DCOSS 2014), Marina Del Rey, May 26-28, 2014

- (60) "Understanding Existing and Designing New Human-Built Environment Interactions", Invited presentation, 2014 U.S.-China CERC Workshop on Human Energy-Related Behavior in Buildings, Lawrence Berkeley National Labs, Berkeley, CA, Aug 28, 2014
- (61) "The Nexus of Cyber-Physical-Social Systems for Engineering and Design," Invited presentation, Georgia Tech, Atlanta, GA, February 22, 2016
- (62) "Smart Interactions," Panelist, "Positions on Smart Environments" panel, 104th ACSA Annual Meeting, Seattle, WA, March 19, 2016
- (63) "End of the Discrete: Towards Continuous Human-Building Interactions," Invited presentation, NSF International Workshop on Implications of Occupant Behavior for Building Operation and Design: Now and the Future, Vienna, Austria, April 2, 2016
- (64) "Technology Solutions for Overcoming Homelessness," Panelist, USC Homelessness in Los Angeles Summit, Los Angeles, CA, April 27, 2016
- (65) "Intelligent Built Environments: Recent Works and Challenges," Invited presentation, INRIA (French Institute for Research in Computer Science and Automation), Paris, France, October 3, 2016
- (66) "Responsive & Adaptive Environments," Invited presentation, Cambridge University, Civil Engineering Department, Cambridge, UK, March 13, 2017
- (67) "Resilient, Smart, Sustainable & Healthy Built Environments," College of Design, Construction and Planning, University of Florida, Gainesville, FL, April 24, 2017
- (68) "Artificial Intelligence for Energy Efficient Buildings," Clean Technology Council, Thousand Oaks, CA, November 7, 2017
- (69) "Smart & Autonomous Mechanical Building Services," Mechanical Services Strategic Research Agenda Workshop, Arup Engineering, Marina Del Rey, CA, February 15, 2018
- (70) "Cognitive Built Environments for Sustainable and Resilient Infrastructure," Future of Engineering Panel, USC Board of Trustees meeting, Ojai, CA, March 24, 2018
- (71) "Cognitive Built Environments," Invited presentation, Georgia Tech, Atlanta, GA, April 11, 2018
- (72) "Sustainable, Smart and Resilient Communities and Cities," Invited presentation, University of Concordia, Montreal, CA, May 8, 2018
- (73) "Cognitive Built Environments at the Convergence of Sensing," Invited presentation, Imperial College London, Centre for Systems Engineering and Innovation, London, UK, June 20, 2018
- (74) "People-Centric AI for the Built Environment," Invited presentation, The Alan Turing Institute, London, UK, June 28, 2018
- (75) "Use of Advanced Visualization Techniques for Explorations in Built Environments," Immersive and Virtual Environments in Transportation Construction, Annual Transportation Research Board Meeting, Washington D.C., January 16, 2019
- (76) "Advanced Methods for Enabling Intelligent Environments," Invited Talk, University of Nebraska, Omaha, Nebraska, May 2019
- (77) "Intelligent Built Environments: A Vision for Research and Education," Invited Talk, University of Washington, Seattle, Washington, January 2020
- (78) "Interactive and Intelligent Built Environments," Invited Online Talk, Purdue University, IN, November 2020
- (79) "The Role of Built Environment on Worker Productivity and Health during the COVID-19 Pandemic," Viterbi vs. Pandemic Lecture Series, November 2020
- (80) "Improving Efficiency and Making Better Decisions with AI and Data Science," ASCE Virtual Roundtable, December 2020

- (81) "Human-Building Interactions for Intelligent Built Environments," Department of Civil, Architectural and Environmental Engineering, Drexel University, February 12, 2021
- (82) "Wellness and Productivity in a Return to Physical Workspaces: Leadership, evolution and impact of a new build environment," USC Marshall School of Business Virtual Panel, October 15, 2021
- (83) "Women in Leadership" panel, organized by Georgia Tech, March 29, 2022 (virtual)
- (84) "Leveraging A Transdisciplinary Approach to Develop Effective AI Solutions that reduce Risk and Promote Worker Health," NIOSH AI Interest Group, June 9, 2022 (virtual)
- (85) "AI & Other Technologies to Support Worker Health & Well-being," Office Ergonomics Research Committee, June 28, 2022 (virtual)
- (86) "Intelligent Environments that Support Comfort, Well-being, and Performance," LBNL Urban Systems Group, November 2, 2022 (virtual)
- (87) "Offices of the Future: Intelligent Workspaces that Support Well-being and Productivity," WorkTech LA, November 15, 2022
- (88) "Healthy Built Environments: Lessons Learned from the Pandemic," Healthy Interior Design Symposium, Toronto Metropolitan University, October 27th & 28th, 2023
- (89) "People-Centric Built Environments that Support Safety, Productivity, Well-being, and Learning," Department of Civil and Environmental Engineering, Syracuse University, November 3, 2023
- (90) "Demolishing Barriers for Technology-Enabled Construction Work through Immersive Virtual Learning and Remote Operations," An NSF-funded Webinar on Safe Human-Robot Interaction in Construction, University of Florida, Virtual, December 1, 2023
- (91) "Human-Centered Intelligent Built Environments," International Council for Research and Innovation in Building and Construction Seminar, Purdue University, Virtual, December 1, 2023
- (92) "Emergency Preparedness, Response and Management: Role of Intelligent Environments" Tianjin University, March 29, 2024, Virtual
- (93) "Intelligent Environments: A Journey into User-Centric Spaces with AI Innovation" AET (Architectural Engineering Technology) Bites Lectures, TU Delft, March 28, 2024.
- (94) "Intelligent Environments: A Journey into User-Centric Spaces" University of Virginia, Distinguished Speakers Series, Charlottesville, April 25, 2024.
- (95) "User-Centered, Sustainable Built Environments: A Look into Comfort, Health, and Energy Efficiency," THU-USC Symposium, May 6, 2024
- (96) "The Evolution of Smart Environments: Technology-Enabled and User-Centered Engineering," Intelligent Engineered Systems and Society (IESS) Seminar, CMU, October 11, 2024
- (97) "Intelligent Environments: A Journey into User-Centric Spaces with AI Innovation," Distinguished Lecture Series, Clemson University, October 23, 2024.
- (98) "Technology-Enabled and User-Centered Built Environments," Invited Talk, New York University, July 30, 2025

Events and Workshops

- (1) Invited Attendee, "Collaborative Practice: When Engineering Design Meets Architecture," NSF Workshop, November 4 & 5, 2010, University of Pennsylvania, Philadelphia, PA
- (2) Invited Attendee, "BIM Education for Students of Architecture, Engineering and Construction," Technion BIM Education Workshop, June 13-15, 2011, Haifa, Israel
- (3) Invited Attendee, "Smarter Service Systems through Innovation Partnerships and Trans-Disciplinary Research," NSF Workshop, Cambridge, MA, Nov 19-21, 2014

- (4) Invited Attendee, “**Adaptive Human Centered Engineered Systems**,” NSF Workshop, February 21, 2016, Arlington, VA
- (5) Organizer, “**International Workshop on Connecting Woman Faculty in Sustainable Building Research (WISB)**,” NSF Workshop, July 5-6, 2018, Dalian, China
- (6) Organizer, “**Human-Building Interactions: Dynamic Interaction of Embodied Human and Machine Intelligence**,” NSF Workshop, May 30-31, 2019, Los Angeles, CA
- (7) Co-organizer, **International Network of Networks for Well-being in the Built Environment Kick off Workshop**, NSF Workshop, March 11-12, 2021, virtual workshop.
- (8) **Explore Engineering Careers in Education**, ASCE’s career discovery series, March 25, 2021
- (9) Co-organizer, “**Artificial Intelligence for Healthy Buildings**”, International Network of Networks for Well-being in the Built Environment (IN2WIBE), NSF Workshop, November 2-5, 2021, virtual workshop
- (10) Organizer, “**Human-Building Interaction Virtual Workshop & Hackathon**,” NSF Workshop, January to March of 2022, 4 virtual workshops.
- (11) Co-organizer, “**Future of Office Workspace and Wellbeing**” International Network of Networks for Well-being in the Built Environment (IN2WIBE), NSF Workshop, September 29-30, 2022, Los Angeles, CA
- (12) Co-organizer, “**Enabling Technologies for Well-being In the Built Environment (ET4WIBE)**” International Network of Networks for Well-being in the Built Environment (IN2WIBE), NSF Workshop, September 14-15, 2022, Philadelphia, PA
- (13) Co-organizer, “**Culture and Convergence for Well-being In the Built Environment**” International Network of Networks for Well-being in the Built Environment (IN2WIBE), NSF Workshop, April 29-30, 2024, Doha, Qatar

FUNDING

My work has received support worth over \$15 million from 11 different federal agencies and corporate sponsors.

External Funding (Awarded)

- (1) Title: Smart Target Pilot Study
Sponsor: Optira, Inc.
Period of Performance: 2009-2010
Role: **Principal Investigator**
Total Amount: \$38,944, Becerik-Gerber's share: \$38,944,
- (2) Title: Pixels to Objects to Intelligence: Building Reality Capture for Bridging Physical and Cyber Space
Sponsor: Autodesk Inc.
Period of Performance: 2010-2011
Role: **Principal Investigator**
Total Amount: \$20,354, Becerik-Gerber's share: \$20,354
- (3) Title: RFID Based Indoor Location Sensing
Sponsor: Lyngsoe Systems
Role: **Principal Investigator**
Period of Performance: 2010-2011
Total Amount: \$56,756, Becerik-Gerber's share: \$56,756
- (4) Title: Building Level Energy Management System (BLEMS)
Sponsor: Department of Energy
Period of Performance: 2010-2013
Role: **Co-PI (Principal Investigator)** (PI: Preston Marshall, Co-PIs: Burcin Becerik-Gerber, Michael Orosz, Carol Fern)

- Total Amount: \$2,207,805 (with cost share), \$1,987,025 (without cost share), Becerik-Gerber's share: \$212,671
- (5) Title: An Integrated Mobile Sensor System for Occupancy and Behavior Driven Building Energy Management
Sponsor: National Science Foundation
Period of Performance: 2012-2014
Role: **Principal Investigator** (Co-PI: Bhaskar Krishnamachari)
Total Amount: \$376,284, Becerik-Gerber's share: \$175,755
- (6) Title: Research Experience for Undergraduates (REU) Supplement for the Integrated Mobile Sensor System for Occupancy and Behavior Driven Building Energy Management
Sponsor: National Science Foundation
Period of Performance: 2012-2013
Role: **Principal Investigator** (Co-PI: Bhaskar Krishnamachari)
Total Amount: \$6,972, Becerik-Gerber's share: \$6,972
- (7) Title: SEP Creating an Energy Literate Society of Humans, Buildings, and Agents for Sustainable Energy Management,
Sponsor: National Science Foundation
Period of Performance: 2012-2016
Role: **Principal Investigator** (Co-PIs: David Gerber, Wendy Wood, Milind Tambe)
Total Amount: \$1,550,000, Becerik-Gerber's share: \$380,721
- (8) Title: Research Experience for Undergraduates (REU) Supplement for SEP: Creating an Energy Literate Society of Humans, Buildings, and Agents for Sustainable Energy Management
Sponsor: National Science Foundation
Period of Performance: 2013-2014
Role: **Principal Investigator** (Co-PIs: David Gerber, Wendy Wood, Milind Tambe)
Total Amount: \$19,828, Becerik-Gerber's share: \$0 (funds are divided between Architecture and Psychology)
- (9) Title: An Inexpensive Vision-Based Approach for the Autonomous Detection, Localization and Quantification of Pavement Defects
Sponsor: National Academy of Sciences – IDEA Program
Period of Performance 2013-2014
Role: **Principal Investigator** (Co-PIs: Sami Masri, Mohammed Jahanshahi)
Total Amount: \$124,999, Becerik-Gerber's share: \$10,177
- (10) Title: LIDAR Research for Innovation in Construction
Sponsor: Kiewit Inc.
Role: **Co-PI (Principal Investigator)** (PI: Winnie Callahan)
Period of Performance: 2013- 2014
Total Amount: \$75,000, Becerik-Gerber's share: \$46,506
- (11) Title: CAREER: A Human-Building Interaction Framework for Responsive and Adaptive Built Environments
Sponsor: National Science Foundation
Period of Performance: 2014-2018
Role: **Principal Investigator**
Total Amount: \$400,715, Becerik-Gerber's share: \$393,715
- (12) Title: Research Experience for Undergraduates (REU) Supplement for SEP: Creating an Energy Literate Society of Humans, Buildings, and Agents for Sustainable Energy Management
Sponsor: National Science Foundation
Period of Performance: 2015-2016

- Role: **Principal Investigator** (Co-PIs: David Gerber, Wendy Wood, Milind Tambe)
Total Amount: \$18,677, Becerik-Gerber's share: \$0 (funds are divided between Architecture and Computer Science)
- (13) Title: Research Experience for Undergraduates (REU) Supplement for CAREER: A Human-Building Interaction Framework for Responsive and Adaptive Built Environments
Sponsor: National Science Foundation
Period of Performance: 2015
Role: **Principal Investigator**
Total Amount: \$9,974, Becerik-Gerber's share: \$9,974
- (14) Title: EAGER: Developing A Mathematical Framework to Enable Bi-Directional Interactions of Humans with Smart Engineered Systems Using Relational Elements
Sponsor: National Science Foundation
Period of Performance: 2015-2017
Role: **Principal Investigator** (Co-PI: Jonathan Gratch)
Total Amount: \$250,000, Becerik-Gerber's share: \$125,000
- (15) Title: Smarter Environments that Learn, Dynamically Adapt and Make Decisions
Sponsor: ARUP Group
Period of Performance: 2017-2018
Role: **Principal Investigator** (Co-PI: Francesco Anselmo, ARUP)
Total Amount: \$64,000 (£50,000), Becerik-Gerber's share: \$51,580 (£42,000)
- (16) Title: International Workshop on Connecting Woman Faculty in Sustainable Building Research (WISB)
Sponsor: NSF
Period of Performance: 2018
Role: **Co-PI** (PI: Jin Wen Co-PIs: Zheng O'Neill, Simi Hoque, Ming Qu)
Total Amount: \$59,997, Becerik-Gerber's share: \$0
- (17) Title: Data-driven Disaster Prepared Buildings, Data-centered Engineering Design Under Uncertainty (Project during Fellowship)
Sponsor: Alan Turing Institute
Period of Performance: 2018-2019
Role: **Principal Investigator**
Total Amount: £81,382; (equivalent of \$116,657), Becerik-Gerber's share: \$116,657 (including travel and accommodation)
- (18) Title: GOALI: Coadaptation of Intelligent Office Desks and Human Users to Promote Worker Productivity, Health, and Wellness
Sponsor: NSF
Period of Performance: 2018-2022
Role: **Principal Investigator** (Co-PIs: Shawn Roll, Gale Lucas, Francesco Anselmo)
Total Amount: \$683,942, Becerik-Gerber's share: \$273,767
- (19) Title: Impact of Building Design Attributes on Occupant Behavior in Response to Active Shooter Incidents in Offices and Schools
Sponsor: NSF
Period of Performance: 2018-2022
Role: **Principal Investigator** (Co-PIs: David Pynadath, Gale Lucas, Erroll Southers)
Total Amount: \$402,452, Becerik-Gerber's share: \$224,864

- (20) Title: Immersive Virtual Learning for Worker-Robot Teamwork on Construction Sites
Sponsor: NSF
Period of Performance: 2018-2022
Role: **Principal Investigator** (Co-PIs: Yasemin Copur, Gale Lucas, Lucio Soibelman)
Total Amount: \$750,000, Becerik-Gerber's share: \$234,050
- (21) Title: Collaborative Research: AccelNet: An International Network of Networks for Well-being in the Built Environment (IN2WIBE)
Sponsor: NSF
Period of Performance: 2019-2023
Role: **Co-PI (Principal Investigator)** (Zheng O'Neill (PI), Jin Wen (Co-PI), Simi Hoque (Co-PI), Teressa Wu (Co-PI))
Total Amount: \$750,000, Becerik-Gerber's share: \$168,750
- (22) Title: Workshop on Embodied Human-Building Interactions
Sponsor: NSF
Period of Performance: 2020-2022
Role: **Principal Investigator**
Total Amount: \$49,000, Becerik-Gerber's share: \$48,000
- (23) Title: Pilot: Automated Detection of Stress in Offices using Machine Learning
Sponsor: University of California, Los Angeles
Period of Performance: 2021-22
Role: **Faculty Advisor**
Total Amount: \$6,585, Becerik-Gerber's share: \$6,585
- (24) Title: Zero Emission Affordable Housing Design
Sponsor: California Energy Commission
Period of Performance: 2022-2023
Role: **Co-PI (Principal Investigator)** (Prime: National Core)
Total Amount: \$1,000,000, Becerik-Gerber's share: \$100,000
- (25) Title: Developing and Implementing Threat Assessment and Management in the Healthcare Enterprise
Sponsor: Department of Homeland Security
Period of Performance: 2022-2023
Role: **Senior Personnel** (PI: Kelly Petrey)
Total Amount: \$117,586, Becerik-Gerber's share: \$94,036
- (26) Title: Mitigating Risk and Promoting Occupational Safety and Health when Developing and Integrating Artificial Intelligence in the Workplace
Sponsor: National Institute for Occupational Safety and Health (NIOSH)
Period of Performance: 2022-2025
Role: **Principal Investigator**
Total Amount: \$135,242
- (27) Title: SCH: Detecting and Mapping Stress Patterns Across Space and Time: Multimodal Modeling of Individuals in Real-World Physical and Social Work Environments
Sponsor: NSF
Period of Performance: 2022-2026
Role: **Co-PI (Principal Investigator)** (Shawn Roll (PI), Shri Narayanan (Co-PI), Gale Lucas (Co-PI))
Total Amount: \$1,099,995, Becerik-Gerber's share: \$265,958

- (28) Title: FW-HTF-R: Demolishing Barriers to Democratize Future Construction Operations by Providing Multi-Sensory Capabilities for Effective Remote Work
Sponsor: NSF
Period of Performance: 2022-2026
Role: **Principal Investigator** (Co-PIs: Shawn Roll, Lucio Soibelman, Gale Lucas)
Total Amount: \$1,799,999, Becerik-Gerber's share: \$771,471
- (29) Title: SCC-IRG Track 1: Behavior-driven Building Safety and Emergency Management for Campus Safety
Sponsor: NSF
Period of Performance: 2023-2026
Role: **Principal Investigator** (Co-PIs: Gale Lucas, David Pynadath, Runhe Zhu - FIU)
Total Amount: \$1,565,000, Becerik-Gerber's share: \$647,302
- (30) Title: Impact of Architectural Design on Emergency Behavior and Response during Active Shooter Incidents
Sponsor: SENTRY (DHS)
Period of Performance: 2024-2025
Role: **Principal Investigator** (Co-PIs: Gale Lucas)
Total Amount: \$225,000, Becerik-Gerber's share: \$150,000
- (31) RECOMMENDED: Title: IN2WIBE 2.0: Interdisciplinary Network of Networks for Well-being in the Built Environment 2.0
Sponsor: NSF
Period of Performance: 2025-2028
Role: **Co-Principal Investigator** (PI: Zheng O'Neill; Co-PIs: Simi Hoque, Teresa Wu)
Total Amount: \$500,000, Becerik-Gerber's share: \$113,000
- (32) RECOMMENDED: Title: Embodied Intelligence in the Built Environment: Multi-modal adaptations of Smart Workspaces for Improving Human Cognitive States and Productivity
Sponsor: NSF
Period of Performance: 2025-2028
Role: **Principal Investigator** (Co-PIs: Yasser Khan, Gale Lucas)
Total Amount: \$540,000, Becerik-Gerber's share: \$260,635

Total awarded funding to date (as PI and/or Co-PI): \$15,020,260

Total awarded funding (Becerik-Gerber's share): \$5,141,440

Internal Funding (Awarded)

- (1) Title: Center for Intelligent Environments, Technology and Society (CENTIENTS) [Internal Grant]
Sponsor: Viterbi School of Engineering
Period of Performance: 2018-2019
Role: **Principal Investigator**
Total Amount: \$60,000, Becerik-Gerber's share: \$60,000
- (2) Title: Refugees for Global Challenges Initiative [Internal Grant]
Sponsor: USC Provosts Office
Period of Performance: 2018-2019
Role: **Principal Investigator**

- Total Amount: \$48,000, Becerik-Gerber's share: \$48,000
- (3) Title: Refugees for Global Challenges Initiative [Internal Grant]
 Sponsor: USC Provosts Office
 Period of Performance: 2019-2020
 Role: **Principal Investigator**
 Total Amount: \$48,000, Becerik-Gerber's share: \$48,000

Internal Funding for Travel

- (1) Viterbi Junior Faculty Development Fund for Travel, 2010, \$3,000
- (2) WISE (Women in Science and Engineering) Supplemental Faculty Support for Travel, 2011, \$2,500
- (3) Viterbi Junior Faculty Development Fund for Travel, 2011, \$3,000
- (4) WISE (Women in Science and Engineering) Supplemental Faculty Support for Travel, 2012, \$2,500
- (5) Viterbi Junior Faculty Development Fund for Travel, 2012, \$2,621
- (6) WISE (Women in Science and Engineering) Supplemental Faculty Support for Travel, 2013, \$2,500
- (7) Viterbi Junior Faculty Development Fund for Travel, 2013, \$ 2,957.50
- (8) WISE (Women in Science and Engineering) Supplemental Faculty Support for Travel, 2014, \$2,500
- (9) Viterbi Junior Faculty Development Fund for Travel, 2014, \$2,500
- (10) WISE (Women in Science and Engineering) Supplemental Faculty Support for Travel, 2015, \$2,500
- (11) WISE (Women in Science and Engineering) Supplemental Faculty Support for Travel, 2016, \$2,500
- (12) WISE (Women in Science and Engineering) Supplemental Faculty Support for Travel, 2017, \$2,500
- (13) WISE (Women in Science and Engineering) Supplemental Faculty Support for Travel, 2018, \$2,500
- (14) WISE (Women in Science and Engineering) Supplemental Faculty Support for Travel, 2019, \$2,500

PATENTS

Autonomous Pavement Condition Assessment System: US 13/717,244 (USC 12-188A) http://www.freepatentsonline.com/y2013/0155061.html	2013
Human-Building Interaction (HBI) Framework for Personalized Comfort Driven System Operations in Buildings: US 14/213475 (Patent Pending) http://www.freepatentsonline.com/y2014/0277765.html	2014
iGlass: Infrared Thermography for Learning Thermoregulation Performance: US 15/403599 (Patent Pending)	2017
Calibration for Multi-Level Building Energy Modeling (USC 2016-085: Provisional Application)	2017

TEACHING RECORD

New Courses Developed at University of Southern California

CE 499: Special Topics: Innovation in Engineering Design for Global Grand Challenges Part 1 & Part 2 (Now CE 486a & 486b), <i>Undergraduate Level</i> , USC, Department of Civil and Environmental Engineering	2018-2020
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The course aims to teach engineering students how to lead the design of products, services, and technologies with a human-centered approach to help solve the needs of the real people who are in the middle of these crises. The course is geared towards students who would like to create new solutions, are comfortable with focusing on wicked problems, and care about cultural, economic, and geographic nuances. The course is built on the principles of “create, collaborate, innovate.” The course provides students with an understanding of the design process, research methodologies and innovation strategies using a team-based project work through the process of observation, visualization, rapid prototyping, and iteration. The course has two parts: Part 1 (Fall semester) and Part 2 (Spring semester). Over the course of one year, 24 USC students in Los Angeles and 12 refugees in a host nation will form a taskforce to seek at least four lifesaving or life-improving innovations aimed at the most vulnerable and hardest-to-reach people impacted by the refugee crisis. These innovations will involve connection to the private sector and input from affected communities to provide, supply, or locally generate solutions such as: safe drinking water and sanitation, provision of energy, education, life-saving information, shelter, or services to help refugees living in camps and in squats.

CE 670: Advanced Research Methods for Built Environment Informatics, *Graduate Level*, USC, 2011–Present
Department of Civil and Environmental Engineering

The goal of this course is to introduce students to the advanced research methods in informatics for intelligent built environments. Specifically, the course focuses on the following research areas: 1) adaptive and responsive built environments; 2) building informatics; and 3) built environment and end-user interactions. Students are first introduced to the concepts, approaches and implementation issues associated with intelligent built environments. Then students are introduced to the research methodologies for informatics for intelligent built environments including the types of data that are collected for intelligent built environments, data acquisition systems, and processing techniques. Students also gain experience with designing research through hands on research assignments.

CE 570: Building Information Modeling for Collaborative Construction Management, *Graduate Level*, USC, Department of Civil and Environmental Engineering 2010- 2017

The course promotes project-based learning through cross-disciplinary, geographically distributed, virtual project team collaboration. The course focuses on BIM applications and investigates construction management technologies including 4D construction simulation, model-based estimating, clash detection and code compliance. Students work in multidisciplinary project teams to simulate design, engineering and construction processes for actual projects selected in collaboration with industry partners. In 15 weeks, students focus on collaboratively designing and engineering optimal solutions, by utilizing information technology and their individual strengths. Students can test ideas, principles, and practices in the way to become creative and innovative practitioners.

CE 470: Building Information Modeling and Integrated Practice, *Undergraduate Level*, USC, 2008–Present
Department of Civil and Environmental Engineering

The course focuses on building information management concepts and solutions; current BIM technologies; coordination of design and construction; information management throughout building life cycle; project delivery systems and technologies for integrated practice.

New Courses Developed Outside University of Southern California

Practice Environments: Contracts, Liability, Business Models, *Undergraduate & Graduate*,
Southern California Institute of Architecture

2007 – 2008

The course examined the role of professional practices in the development and direction of design and production. The course focused on licensing and legal requirements, codes and budgets, and financial interests.

Managing Design and Project Delivery: Architect's Role as Project Manager, Graduate, Southern
California Institute of Architecture

2007

The course examined project delivery methods, project team management, leadership, budget and cost control, scheduling, and risk, change and construction management.

Teaching Evaluations at University of Southern California

- (1) CE499: Special Topics: Building Information Management (CE 470), Fall 2008, Unit: 3, Enrollment: 20, Instructor Evaluation: 3.83, Course Evaluation: 3.56
- (2) CE599: Special Topics: Project Based Learning: BIM Based and Collaborative Engineering and Management, (CE 570), Spring 2010, Unit: 3, Enrollment: 12, Instructor Evaluation: 3.73, Course Evaluation: 3.18
- (3) CE 470: Building Information Modeling and Integrated Practice, Fall 2010, Unit: 3, Enrollment: 28, Instructor Evaluation: 3.68, Course Evaluation: 4.26
- (4) CE599: Special Topics: Data Sensing, Analysis & Instrumentation for Infrastructure, (CE 670), Fall 2010, Unit: 3, Enrollment: 5, Instructor Evaluation: 5, Course Evaluation: 5
- (5) CE 570: Building Information Modeling for Collaborative Construction, Spring 2012, Unit: 3, Enrollment: 12, Instructor Evaluation: 3.00, Course Evaluation: 2.56
- (6) CE 570: Building Information Modeling for Collaborative Construction, Fall 2012, Unit: 3, Enrollment: 11, Instructor Evaluation: 4.55, Course Evaluation: 4.45
- (7) CE 470: Building Information Modeling and Integrated Practice, Fall 2013, Unit: 3, Enrollment: 26, Instructor Evaluation: 4.06, Course Evaluation: 3.83
- (8) CE 470: Building Information Modeling and Integrated Practice, Spring 2014, Unit: 3, Enrollment: 30, Instructor Evaluation: 4.61, Course Evaluation: 4.35
- (9) CE 470: Building Information Modeling and Integrated Practice, Fall 2014, Unit: 3, Enrollment: 29, Instructor Evaluation: 4.68, Course Evaluation: NA
- (10) CE 470: Building Information Modeling and Integrated Practice (DEN@Viterbi), Fall 2014, Unit: 3, Enrollment: 2, Instructor Evaluation: 4, Course Evaluation: NA
- (11) CE 470: Building Information Modeling and Integrated Practice, Fall 2015, Unit: 3, Enrollment: 23, Instructor Evaluation: 4.40, Course Evaluation: 4.40
- (12) CE 470: Building Information Modeling and Integrated Practice, Fall 2015 (DEN@Viterbi), Unit: 3, Enrollment: 2, Instructor Evaluation: 4, Course Evaluation: 3.50
- (13) CE 470: Building Information Modeling and Integrated Practice, Fall 2015, Unit: 3, Enrollment: 22, Instructor Evaluation: 4.60, Course Evaluation: 4.50

- (14) CE 670: Advanced Research Methods for Built Environment Informatics, Fall 2015, Unit: 3, Enrollment: 10, Instructor Evaluation: 4.80, Course Evaluation: 4.70
- (15) CE 470: Building Information Modeling and Integrated Practice, Summer 2016, Unit: 3, Enrollment: 16, Instructor Evaluation: 4.58, Course Evaluation: 4.33
- (16) CE 570: Building Information Modeling for Collaborative Construction, Summer 2017, Unit: 3, Enrollment: 16, Instructor Evaluation: 4.91, Course Evaluation: 4.73
- (17) CE 470: Building Information Modeling and Integrated Practice, Fall 2017, Unit: 3, Enrollment: 30, Instructor Evaluation: 3.82, Course Evaluation: 3.82
- (18) CE 470: Building Information Modeling and Integrated Practice, Fall 2017 (DEN@Viterbi), Unit: 3, Enrollment: 6, Instructor Evaluation: 3.5, Course Evaluation: 3.5
- (19) CE 470: Building Information Modeling and Integrated Practice, Spring 2018, Unit: 3, Enrollment: 29, Instructor Evaluation: 4.08, Course Evaluation: 4.08
- (20) CE 499: Special Topics: Innovation in Engineering Design for Global Challenges – Part 1, Fall 2018, Unit: 3, Enrollment: 26, Instructor Evaluation: 4.33, Course Evaluation: 4.22
- (21) CE 499: Special Topics: Innovation in Engineering Design for Global Challenges – Part 2, Spring 2019, Unit: 3, Enrollment: 22, Instructor Evaluation: 4.42, Course Evaluation: 4.63
- (22) CE 499: Special Topics: Innovation in Engineering Design for Global Challenges – Part 1, Fall 2019, Unit: 2, Enrollment: 24, Instructor Evaluation: 4.91, Course Evaluation: 4.95
- (23) CE 499: Special Topics: Innovation in Engineering Design for Global Challenges – Part 2, Spring 2020, Unit: 4, Enrollment: 22, Instructor Evaluation: 4.94, Course Evaluation: 5.00
- (24) CE 470: Building Information Modeling and Integrated Practice, Spring 2020, Unit: 3, Enrollment: 27, Instructor Evaluation: 4.52, Course Evaluation: 4.48
- (25) CE 470: Building Information Modeling and Integrated Practice, Spring 2020 (DEN@Viterbi), Unit: 3, Enrollment: 3, Instructor Evaluation: 3.33, Course Evaluation: 3.00
- (26) CE 573: Advanced Technologies in AEC Practices, Summer 2020, Unit: 4, Enrollment: 23, Instructor Evaluation: 4.82, Course Evaluation: 4.41
- (27) CE 470: Building Information Modeling: Project Visualization and Simulation, Fall 2020, Unit: 4, Enrollment: 21, Instructor Evaluation: 4.54, Course Evaluation: 4.77 [remote teaching due to COVID-19]
- (28) CE 470: Building Information Modeling: Project Visualization and Simulation, Fall 2021, Unit: 4, Enrollment: 22, Instructor Evaluation: 4.56, Course Evaluation: 4.56
- (29) CE 670: Advanced Research Methods for Built Environment Informatics, Fall 2021, Unit: 3, Enrollment: 8, Instructor Evaluation: 5, Course Evaluation: 5
- (30) CE 470: Building Information Modeling: Project Visualization and Simulation, Spring 2023, Unit: 4, Enrollment: 30, Instructor Evaluation: 4.7, Course Evaluation: 4.61
- (31) CE 470: Building Information Modeling: Project Visualization and Simulation, Spring 2023 (DEN@Viterbi), Unit: 4, Enrollment: 5, Instructor Evaluation: 4.5, Course Evaluation: 4.5
- (32) CE 470: Building Information Modeling: Project Visualization and Simulation, Fall 2023, Unit: 4, Enrollment: 22, Instructor Evaluation: 4.39, Course Evaluation: 4.28
- (33) CE 470: Building Information Modeling: Project Visualization and Simulation, Fall 2023 (DEN@Viterbi), Unit: 4, Enrollment: 1, Instructor Evaluation: NA, Course Evaluation: NA
- (34) CE 470: Building Information Modeling: Project Visualization and Simulation, Fall 2024, Unit: 4, Enrollment: 12, Instructor Evaluation: 4, Course Evaluation: 4
- (35) CE 470: Building Information Modeling: Project Visualization and Simulation, Fall 2024 (DEN@Viterbi), Unit: 4, Enrollment: 6, Instructor Evaluation: 4.75, Course Evaluation: 4.75

(36) CE 670: Advanced Research Methods for Built Environment Informatics, Fall 2024, Unit: 3, Enrollment: 5, Instructor
Evaluation: NA, Course Evaluation: NA

Directed Research

	Semester	Student Name	Directed Research Class	Units
(1)	Fall 2009	Adams, Camilla	CE 490 (Undergraduates only)	1
(2)	Fall 2009	Jazizadeh Karimi, Farrokh	CE 790 (Ph.D. only)	4
(3)	Spring 2010	Rooprai, Gursimran	CE 590 (Master only)	3
(4)	Summer 2010	Li, Nan	CE 590 (Master only)	5
(5)	Summer 2011	Aspurez, Victor	CE 790 (Ph.D. only)	3
(6)	Fall 2011	Aspurez, Victor	CE 790 (Ph.D. only)	1
(7)	Spring 2012	Kanabar, Manthan	CE 590 (Master only)	2
(8)	Summer 2012	Yang, Zheng	CE 590 (Master only)	1
(9)	Fall 2012	Aspurez, Victor	CE 790 (Ph.D. only)	1
(10)	Fall 2012	Jazizadeh Karimi, Farrokh	CE 790 (Ph.D. only)	3
(11)	Fall 2012	Khashe, Saba	ENE 590 (Master only)	3
(12)	Fall 2012	Moiso Marin, Franco	CE 590 (Master only)	1
(13)	Fall 2012	Raissi Fard, MohammadReza	CE 590 (Master only)	2
(14)	Spring 2013	Khashe, Saba	CE 590 (Master only)	1
(15)	Spring 2013	Li, Nan	CE 790 (Ph.D. only)	4
(16)	Summer 2013	Ghahramani, Ali	CE 790 (Ph.D. only)	1
(17)	Summer 2013	Heydarian, Arsalan	CE 790 (Ph.D. only)	3
(18)	Summer 2013	Khashe, Saba	CE 790 (Ph.D. only)	1
(19)	Summer 2013	Yang, Zheng	CE 790 (Ph.D. only)	4
(20)	Fall 2013	Doma Venkata, Nishesh Guptha	CE 590 (Master only)	2
(21)	Fall 2013	Quan, Xuewen	CE 590 (Master only)	3
(22)	Spring 2014	Carneiro, Joao	CE 590 (Master only)	2
(23)	Spring 2014	Ghahramani, Ali	CE 590 (Master only)	3
(24)	Spring 2014	Heydarian, Arsalan	CE 790 (Ph.D. only)	3
(25)	Spring 2014	Oskouie, Pedram	CE 790 (Ph.D. only)	3
(26)	Summer 2014	Kim, Hunyoung	CE 590 (Master only)	1
(27)	Fall 2014	Tan, Yi	CE 590 (Master only)	1
(28)	Fall 2014	Chen, Nanlin	CE 590 (Master only)	2
(29)	Fall 2014	Kanday, Santosh	CE 590 (Master only)	1
(30)	Spring 2015	Heydarian, Arsalan	CE 790 (Ph.D. only)	3
(31)	Spring 2015	Khashe, Saba	CE 790 (Ph.D. only)	3
(32)	Spring 2015	Oskouie, Pedram	CE 790 (Ph.D. only)	3
(33)	Spring 2015	Tang, Wei	CE 590 (Master only)	2
(34)	Spring 2015	Ghahramani, Ali	CE 790 (Ph.D. only)	2
(35)	Spring 2015	Carneiro, Joao Pedro	CE 590 (Master only)	1
(36)	Summer 2015	Jazizadeh Farrokh	ENG 596 (Ph.D.)	1
(37)	Fall 2015	Oskouie, Pedram	CE 790 (Ph.D. only)	2
(38)	Spring 2016	Carneiro, Joao Pedro	CE 790 (Ph.D. only)	1
(39)	Spring 2016	Ahmadi-Karvigh, Simin	CE 790 (Ph.D. only)	1

(40)	Fall 2016	Carneiro, Joao Pedro	ENE 790 (Ph.D. only)	2
(41)	Spring 2017	Oskouie, Pedram	ENG 596 (Ph.D.)	1
(42)	Summer 2017	Oskouie, Pedram	ENG 596 (Ph.D.)	1
(43)	Fall 2017	Desai, Rohan	CE 590 (Master only)	2
(44)	Spring 2018	Ahmadi-Karvigh, Simin	ENG 596 (Ph.D.)	1
(45)	Spring 2018	Aryal, Ashrant	CE 790 (Ph.D. only)	1
(46)	Spring 2018	Azarnoush, Khorshid	CE 590 (Master only)	2
(47)	Spring 2018	Ozcelik, Gokce	CE 790 (Ph.D. only)	3
(48)	Summer 2018	Carneiro, Joao Pedro	ENG 596 (Ph.D.)	1
(49)	Summer 2018	Ozcelik, Gokce	ENG 596 (Ph.D.)	1
(50)	Fall 2018	Aryal, Ashrant	CE 790 (Ph.D. only)	2
(51)	Fall 2018	Moghaddasi, Negin	CE 590 (Master only)	3
(52)	Spring 2019	Bissonnette, Nathan	CE 590 (Master only)	3
(53)	Spring 2019	Fukumora, Yoko	CE 590 (Master only)	2
(54)	Spring 2020	Awada, Mohamand	CE 790 (Ph.D. only)	2
(55)	Fall 2020	Adami, Pooya	CE 790 (Ph.D. only)	2
(56)	Spring 2021	Awada, Mohamad	CE 790 (Ph.D. only)	2
(57)	Spring 2021	Li, Shanglin	CE 590 (Master only)	2
(58)	Summer 2021	Ala, Nekouvaght	CE 790 (Ph.D. only)	2
(59)	Summer 2021	Runhe, Zhu	ENG 596 (Ph.D.)	1
(60)	Spring 2022	Ala, Nekouvaght	CE 790 (Ph.D. only)	2
(61)	Spring 2022	Mirmahdi, Seyedrezaei	CE 790 (Ph.D. only)	2
(62)	Spring 2022	Lanhong, Tang	CE 590 (Master only)	1
(63)	Fall 2022	Adami, Pooya	CE 790 (Ph.D. only)	1
(64)	Fall 2022	Awada, Mohamad	CE 790 (Ph.D. only)	2
(65)	Fall 2022	Conner, Nicholas	CE 590 (Master only)	3
(66)	Spring 2023	Conner, Nicholas	CE 590 (Master only)	2
(67)	Spring 2023	Liu, Ruying	CE 790 (Ph.D. only)	2
(68)	Fall 2023	Liu, Ruying	CE 790 (Ph.D. only)	2
(69)	Fall 2023	Rodrigues, Patrick	CE 790 (Ph.D. only)	4
(70)	Spring 2024	Awada, Mohamad	CE 790 (Ph.D. only)	1
(71)	Fall 2024	Brun, Antonin	CE 790 (Ph.D. only)	3

Guest Lecturer

- (1) FBE 466: Management of Real Estate Development, Prof. Robert Bridges, Finance and Business Economics, Marshall School of Business, 2010
- (2) ENGR: Engineering Freshman Academy, Prof. Milind Tambe, Engineering, 2010
- (3) ARCH 307: Digital Tools for Architecture, Prof. Karen Kensek, School of Architecture, 2011
- (4) ENGR: Engineering Freshman Academy, Prof. Milind Tambe, Engineering, 2013
- (5) ISE 576, Industrial Ecology: Technology-Environment Interaction, Prof. Mansour Rahimi and Prof. Robert Vos, Industrial and Systems Engineering, 2014
- (6) CE 599, Sustainability in the Built Environment, Prof. Lucio Soibelman, Civil and Environmental Engineering, 2014
- (7) ENGR: Engineering Freshman Academy, Prof. Milind Tambe, Engineering, 2015
- (8) COSC 690: Theory of Research in Construction Management, Prof. Amir Behzadan, Texas A&M, February 202

MENTORSHIP

Faculty

- | | |
|---|-----------|
| (1) Kelly Sanders, Assistant Professor – <i>Astani Civil and Environmental Engineering</i> , Viterbi School of Engineering, University of Southern California | 2014-2020 |
| (2) Bora Gencturk, Assistant Professor - <i>Astani Civil and Environmental Engineering</i> , Viterbi School of Engineering, University of Southern California | 2016-2019 |

Visiting Scholars

- | | |
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| (1) Dr. Gulben Calis, Ph.D., Ege University, Turkey | 2010-2012 |
| Research Topic: Implementation and assessment of indoor localization systems for context-aware applications in construction and facilities management | |
| Current Position: Assistant Professor, Ege University, Turkey | |
| (2) Dr. Shabtai Isaac, Ph.D., Technion University, Israel | Fall 2014-2015 |
| Research Topic: Translation of user requirement to project requirements and the impact on energy efficiency | |
| Current Position: Assistant Professor, Ben-Gurion University of the Negev, Israel | |

Ph.D. Students

Of the 15 former PhD students, 8 of have been placed in academia as tenure-track assistant professors.

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| (1) Nan Li, Ph.D. – <i>Viterbi Fellow</i> | 2009-2014 |
| <i>*Graduated in 2014</i> | |
| Dissertation Title: A Radio Frequency Based Indoor Localization Framework for Supporting Building Emergency Response Operations | |
| *Recipient of Outstanding Research Assistant Award in the Civil and Environmental Engineering Department in 2011 | |
| *Recipient of the Best Dissertation Award in the Civil and Environmental Engineering Department in Spring 2014 | |
| *Recipient of USC Ph.D. Achievement Award for 2014 | |
| Screening exam: May 2010; Qualifying exam: Jan 2013; Defense: Jan 2014 | |
| First Position: As of July 2014, Assistant Professor at the Tsinghua University, Department of Construction Management | |
| (2) Farrokh Jazizadeh, Ph.D. (co-advised with Prof. Lucio Soibelman) | 2009-2015 |
| <i>*Graduated in 2015</i> | |
| Dissertation Title: User-Centered Smart Sensing for Non-Intrusive Electricity Consumption Disaggregation in Buildings | |
| *Recipient of Outstanding Teaching Assistant Award in in the Civil and Environmental Engineering Department in 2012 | |
| *Recipient of Outstanding Research Assistant Award in the Civil and Environmental Engineering Department in 2013 | |
| *Recognized by Phi Kappa Phi for academic excellence at the doctoral level in 2014 | |
| *Recipient of USC Ph.D. Achievement Award for 2015 | |
| Screening exam: May 2010; Qualifying exam: Jan 2013; Defense: March 2015 | |

- First Position:** As of August 2015, **Assistant Professor (Tenure Track)** at the Virginia Polytechnic Institute and State University, Department of Civil and Environmental Engineering
- (3) Zheng Yang, Ph.D.– *Viterbi Fellow* 2011-2016
**Graduated in 2016*
- Dissertation Title:** Building Occupancy Modeling and Occupancy – Loads Relationships for Building Heating/Cooling Energy Efficiency
- *Recipient of **Diploma in Innovation Award** from Office of the Provost in 2013
 - *Recipient of **Outstanding Research Assistant Award** in the Civil and Environmental Engineering Department in 2014
 - *Recognized by Phi Kappa Phi for **academic excellence at the doctoral level** in 2015
- Screening exam: Jan 2013; Qualifying exam: Oct 2014; Defense: May 2016
- First Position:** As of September 2016, **Post-doc** at Stanford University, Department of Civil and Environmental Engineering
- (4) Ali Ghahramani, Ph.D.– *Provost Fellow* 2013-2017
**Graduated in 2017*
- Dissertation Title:** Learning Personal Thermal Comfort and Integrating Personal Comfort Requirements into HVAC System Control Loop
- *Recipient of **Outstanding Research Assistant Award** in the Civil and Environmental Engineering Department in 2016
- Screening exam: Jan 2014; Qualifying exam: Jan 2016; Defense: October 2016
- First Position:** As of March 2017, **Post-doc** at Center for the Built Environment of University of California at Berkeley
- Second Position:** National University of Singapore as a Presidential Young Professor
- (5) Arsalan Heydarian, Ph.D. student – *Viterbi Fellow* 2012-2017
**Graduated in 2017*
- Dissertation Title:** Improving Design and Operation of Buildings by Integrating Occupant Behavioral Data Through the Use of Immersive Virtual Environments
- *Recipient of **Outstanding Teaching Assistant Award** in the Civil and Environmental Engineering Department in 2016
- Screening exam: Jan 2014; Qualifying exam: Jan 2016; Defense: March 2017
- First Position:** As of August 2017, **Assistant Professor (Tenure Track)** University of Virginia, Departments of Civil and Environmental Engineering & Systems Engineering
- (6) Pedram Oskouie, Ph.D. student (co-advised with Prof. Lucio Soibelman) 2012-2017
**Graduated in 2017*
- Dissertation Title:** In-situ Quality Assessment of Scan Data for As-Built Models Using Building-specific Geometric Features
- *Recipient of **Outstanding Teaching Assistant Award** in the Civil and Environmental Engineering Department in 2014
- Screening exam: Jan 2014; Qualifying exam: Apr 2016; Defense: Aug 2017
- First Position:** As of Fall 2017, BIM Graphics Support Manager at STV, Delta T2-T3 Modernization Program at LAX
- (7) Saba Khashe, Ph.D. student 2013-2017
**Graduated in 2017*

- Dissertation Title:** Enabling Human-Building Communication to Promote Pro-Environmental Behavior in Office Buildings
- *Recipient of **Outstanding Teaching Assistant Award** in the Civil and Environmental Engineering Department in 2017
- Screening exam: Jan 2014; Qualifying exam: Aug 2016; Defense: Nov 2017
- First Position:** As of January 2018, UX designer and researcher at Ahura Systems
- (8) Simin Ahmadi-Karvigh, Ph.D. student (co-advised with Prof. Lucio Soibelman) 2013-2018
- *Graduated in 2018*
- Dissertation Title:** Activity-Driven and User-Centered Automation of Appliances and Lighting Systems
- Screening exam: Jan 2014; Qualifying exam: January 2017; Defense: May 2018
- First Position:** As of June 2018, Data Scientist at Apple Inc.
- (9) Gokce Ozcelik, Ph.D. student – *Viterbi Fellow*
- *Graduated in 2019*
- Dissertation Title:** Understanding Human-Building Systems Interactions Through Perceptual Decision-Making Processes 2014-2019
- Screening exam: Jan 2016; Qualifying exam: Sept 2018; Defense: May 2019
- First Position:** As of Fall 2019, Sanveo BIM Consulting as a BIM Construction Engineer
- (10) Ashrant Aryal, Ph.D. student – *Provost Fellow*
- *Graduated in 2020*
- Research Topic:** Intelligent Agents for Personalizing Indoor Environment and Improving Occupant Comfort in Offices
- Screening exam: Jan 2017; Qualifying exam: May 2019; Defense: May 2020
- First Position:** As of Fall 2020, TT Assistant Professor at the Construction Science Department of Texas A&M University 2015-2020
- *Recipient of **2018 Viterbi Undergraduate Research Mentoring Award**
- *Recipient of **Outstanding Research Assistant Award** in the Civil and Environmental Engineering Department in 2019
- (11) Runhe Zhu, Ph.D. student – *Viterbi Fellow*
- *Graduated in 2022*
- Research Topic:** Understanding Human-Building-Emergency Interactions in the Built Environment
- First Position:** As of Spring 2023, TT Assistant Professor at the Moss Department of Construction Management Department of Florida International University 2017-2022
- *Recipient of **Outstanding Teaching Assistant Award** in the Civil and Environmental Engineering Department in 2018
- *Recipient of **Theodore and Wen-Hui Chen Endowed Fellowship**
- *Recipient of **Outstanding Research Assistant Award** in the Civil and Environmental Engineering Department in 2020
- Screening exam: Jan 2019; Qualifying exam: Aug 2020; Defense: August 2022
- (12) Pooya Adami, Ph.D. student – *Annenberg Fellow* (co-advised with Prof. Lucio Soibelman)
- *Graduated in 2023* 2019-2023
- Research Topic:** Human-Robot Collaboration on Construction Sites
- Screening exam: Jan 2020; Qualifying exam: December 2022; Defense: March 2023

- First Position:** GRYPs
- (13) Mohamad Awada, Ph.D. student – *Annenberg Fellow*
**Graduated in 2024*
- Research Topic:** Health and Well-Being in Buildings
- *Recipient of **Outstanding Research Assistant Award** in the Civil and Environmental Engineering Department in 2022
 - *Recipient of **Outstanding Service Award** in the Civil and Environmental Engineering Department in 2023
 - *Recipient of **USC PhD Achievement Award** in the Civil and Environmental Engineering Department in 2024
- Screening exam: Jan 2020; Qualifying exam: November 2022; Defense: April 2024
- First Position:** TT Assistant Professor at the Civil and Environmental Engineering Department of New York University
- (14) Ruying Liu, Ph.D. student – *Annenberg Fellow*
**Graduated in 2025*
- Research Topic:** Understanding Human-Building Interactions During Emergencies
- *Recipient of **Theodore and Wen-Hui Chen Endowed Fellowship**
 - *Recipient of **WISE Merit Award to Current Doctoral Students**
 - *Recipient of **Outstanding Research Assistant Award** in the Civil and Environmental Engineering Department in 2023
- Screening exam: January 2022; Qualifying exam: November 2023; Defense: N/A
- First Position:** Postdoc at USC
- (15) Patrick Borges Rodrigues, Ph.D. student – *DIA Fellow* (co-advised with Prof. Lucio Soibelman)
**Graduated in 2025*
- Research Topic:** Human-Robot Collaboration on Construction Sites
- *Recipient of **Outstanding Teaching Assistant Award** in the Civil and Environmental Engineering Department in 2022
 - * 2024 CPS Rising Stars Workshop attendee at UVA
- Screening exam: January 2021; Qualifying exam: November 2024; Defense: May 2025
- First Position:** TT Assistant Professor at the Civil and Environmental Engineering Department of NJIT
- (16) Mirmahdi Seyedrezaei, PhD student – *Viterbi Fellow*
- Research Topic:** Social equity in the built environment
- Screening exam: January 2022; Qualifying exam: N/A; Defense: N/A
- (17) Antonin Brun, PhD student – *Viterbi Fellow*
- Research Topic:** Designing and evaluating user-centered stress management strategies in office environments to enhance occupant well-being and performance.
- Screening exam: January 2024; Qualifying exam: N/A; Defense: N/A
- (18) Tao Zang, PhD student – *Viterbi Fellow*
- Research Topic:** Assessing the impact of indoor environmental quality (IEQ) on the prevalence and severity of sick building syndrome symptoms.
- Screening exam: Jan 2025; Qualifying exam: N/A; Defense: N/A
- (19) Zicheng Han, PhD student

- Research Topic:** Cognitive agents to enhance decision-making and human behavior modeling in multi-hazard simulation environments.
Screening exam: Jan 2025; Qualifying exam: N/A; Defense: N/A
- (20) Mireya Reyes, PhD student
Research Topic: Evaluating the impact of indoor environmental quality (IEQ) factors on human sleep quality
Screening exam: N/A; Qualifying exam: N/A; Defense: N/A
2024-Present
- (21) Joseph Mondragon Vargas, PhD student – *Viterbi Fellow*
Research Topic: TBD
Screening exam: N/A; Qualifying exam: N/A; Defense: N/A
2025-Present
- (22) Yuxin Yang, PhD student – *Viterbi Fellow*
Research Topic: TBD
Screening exam: N/A; Qualifying exam: N/A; Defense: N/A
2025-Present
- (23) Shanshan Jiang, PhD student – *Viterbi Fellow*
Research Topic: TBD
Screening exam: N/A; Qualifying exam: N/A; Defense: N/A
2025-Present
- (24) Wenbo Zhang, PhD student
Research Topic: TBD
Screening exam: N/A; Qualifying exam: N/A; Defense: N/A
2025-Present

Master Students

- (1) David Kent, Master of Construction Management
Research Topic: Integrated Project Delivery (IPD) and its applications, acceptance and use in the construction industry
2009
- (2) Edward Kim, Master of Construction Management
Research Topic: Tradeoffs between sustainable design and end user comfort
2009
- (3) Samara Rice, Master of Construction Management
Research Topic: Return on investment of building information modeling from the owner's perspective
2009
- (4) Gursimran Rooprai, MS in Green Technology
Research Topic: Building performance metrics for sustainable buildings
2010
- (5) Laura Klein (Mino), MS in Civil Engineering (Structural Engineering)
Research Topic: Investigation of reality capture methods for as-built BIM documentation
2008-2011
- (6) Shuai Li, MS in Civil Engineering
Research Topic: Grand challenges of civil engineering; Indoor location sensing in built environments
2010-2012
- (7) Manthan Kanabar, MS in Civil Engineering
Research Topic: Building information modeling for collaborative construction management
2012
- (8) Hamid Hajian, MS in Civil Engineering, and Engineering Degree
Research Topic: Impact of target locations and types on 3D laser scanning accuracy
2009-2012
- (9) Geoffrey Kavulya, MS in Civil Engineering, and Engineering Degree
Research Topic: Adjustable autonomy to enable sustainable energy reduction in commercial buildings
2010-2013
- (10) Omid Davtalab, MS in Civil Engineering
Research Topic: Data mining/processing for bridge maintenance planning
2012-2013
- (11) MohammedReza Raissi Fard, MS in Civil Engineering
Research Topic: Cloud computing applications for AEC business models
2012-2013

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| (12) Semir Dia, MS in Civil Engineering (Construction Engineering and Management) | 2013 |
| Research Topic: A review of resilience of coastal structures | |
| (13) Nishesh Guptha, MS in Civil Engineering | 2013 |
| Research Topic: Wall settlement analysis using the 3D scanners | |
| (14) Chao Tang, MS in Civil Engineering | 2013-2014 |
| Research Topic: Personalized thermal comfort in commercial buildings; Energy simulation and calibration | |
| (15) Xuewen Quan, MS in Civil Engineering | 2013-2014 |
| Research Topic: Use of laser scanners in construction processes | |
| (16) Joao Carneiro, MS in Civil Engineering | 2013-2015 |
| Research Topic: Use of immersive virtual environments in building and occupant performance evaluation | |
| (17) Meida Chen, MS in Civil Engineering | 2013-2014 |
| Research Topic: Application of machine learning in energy efficiency; infrastructure-oriented data sensing | |
| (18) Qiudi Du, MS in Civil Engineering (Structural Engineering) | 2014 |
| Research Topic: Use of interactive environments in building performance evaluation | |
| (19) Yuekun Pan, MS in Civil Engineering (Structural Engineering) | 2014 |
| Research Topic: Use of interactive environments in building performance evaluation | |
| (20) Yi Tan, MS in Civil Engineering | 2014 |
| Research Topic: Use of interactive environments in building performance evaluation | |
| (21) Nanlin Chen, MS in Civil Engineering | 2014 |
| Research Topic: Calibration of energy models | |
| (22) Santosh Kanday, MS in Civil Engineering | 2014 |
| Research Topic: Investigation of green branding on energy efficiency and occupant behavior | |
| (23) Ye Tian, MS in Computer Science | 2014 |
| Research Topic: Use of avatars in immersive virtual environments for building relationships with occupants | |
| (24) Wei Tang, MS in Structural Engineering | 2015 |
| Research Topic: Understanding the effects of building parameters such as location, construction set, window-wall ratio, and zoning method, on building energy performance | |
| (26) Xinran Yu, MS in Civil Engineering | 2015 |
| Research Topic: Understanding the impact of activity related heat gain on HVAC energy consumption | |
| (27) Kenan Zhang, MS in Architecture and Civil Engineering, CMU (Intern) | 2015 |
| Research Topic: Calculation of energy savings from set points using simulation | |
| (28) Yuchao Wang, MS in Structural Engineering | 2016 |
| Research Topic: Created realistic immersive virtual environments | |
| (29) Rohan Desai, MS in Structural Engineering | 2017-2018 |
| Research Topic: Designed & programmed avatars in VR and helped conducting experiments | |
| (30) YoungHo Jung, MS in Civil Engineering | 2017 |
| Research Topic: Understanding human building interactions making using immersive virtual environments | |
| (31) Jishi Chen, Master in Construction Management (MCM) | 2017 |
| Research Topic: Classification of occupancy states of a smart desk | |
| (32) Siddharth Bhat, MS in Mechanical Engineering | 2017-2018 |
| Research Topic: Monitoring thermal comfort using wearable sensors | |
| (33) Abinaya Manimaran, MS in Electrical Engineering | 2017-2018 |

	Research Topic: Understanding desk use behavior in office environment	
(34)	Jagruthi Shivapura Prabhudev, MS in Computer Science	2018
	Research Topic: Visualization of desk use patterns in office environment	
(35)	Brinal Chimanlal Bheda, MS in Electrical Engineering	2018
	Research Topic: Developing a mobile application for interaction between smart desk and the user	
(36)	Youngho Jung, Master in Construction Management (MCM)	2017-2018
	Research topic: Exploring and designing virtual environments	
(37)	Yang Zhu, Master in Construction Management (MCM)	2017
	Research topic: Human Building Interactions (HBIs) under multi-modal discomfort experiments	
(38)	Ragini Chugh: Master in Computer Science	2018
	Research topic: Understanding HBIs through occupants' decisions	
(39)	Nathan Bissonnette, MS in Structural Engineering	2019
	Research topic: Development of virtual environments for simulating active shooter incidents	
	*Received the outstanding masters student award in the "research" category in Spring 2019	
(40)	Vivek Mishra, MS in Computer Science (Data Science)	2019
	Research topic: Sensing different office worker postures using Kinect (intelligent desk research)	
(41)	Yoko Fukumura, M.A. Occupational Therapy	2019
	Research topic: Assessment and evaluation of office worker postures (intelligent desk research)	
(42)	Zheng Lu, MS in CE, Advanced Design and Construction Technology	2021
	Research Topic: Effect of indoor buildings' design on occupants' stress levels	
(43)	Yijing Xiao, MS in Computer Science	2019-2020
	Research Topic: Human-Machine Collaboration in Office Buildings	

Undergraduate Students

(1)	Camilla Adams, BS in Policy, Planning, and Development, Real Estate Development	2009
	Research Topic: Status of current BIM education in architecture, engineering, construction management programs	
(2)	Reza Ghassemi, BS in Civil Engineering	2010
	Research Topic: Integrated Project Delivery (IPD) in the construction industry	
(3)	Tedman Tran, BS in Civil Engineering 2015	2012-2013
	Research Topic: Green building practices for construction management	
(4)	Ben Richardson, BS in Civil Engineering 2016 – <i>Merit Scholar Researcher</i>	2012-2013
	Research Topic: Occupant thermal comfort and HVAC system efficiency	
(5)	Nicole Ludena, BS in Civil Engineering 2016	2012-2013
	Research Topic: Integrated mobile sensor systems for building energy efficiency	
(6)	Michelle Munoz, BS in Civil Engineering 2016	2012-2013
	Research Topic: Integrated mobile sensor systems for building energy efficiency	
(7)	Evan Rosca, BS in Civil Engineering 2016	2013
	Research Topic: Information visualization for energy efficient and environmental building design	
(8)	Estevan Rodriguez, BS in Civil Engineering 2014	2013
	Research Topic: Integrated mobile sensor systems for building energy efficiency	
(9)	Nick Halsey, BS in Civil Engineering (Building Science) 2016– <i>Merit Scholar Researcher</i>	2013-2014
	Research Topic: Situational awareness on construction sites using laser scanners	

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| (10) Alexander Coco, BS in Astronautical Engineering 2016 – <i>Merit Scholar Researcher</i> | 2014 |
| Research Topic: Virtual reality applications in training and research | |
| (11) Samantha Kaplan, BS in Mechanical Engineering with a minor in Cinematic Arts and Science Visualization 2015 – <i>Merit Scholar Researcher</i> | 2014 |
| Research Topic: Interactive virtual environments and their use in AEC | |
| (12) Alexandre Muller Filho, BS in Civil Engineering (Brazilian Mobility Project) 2015 | 2014–2015 |
| Research Topic: Use of laser scanners in construction processes | |
| (13) Christina Nour, BS in Civil Engineering (Building Science) 2016 | 2014-2015 |
| Research Topic: Human-building interactions for building energy efficiency | |
| (14) Lucy Egbe, BS in Civil Engineering (Building Science) 2016 | 2015 |
| Research Topic: Human-building interactions for building energy efficiency | |
| (15) Jose Antonio Guevara, UNAM, Industrial Engineering, 2016 | 2015 |
| Research Topic: Activity detection using wearable sensors | |
| (16) Guillermo Castro, BS in Civil Engineering, East Los Angeles College (STEM academy) | 2014-2016 |
| Research Topic: Thermoregulation system operation state via iGlass | |
| (17) Michael Castro, BS in Civil Engineering, East Los Angeles College and Los Angeles Southwest College (STEM academy) | 2016 |
| Research Topic: Automation of activities in office and residential settings | |
| (18) Brady Guan, BS in Civil Engineering, Cal Poly Pomona (STEM academy) | 2017 |
| Research Topic: Understanding desk use behavior in an office environment | |
| (19) Bonnie Powell, BS in Mechanical Engineering, Cornell University (NSF REU) | 2017 |
| Research Topic: Data driven approach for understanding human-building interactions | |
| (20) Ishan Shah, BS in Computer Engineering | 2017-2018 |
| Research Topic: Monitoring air movement around an office worker | |
| (21) Eddy Solares, BS in Mechanical Engineering, East Los Angeles College (ELAC MESA) | 2018 |
| Research Topic: Thermal comfort assessment using thermal imaging and wearable sensors | |
| (22) Paulina Maldonado, BS in Mechanical Engineering, East Los Angeles College (ELAC MESA) | 2018 |
| Research Topic: Thermal comfort assessment using thermal imaging and wearable sensors | |
| (23) Jessica Brown, BS in Civil Engineering (Viterbi Summer Institute) | 2018 |
| Research Topic: Monitoring air movement using alternative sensors | |
| (24) Francisco Rodriguez, BS in Civil Engineering (Viterbi Summer Institute) | 2018 |
| Research Topic: Monitoring air movement using alternative sensors | |
| (25) Jessica Vela Guevara, BS in Civil Engineering (Viterbi Summer Institute) | 2018 |
| Research Topic: Monitoring air movement using alternative sensors | |
| (26) Adrianna Gasior, BS in Civil Engineering (NSF REU) | 2018 |
| Research Topic: Exploring and getting to know HBIs through preparing animations and visualizations | |
| (27) Kengo Tanaka, BS in Computer Science (USC-ELAC Summer Program) | 2019 |
| Research Topic: Personalized sensing and learning for thermal comfort | |
| (28) Jacquelin Chen, BS in Civil Engineering | 2021 |
| Research Topic: Human-robot interaction on construction sites | |
| (29) Christian Bryan, BS in Computer Science and Business Administration | 2021 |
| Research Topic: Occupant behavior modeling for emergency evacuation modeling | |

(30) Matheos Xenakis, BS in Industrial & Systems Engineering

2021

Research Topic: Automated stress detection using machine learning

Candidacy and Thesis Committees

(In addition to the Ph.D. students advised by me)

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|---|-------------|
| (1) Lu Wang, Ph.D. Candidacy & Defense, Computer Science, <u>Advisor:</u> Dr. Ulrich Neumann | 2009 |
| (2) Songhua Xing, Ph.D. Candidacy & Defense, Computer Science, <u>Advisor:</u> Dr. Cyrus Shahabi | 2012 |
| (3) Hadi Meidani, Ph.D. Candidacy & Defense, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Roger Ghanem | 2012 |
| (4) Saima Aman, Ph.D. Defense, Computer Science, <u>Advisor:</u> Dr. Viktor Prasanna | 2012 |
| (5) Armen Derkevorkian, Ph.D. Candidacy & Defense, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Sami Masri | 2012 |
| (6) Amanda Laur, M.S. Candidacy & Defense, Master of Science, Department of Sociology (Geographic Information Science and Technology), <u>Advisor:</u> Dr. John Wilson | 2012-2014 |
| (7) Hamid Hajian, Eng Degree Defense, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Greg Brandow | 2012 |
| (8) Babak Zareiyan, Ph.D. Screening Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Behrokh Khoshnevis | 2013 |
| (8) Jun-Young Kwak, Ph.D. Candidacy & Defense, Ph.D., Computer Science, <u>Advisor:</u> Dr. Milind Tambe | 2012-2013 |
| (9) Woohoe Kim, Ph.D. Defense, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Massoud Pirbazari | 2013 |
| (10) Shih-Hsin Lin, Ph.D. Candidacy & Defense, School of Architecture, <u>Advisor:</u> Dr. David J. Gerber | 2012-2013 |
| (11) Tim Hayes, Ph.D. Candidacy & Defense, Psychology, <u>Advisor:</u> Dr. Wendy Wood | 2014 & 2017 |
| (12) Jaehoon Jung, Ph.D. Defense, Civil and Environmental Engineering, Yonsei University <u>Advisor:</u> Joon Heo (Professor/Supervisor, Dept. of Civil and Environmental Engineering, Yonsei University) | 2014 |
| (13) Mohamed Abdelbarr, Ph.D. Screening Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Sami Masri | 2014 |
| (14) Meida Chen, Ph.D. Screening Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Lucio Soibelman | 2015 |
| (15) Evangelos Pantazis, Ph.D. Screening Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. David Gerber | 2015 |
| (16) Chen Zhenghua, Ph.D. Defense, School of Electrical & Electronic Engineering, Nanyang Technological University. <u>Advisor:</u> Yeng Chai Soh | 2017 |
| (17) Kevin Lloyd, Master Thesis, Civil and Environmental Engineering, Cambridge University. <u>Advisor:</u> Ioannis Brilakis | 2017 |
| (18) Nick Cutler, Master Thesis, Civil and Environmental Engineering, Cambridge University. <u>Advisor:</u> Ioannis Brilakis | 2017 |
| (19) Angela Geronazzo, Ph.D. Defense, Department of Information Technology, Politecnico di Milano. <u>Advisor:</u> Christina Bolchini | 2017 |

(20) Yu Hou, Ph.D. Screening Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Lucio Soibelman	2018
(21) Meida Chen, Ph.D. Qualifying Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Lucio Soibelman	2018
(22) Daniel Pees, Ph.D. Defense Exam, School of Building Construction, Georgia Tech, <u>Advisor:</u> Dr. Javier Irizarry	2018
(23) Evangelos Pantazis, Ph.D. Defense Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. David Gerber	2019
(24) Eyuphan Koc, Ph.D. Qualifying Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Lucio Soibelman	2019
(25) Meida Chen, Ph.D. Defense Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Lucio Soibelman	2020
(26) Yu Hou, Ph.D. Qualifying Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Lucio Soibelman	2020
(27) Eyuphan Koc, Ph.D. Defense Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Lucio Soibelman	2021
(28) Yu Hou, Ph.D. Defense Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Lucio Soibelman	2021
(29) Michal Gath Morad, Ph.D. Defense Exam, Cognitive Science, ETH Zurich, <u>Advisor:</u> Dr. Christoph Hoelscher	2021
(30) Stepp Mayes, Ph.D. Qualifying Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Kelly Sanders	2022
(31) Zili Zhou, Ph.D. Defense Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Patrick Lynett	2022
(32) McKenna Peplinski, Ph.D. Qualifying Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Kelly Sanders	2022
(33) Ramin Rohidi, PhD Qualifying Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Costas Sioutas	2023
(34) Mohammad Aldekheel, PhD Qualifying Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Costas Sioutas	2023
(35) Andrew Jin, Ph.D. Defense Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Kelly Sanders	2024
(36) Kayla Butler, Ph.D. Qualifying Exam, Civil and Environmental Engineering, <u>Advisor:</u> Dr. Sam Silva	2025

SERVICE ACTIVITIES

External Service

Editorships Duties

(1) Associate Editor, <i>ASCE Journal of Computing in Civil Engineering</i>	2011-Present
(2) Associate Editor, <i>ASCE OPEN: Multidisciplinary Journal of Civil Engineering</i>	2023-Present
(3) Editorial Board Member for Nature Scientific Reports (Civil Engineering)	2021-Present

(4) Guest Editor, ASCE <i>Journal of Computing in Civil Engineering</i> , Special Issue for the 2013 International Workshop in Civil Engineering for the Journal of Computing in Civil Engineering (SangHyun Lee & Ioannis Brilakis, co-Guest Editors)	2013-2014
(5) Specialty Editor for <i>Journal of Buildings</i> , Special Issue Topic: Understanding Human-Building Interactions for Intelligent Built Environments	2015-2016
(6) Guest Editor, <i>Applied Energy</i> , Special Issue for 3 rd ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys 2016) (David Irwin, co-Guest Editor)	2017-2018
(7) Guest Editor, ASME Journal of Engineering of Sustainable Buildings and Cities, SI: Build Environment and Human Wellbeing (Jin Wen, Simi Hoque, Zheng O'Neill, co-Guest Editors)	2020-2021
(8) Guest Editor, Journal of Advanced Engineering Informatics, SI: Emerging Learning Technologies for Future of Work and Education in Engineering (Masoud Gheisari, Carrier Dossick, co-Guest Editors)	2021-2022
(9) Special Collection, Nature Scientific Reports, Special Collection on Human-Building Interaction (HBI) (Other Editors: John Taylor, Georgia Tech, Haeiyoung Noh, Stanford, Gale Lucas, USC)	2022

Technical Reviewer for Peer-Reviewed Books/Journals

(1) Reviewer, ASCE <i>Journal of Computing in Civil Engineering</i>	2010-Present
(2) Reviewer, <i>Journal of Information Technology in Construction</i>	2010-Present
(3) Reviewer, <i>Advanced Engineering Informatics</i>	2011-Present
(4) Reviewer, <i>Automation in Construction</i>	2009-Present
(5) Reviewer, ASCE <i>Journal of Construction Engineering and Management</i>	2011-Present
(6) Reviewer, <i>Journal of Building and Environment</i>	2012-Present
(7) Reviewer, <i>Journal of Applied Energy</i>	2012-Present
(8) Reviewer, IEEE <i>Transactions on Human-Machine Systems</i>	2013-Present
(9) Reviewer, ASCE <i>Journal of Management in Engineering</i>	2013-Present
(10) Reviewer, <i>Journal of Energy and Building</i>	2013-Present
(11) Reviewer, <i>Journal of Information and Management</i>	2014-Present
(12) Editorial Review Board Member, <i>Engineering, Construction and Architectural Management (ECAM) Journal</i>	
(13) Review Editor, Digital Architecture, part of the journal(s) Frontiers in Built Environment and Digital Humanities	2015-Present
(14) Wiley Publications	2015
(15) Reviewer, <i>Journal of Energy</i>	2015-Present
(16) Reviewer, <i>Building Simulation Journal</i>	2017-Present
(17) Reviewer, <i>Building Engineering</i>	2018-Present

Technical Reviewer for Peer-Reviewed Conferences

(1) Reviewer, ASCE International Workshop on Computing in Civil Engineering	2010-Present
(2) Reviewer, International Symposium on Automation and Robotics in Construction (ISARC)	2012-Present
(3) Reviewer, Construction Research Congress (CRC)	2012-Present
(4) Reviewer, Symposium on Simulation for Architecture and Urban Design (SimAUD)	2012-2014
(5) Reviewer, Transportation Review Board Conference	2012

(6) Reviewer, Architectural Engineering Institute Conference	2012
(7) Reviewer, Transportation Research Record	2012-2013
(8) Reviewer, International Conference on Computing in Civil and Building Engineering (ICCCBE) 2014	2013
(9) Reviewer, Winter Simulation Conference 2014	2014
(10) Reviewer, First International Symposium on Sustainable Human-Building Ecosystems (ISSHBE)	2015
(11) Reviewer, Winter Simulation Conference 2015	2015
(12) Reviewer, ACM BuildSys 2015 & 2019	2015 & 2019
(13) Reviewer, LC3 2017, Lean & Computing in Construction Congress	2017
(14) Program Committee Member, EG-ICE 2017 (European Group for Intelligent Computing in Engineering)	2017-2018
(15) BIM School, LC3, 2017, Lean & Computing in Construction Congress	2017
(16) Reviewer, International Workshop on Human-in-the-loop Internet of Things (Hil-IoT)	2018
(17) Scientific Committee Member, EG-ICE 2020 (European Group for Intelligent Computing in Engineering)	2019-2021

Technical Reviewer for Peer-Reviewed Funding

(1) Panelist, National Science Foundation, Engineering Directory	2011
(2) Panelist, National Science Foundation, CISE Directory	2012
(3) Reviewer, Portuguese Foundation for Science and Technology (FCT)	2012
(4) Panelist, National Science Foundation, Engineering Directory	2013
(5) Panelist, National Science Foundation, Engineering Directory	2014
(6) Panelist, National Science Foundation, Engineering Directory	2014
(7) Panelist, National Science Foundation, CISE and Engineering Directories	2015
(8) Panelist, National Science Foundation, CISE and Engineering Directories	2017
(9) Panelist, National Science Foundation, Engineering Directory	2018
(10) Panelist, National Science Foundation, Division of Undergraduate Education	2019
(11) Reviewer, DOE's Office of Technology Transitions, FY19 Technology Commercialization Fund (TCF)	2019
(12) Reviewer, Israeli Ministry of Science	2019
(13) Panelist, National Science Foundation, Engineering Directory	2019
(14) Ad Hoc Reviewer, National Science Foundation, Engineering Directory	2019, 2020
(15) Research Grants Council (RGC) of Hong Kong	2021
(16) Israel Science Foundation (ISF)	2023
(17) UAEU Research Office	2023

Technical Reviewer for Awards

(1) TR35, Technology Review, MIT	2017-2020
(2) Chair professorship panel for Dr. Virshal Garg	March 2022
(3) Society Awards Committee, ASCE	2024-2026

Professional Committee Memberships and Duties

(1) Member, ASCE Technical Council on Computing and Information Technology, <i>Data Sensing and Analysis Committee</i> (Formerly Intelligent Computing)	2010–Present
(2) Member, ASCE Technical Council on Computing and Information Technology, <i>Educational Committee</i>	2010–Present
(3) Member, ASCE Technical Council on Computing and Information Technology, <i>Visualization, Information Modeling, and Simulation Committee</i>	2010–Present
(4) Board Member, International Association of Automation and Robotics in Construction (IAARC)	2011- Present
(5) Member, IEEE, Smart Buildings Technical Committee	2012–Present
(6) Chair, Technical Council on Computing, and Information Technology (TCCIT), Data Sensing and Analysis Committee, Grand Challenges Task Force	2011-2012
(7) Secretary, ASCE Technical Council on Computing and Information Technology, Data Sensing and Analysis Committee	2012-2014
(8) Member, 2011 Best Paper Award Committee for <i>Journal of Computing in Civil Engineering</i>	2012
(9) Participant, Annex 66, a task group of the International Energy Agency, focuses on defining and simulating occupant behavior in buildings	2013-2018
(10) Member, Vision for Buildings of the Future Committee, US Department of Energy, Building Technologies Office	2014-2015
(11) Vice Chair, ASCE Technical Council on Computing and Information Technology, Data Sensing and Analysis Committee	2014-2015
(12) At Large Member, ASCE Computing Division, ExCom	2015-2016
(13) Secretary, ASCE Computing Division, ExCom	2016-2017
(14) Vice Chair, ASCE Computing Division, ExCom	2017-2018
(15) Chair, ASCE Computing Division, ExCom	2018-2019
(16) Ex-Chair, ASCE Computing Division, ExCom	2019-2020
(17) Member, Board on Infrastructure and the Constructed Environment, The National Academies of Sciences, Engineering, and Medicine	2021
(18) Scientific Committee, TUM Georg Nemetschek Institute Artificial Intelligence for the Built World (TUM GNI)	2023-2026

Organizing Committee Duties

(1) Local Chair, ASCE International Workshop on Computing in Civil Engineering	2012-2013
(2) Publicity Chair, Organizing Committee, ACM BuildSys 2015	2015
(3) Co-Chair, Technical Program, Organizing Committee, ACM BuildSys 2016	2016
(4) Co-organizer, <i>NSF Workshop, Connecting Woman Faculty in Sustainable Building Research</i> , Dalian, China, July 5-6, 2018	2018
(5) Co-organizer, <i>NSF Workshop, Connecting Woman Faculty in Sustainable Building Research</i> , Syracuse, NA, September 23 rd , 2018	2018
(6) Program Committee Member, Health in Buildings Roundtable	2020
(7) Organizing Committee Member, IN2WIBE, Health in Buildings Workshop	Jan 2021
(8) Organizing Committee Member, IN2WIBE, Artificial Intelligence for Healthy Buildings	Nov 2021
(9) Co-organized Writing Workshops on Human-Building Interaction (4 writing workshops)	Jan-March 2022

(10) Co-organized a Virtual Hackathon on Human-Building Interaction	February 2022
(11) Organizing Committee Member, IN2WIBE, Future of Office Workspace and Wellbeing	September 2022
(12) Co-organizer /Co-moderator of "Ask me Anything" Webinars, National Academy of Construction	Fall 2022-Present
(13) Organizing Committee Member, IN2WIBE, Enabling Technologies for Well-being In the Built Environment	September 2023

Memberships in Professional Societies

(1) American Society of Civil Engineers (ASCE)	Since 2009
(2) International Association of Automation and Robotics in Construction (IAARC)	Since 2009
(3) Construction Institute (CI)	2009-2012
(4) Construction Management Association of America (CMAA)	2009-2012
(5) BuildingSMART Alliance	2008-2012
(6) Water Environment Federation (WEF)	2010-2012
(7) American Society for Engineering Education (ASEE)	2011-2102
(8) Institute of Electrical and Electronics Engineers (IEEE) Robotics and Automation Society	2012
(9) Construction Research Council (CRC)	Since 2012
(10) Association for Computer Machinery (ACM)	Since 2018

Other External Service

(1) Host for 'Ask Me Anything' webinars for National Academy of Construction	2022-Present
(2) Advisory Committee Member for Politecnico di Torino	2023
(3) Expert, New Bauhaus Project, European Union	2023
(4) Power Differentials in Engineering in Academia: Existence, Impact, Awareness, and Mitigation, ASEE CDEI	2023
(5) Power Differentials Presentation for Global Engineering Deans Council Webinar	2024
(6) NAC podcast in the "Get the kNACK" series on technologies	2024

Internal Service

University Service

(1) Member, USC 2020 Sustainability Plan, Greenhouse Gas Emissions Sub-Committee	2016
(2) USC Mentoring Awards Selection Committee	2019
(4) New Computer Science Architect Selection Committee	2020
(5) USC IYA Dean Search Committee	2021
(6) Presidential Sustainability Working Group Committee on Campus Sustainability Goals	2021
(7) USC Center for Sustainability Solutions Research Advisory Board Member	2020-2021
(8) USC Healthy Campus, Advisory Committee Member	2022
(9) Member, University Committee of Academic Review (UCAR)	2023
(10) Deans of Faculty and Deans of Research Panel Discussion	2024

School Level Service

(1) Member, VITAC: Viterbi Information Technology Advisory Council	2010-2015
(2) Member, MS Green Technologies Program Committee and Student Advisement	2011-2014
(3) Member, Viterbi WISE Committee for 2014 Undergraduate Research Experience Awards	2013-2014

(4) Member, Viterbi Trustee and Presidential Scholarship Committee (Interviewer)	2014
(5) Member, Viterbi WISE Committee for 2014 WISE Top-Off Awards	2014-2015
(6) Member, Viterbi WISE Committee for 2014 Summer Research Awards	2014-2015
(7) Member, Viterbi WISE Committee for 2014 WiSE Ph.D. Merit Awards	2014-2015
(8) Member, Viterbi Transformative Faculty Committee	2014-2016
(9) Member, Engineering Faculty Council (EFC)	2015-2016
(10) Member, Viterbi Research Committee	2015-2017
(11) Member, Joint APT/EFC Merit Review Committee	Spring 2016
(12) At Large Member, Appointment, Promotion, and Tenure (APT) Committee	2016-2017
(13) Member, Engineering Faculty Council (EFC)	2017-2019
(14) Viterbi Appointment, Promotion, and Tenure (APT) Committee	2017-2020
(15) Viterbi PhD Council	2017-Present
(16) Viterbi Joint APT/EFC Merit Review Committee	2018-2019
(17) Viterbi Research Awards Selection Committee	2019
(18) Joint Viterbi EFC Service Evaluation	2019-2021
(19) Viterbi Idea Generation Committee for USC's New Sustainable Building	2019-2020
(20) Center for Sustainability advisory board – proposal review process	2020
(21) Grade Appeal Committee	Summer 2020
(22) PhD Academic Career Mentoring Panel Series	Spring 2020
(23) Development of Minor in Engineering Innovation for Global Challenges	2020-2021
(24) Viterbi Joint APT/EFC Merit Review Committee	2021
(25) Viterbi Strategic Plan for Occupancy and Space Planning	Spring 2022

Departmental Service

(1) Faculty Advisor, Undergraduate Civil Engineering Building Science Student Advisement	2009-2012
(2) Member, Faculty Merit Review Committee	2010 & 2014
(3) Member, Strategic Planning Committee	2012- 2014
(4) Member, Ph.D. Student Recruitment and Scholarship Committee	2009-Present
(5) Member, Committee to Develop Procedures on Tendering Joint Appointments to Tenured/Tenure Track Faculty	2012
(6) Member, RA/TA Awards Committee	2012-2013
(7) Member, Faculty Search Committee	2012-2013
(8) Member, Visitor Requests Committee	2013-2016
(9) Member, Ad Hoc Committee for Appointments	2013
(10) ABET Course Coordinator for CE 470	2012-Present
(11) USC Faculty Representative	2013-2014
(12) Member, Best Thesis Committee	2013
(13) Faculty Advisor, Undergraduate Civil Engineering Students (Building Science)	2013 - Present
(14) Member, Alumni Awards Committee	2013-2014
(15) Member, BS CEE Admissions Conversion Phone Call Campaign Committee	2014
(16) CEE Information Technology Committee	2014
(17) Teaching Assistant Assignment Committee	2015
(18) Construction Engineering and Management Curriculum Committee	2015
(19) Faculty Search Committee	2015-2016

(20) Non-engineering Students Degree Requirements Committee	2015-2016
(22) CEE Department Chair Evaluation Committee	2017-2018
(23) Alumni Awards Committee	2017
(24) Construction Engineering and Management Curriculum Committee	2017-2019
(25) Promotions and Tenure Committee	2017-2019
(26) Explore USC, CEE Department Representative	2019
(27) Member, Strategic vision for CEE department	2019
(28) Member, Departmental tenure, and promotion subcommittee	2019
(29) Member, Strategic Vision Planning Committee	Fall 2019-Spring 2020
(30) Member, Faculty Retreat Committee	Fall 2019-Spring 2020
(31) Member, Space Committee	2021

OUTREACH ACTIVITIES

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| (1) Presentation of research to high school students in collaboration with the Iridescent Learning, http://iridescentlearning.org/ . Students from Jefferson High School, Bishop Conaty Our Lady of Loretto, New Designs Charter School, and West Adams High attended to a research presentation that focused on research in i-LAB. | 2012 |
| (2) PI Becerik-Gerber partnered with the Center for Engineering Diversity (CED) Summer Institute for helping three freshmen, who are underrepresented in engineering majors (Latino), acclimate to college life through a short project, where students worked together as a team on an assigned project, which required them to set up a sensor system for measuring ambient climate conditions and use the variations of ambient conditions for detecting changes in occupancy of a room. The students got familiar with sensor systems and some simplified concepts of machine learning techniques. The students learned how a wireless sensor system is set up, they learned about research validation concepts and understood the need for collecting ground truth data. Two out of three students (Latino and female engineering students) continued to be part of PI Becerik-Gerber's research group. | 2012 |
| (3) Presentation to middle school students (6 th graders) at the Foshay Learning Center on the topic: "Who is a Civil Engineer? How Energy Efficient Buildings Work?" | 2012 |
| (4) NSF BE-LA: Body Engineering, Los Angeles (Award number: 1045595): The project establishes a new GK-12 program at USC that develops graduate fellows majoring in engineering and related disciplines into well-rounded STEM leaders of tomorrow, while introducing cutting-edge body engineering research into urban Los Angeles middle school science classrooms. Graduate fellows are provided with training and practice in education, communication, leadership, collaboration, and cultural sensitivity that enhances their doctoral training. Each graduate fellow is paired with a middle school science teacher and serves as an in-class science resource throughout the school year. Fellows develop and deliver original lesson plans incorporating their doctoral research and the research of their faculty advisors. Geoffrey Kavulya of i-LAB is one of the NSF BE-LA fellows. His focus and responsibilities include serving as a resource and content expert in Earth Science at Foshay Middle School. The primary objective is to provide in-depth and inquiry-based learning activities for about 80 students. The topics covered include tools of earth science, earth's systems and cycles, plate tectonics, earthquakes and volcanoes. Each of these topics is accompanied by visuals such as relevant video clips and/or actual samples | 2012 - 2013 |

necessary to explain fundamental concepts of earth science. Our focus is to help students to develop positive attitudes toward STEM.

- (5) I-LAB's research is featured as part of a scientist's history video series to the Curiosity Machine website (<http://curiositymachine.org>) which, is an interactive website that uses science, technology and engineering projects to develop persistent curiosity and show that knowledge is empowering. Our group has designed two engineering design challenges that K-5 children can do with their parents. These two challenges are "Candles in the dark" and "Generate electricity to light up an LED" . 2012-2013
- (6) Hosted three incoming freshmen in our lab and presented our work to them as part of the Center for Engineering Diversity's Summer Institute Program. 2013
- (7) In anticipation for Gravity (an upcoming film starring Sandra Bullock as an engineer), the movie, and in partnership with Warner Bros. Pictures, Iridescent Learning launched a science contest for teens called the "Gravity Design Challenge". Teens are invited to the website Curiosity Machine to participate in the challenge, through which they were paired with a mentor to design and build a Rube Goldberg space machine that simulates an orbit of the earth. The students built a launch mechanism, and orbit transfer mechanism, and a gravity well that simulates the orbit. <http://iridescentlearning.org/get-involved/los-angeles/>. Becerik-Gerber mentored the high school students in the Gravity Challenge and acted as a female role model, encouraging high school girls to explore a career in engineering. 2013
- (8) iLAB hosted, Guillermo Castro, a second year Civil Engineering undergraduate student in partnership with East LA College's STEM Academy. Through a 10-week long program, the student worked closely with Ali Ghahramani (2nd year PhD student in iLAB) on a research project that aimed at learning human's thermal preferences by sensing the performance of human thermoregulation system. We designed an infrared radiation-sensing device that captures how blood flow changes in specific points on a human face. The student helped with the fabrication of the device, data collection, and data analysis using different software packages including LabView and Matlab. 2014
- (9) A group of LAUSD (Los Angeles Unified School District) middle school STEM teachers took part in USC ACCESS 4Teacher's NSF RET (USC Viterbi National Science Foundation - Research Experience for Teachers Program). This collaboration, between USC and LAUSD teachers, aims to plan, design, pilot, and help implement engineering-driven 6-8th grade curricula based on current research in the classrooms and beyond. From the group of LAUSD teachers participating in the program, two teachers (an environmental and life science teacher and a physical science teacher) spent 5 weeks in our lab, working closely with Ali Ghahramani (2nd year PhD student in iLAB) and Dr. Burcin Becerik-Gerber, researching human building interactions for energy efficiency - Facilitated Human Interactions for Reducing Energy (FHIRE). The teachers participated in research by exploring energy related technological advancements in commercial and residential buildings, and how human energy related behaviors influence building energy performance. Specifically, they took part in experiments, where we modeled personalized thermal comfort preferences for occupants in a shared office space. Their tasks included collecting data using surveys and sensors. The teachers worked together to integrate their research experience with the Next Generation Science Standards (NGSS) and they will be implementing their lesson plans in 2014-2015 school year. 2014

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| (10) In collaboration with USC's Precollege Outreach Office, we hosted around 35 middle school female students in our lab and presented them our research and demonstrated the latest technologies we use for research and in the architecture, engineering and construction industry. | 2015 |
| (11) As part of the USC ACCESS 4Teacher's NSF RET (USC Viterbi National Science Foundation - Research Experience for Teachers Program), we hosted an LAUSD (Los Angeles Unified School District) STEM teacher in our lab, exposing him to our research and state of the art solutions for building energy efficiency, with a specific focus on daily activity recognition. | 2015 |
| (12) In collaboration with Iridescent Learning, iLAB researchers worked on open ended engineering challenges that focus on energy conservation in buildings. As part of this effort, 10 researchers from iLAB attended a Design-Build-Innovate workshop that was led by iridescent Learning on July 21. Through this workshop, the researchers learned how to best design engineering challenges that would expose students to engineering and technology challenges and encourage them to consider careers in these areas. We have designed a comprehensive sustainable building engineering challenge. | 2015 |
| (13) Guillermo Castro, a third year Civil Engineering undergraduate student from East LA College continued working on the project that aimed at learning human's thermal preferences by sensing the performance of human thermoregulation system. Through a 10-week long program of STEM Academy, the student worked closely with a PhD student in iLAB and collected data using an infrared radiation-sensing device that captures how blood flow changes in specific points on a human face. The student also helped analyzing the data. | 2015 |
| (14) As part of NSF's Research Experience for Undergraduates (REU) Program, an undergraduate student (African American female student) in civil engineering took part in research project that focused on simulating lighting and HVAC energy consumption in office buildings. During the summer of 2015, the student worked with a PhD student on building simulations using Energy Plus and DaySim using DOE's reference buildings. | 2015 |
| (15) Michael Castro, a third year Mechanical Engineering undergraduate student from East LA College, worked on a project aimed at improving building's energy efficiency via developing activity-based and user-centered automation systems. During a 10-week long program of STEM Academy, Michael worked closely with a PhD student in iLAB to build and program wireless power meters and actuators to monitor occupant's activities and automate the operation of appliances. | 2016 |
| (16) iLAB researchers, in collaboration with Iridescent Learning, designed two engineering challenges to be part of the Sustainable Town series. These challenges included (1) building a water collection system that collects and spreads out as much water as possible during a rainstorm and (2) designing a device that can spread natural light around a house, so a secret message could be read inside the house. These challenges are going to be published at the curiositymachine.org website. | 2016 |
| (17) Iridescent Learning worked with iLAB to develop on an inspirational video is about our research and design self-directed engineering challenges that urban families can do at home. The underlying idea is that families learn concrete strategies to better support their children in schools by staying engaged. Children and their families watch the video, build a project in response to the challenge that transfers specific engineering principles highlighted in the video, and share their invention through photos, videos, sketches, and writing. These activities are also hosted at the curiositymachine.org website. | 2016 |

- (18) Family Science Workshops task brings role models together with parents and their children to inspire students to pursue engineering careers and engage underserved families in long-term science exploration. In collaboration with Iridescent Learning, we attended two Family Science Workshops, that targeted low-income minority families with limited knowledge of engineering principles. The family science workshops aimed at teaching the students what energy is, non-renewable energy sources and their impact on the environment, renewable energy sources (solar energy, wave energy, wind energy, etc.), how we waste energy, how to conserve energy and water, how to save energy with natural lighting. K12 students, assisted by the PhD students engaged in this project, built houses that incorporated (1) a water collection system; (2) a sunlight dispersal; and used (3) renewable energy with inexpensive commonly-found office materials that can be used for the design challenge. We acted as mentors and provided formative feedback to children on how to improve their designs and engaged them in a deeper conversation about the science beyond their physical projects. 2016
- (19) Brady Guan, an undergraduate student at Cal Poly Pomona, worked on a project aimed at developing data-driven approaches for understanding human-building interactions. During a 10-week long program of STEM Academy, Brady worked closely with two PhD students in iLAB and prepared and analyzed the data collected from multiple sensors around/attached to an intelligent Desk. 2017
- (20) Two high school students joined iLAB for 7 weeks during Summer 2017 and built wearable sensors to sense and monitor thermal comfort using physiological measurements around human wrist. Students gained experience working with sensors, data collection systems and some of the machine learning algorithms. As part of the Viterbi SHINE (Summer High School Intensive Next-Generation Engineering) program, the students met weekly for learning about university-level research, building scientific communication skills, and benefiting from another layer of mentoring from undergraduate researchers. 2017
- (21) As part of the NSF REU program, a female undergraduate student worked with two PhD students over a period of 5 weeks on a project, which is centered around creating smart desks that can understand user needs and behavior. The smart desks created by Arup (<https://allaboutthedesk.arup.com>) are equipped with multiple sensors that try to monitor desk-occupant behavior (e.g. motion sensors, power meters etc.) and their surrounding environment (e.g. temperature, lighting levels etc.). To understand occupant behavior, it is important to know whether the desk is occupied or not. The occupancy information can be related to other information such as power consumption and impact on lighting/ temperature of the surrounding environment to get a better understanding of how occupants use the desks and how their desk-use behavior impacts the environment. Specifically, student's work was related to deciphering occupancy profiles of the desk users by using the motion sensor data collected from each desk. The student wrote scripts to extract and preprocess the data to feed it to different algorithms that can decipher occupancy states from the motion data. She also tested different algorithms (Kernel Density Estimation, Jenks Natural Breaks, and k-means clustering) to estimate occupancy states. Furthermore, she also helped to identify what appliances were being used based on the power consumption data. Her work on cleaning and preprocessing the data was also useful in implementing other algorithms (clustering, peak finding) used to extract occupancy states from the motion data. 2017
- (22) Two high school students joined iLAB for 7 weeks during Summer 2018 as part of the Viterbi 2018

- SHINE (Summer High School Intensive Next-Generation Engineering) program. Students focused on human-machine interaction, specifically focusing on construction robot-construction worker collaboration. Specifically, they worked on simulating a demolition construction robot and creation of construction site properties using immersive virtual environments. Students met weekly for learning about university-level research, building scientific communication skills, and benefiting from another layer of mentoring from undergraduate researchers.
- (23) As part of the USC-ELAC (East Los Angeles College) Summer Research Program, two undergraduate students joined iLAB. These students focused on sensing thermal comfort using wearable sensors and thermal imaging. During a 10-week long program of the students worked closely with a PhD student in iLAB, built sensors, collected and analyzed the data from multiple sensors around/attached to an intelligent desk. 2018
- (24) As part of the USC ACCESS 4Teacher's NSF RET (USC Viterbi National Science Foundation - Research Experience for Teachers Program), we hosted two LAUSD (Los Angeles Unified School District) STEM teacher in our lab, exposing them to our research and state of the art for climate change and sustainable building design. 2018
- (25) As part of the USC-ELAC (East Los Angeles College) Summer Research Program, a junior in computer science in East Los Angeles College (ELAC) participated in summer research through the Mathematics, Engineering and Science Achievement (MESA) summer research internship program. The MESA summer research program at ELAC supports educationally and economically disadvantaged students to participate in summer research at USC for seven weeks over the summer (mid June – early August). The student supported data collection and analysis for the experiment, which focused on comparing different sensing and modeling methods for predicting thermal comfort. 2019
- (26) Two undergraduate students joined iLAB as part of Viterbi Summer Institute (incoming freshmen). The 4-week residential high-achievement program is designed to enhance the transition to USC for engineering students from underrepresented backgrounds and facilitated through Viterbi Center for Engineering Diversity (CED). The Viterbi Summer Institute (VSI) aims to create early awareness about the importance of research by having students work in labs with faculty and graduate students. The VSI students supported the sensor setup efforts for thermal comfort assessment experiments. 2019
- (27) PI Becerik-Gerber's PhD student, Ashrant Aryal, conducted a workshop for high school students currently involved in the Summer High School Intensive in Next-Generation Engineering (SHINE) program. The SHINE program is designed to provide hands on research experience for high school students who are interested in pursuing further education in STEM fields. The one-day workshop introduced students to the idea of smart buildings and helped them get hands on experience working with different sensors and data acquisition systems. 2019
- (28) Three high school students joined iLAB for 7 weeks during summer as part of the Viterbi SHINE (Summer High School Intensive Next-Generation Engineering) program. Students learned about and contributed to the interaction programming in virtual reality. Specifically, they worked on programming door/window interactions, as well as making the VR environment more realistic. Students met weekly for learning about university-level research, building scientific communication skills, and benefiting from another layer of mentoring from undergraduate researchers. 2019 & 2021
- (29) As part of the *#HiddenNoMore* program, funded by the State Department, I hosted about [30](#) 2019

- [women leaders who represent “hidden talent”](#) in their home countries and showed them our efforts to prepare women and girls for STEM careers.
- (30) We produced a 4-minute video about our intelligent desk project. The video is disseminated by [NSF.gov](#) in the multimedia gallery: https://nsf.gov/news/mmg/mmg_disp.jsp?med_id=185956&from= It is also included in NSF’s “Dispatches from the Cutting Edge” TV series. Additionally, it is included on NSF’s [Science Zone Roku channel](#). Finally, the video is featured on NSF’s Science Zone app for iPhone/iPad and Android. 2019
- (31) As part of Summer Undergraduate Research Experience (SURE) program, an undergraduate student (civil engineering) from Duke University, joined iLAB for during Summer of 2021 and worked on virtual ergonomics. She developed Unity 3D scenes, created Sketchup models, and worked with the Ergonomics Evaluation app from the 3D experience (Dassault Systems) for a remote-controlled robot on a construction site. 2021
- (32) A high school student joined iLAB for 7 weeks during Summer 2021 and another high school student joined our lab for 7 weeks during Summer 2021 as part of the Viterbi SHINE (Summer High School Intensive Next-Generation Engineering) program. Student learned about and contributed to the interaction programming in virtual reality. Specifically, she worked on virtual ergonomics evaluation developed Unity 3D scenes, created Sketchup models, and worked with the Ergonomics Evaluation app from the 3D experience (Dassault Systems) for an office space in which a teleoperation workstation for a construction robot is to be tested 2021 & 2023
- (33) As part of the USC-ELAC (East Los Angeles College) Summer Research Program, a junior in electrical engineering in East Los Angeles College (ELAC) participated in summer research through the Mathematics, Engineering and Science Achievement (MESA) summer research internship program. The MESA summer research program at ELAC supports educationally and economically disadvantaged students to participate in summer research at USC for seven weeks over the summer (mid June – early August). The student worked on collecting biofeedback to assess immersive experiences using emotion-sensing wearable technology. 2021
- (34) Several incoming freshmen engineering students are engaged in research activities of this project, as part of the Viterbi Scholars Institute (VSI). VSI is a high achievement program designed to enhance the transition to USC for engineering students from underrepresented backgrounds. Institute participants gain a competitive edge by engaging with faculty, staff, and students in a supportive community environment. The students who are part of our lab worked in the Unity 3D platform and created VR environments and conducted literature review on the challenges of the construction industry and some of the novel technologies currently adapted by the industry. 2021-2022
- (35) Eight high school students joined iLAB for 7 weeks during summer as part of the Viterbi SHINE (Summer High School Intensive Next-Generation Engineering) program. Students learned about virtual reality, environmental sensing, human subject experiments, and smart home automation technologies. Students met weekly for learning about university-level research, building scientific communication skills, and benefiting from another layer of mentoring from undergraduate researchers. 2023

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