B u r c i n   B e c e r i k - G e r b e r
Professor of Civil and Environmental Engineering
University of Southern California
Sonny Astani Department of Civil & Environmental Engineering
3620 S. Vermont Ave. KAP 224C, Los Angeles, CA 90089-2531
becerik@usc.edu +1 213 740-4383 (O) +1 617 233 5088 (M)
http://i-lab.usc.edu/

[Updated September 2022]

ACADEMIC DEGREES

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

ACADEMIC APPOINTMENTS

University of Southern California, Sonny Astani Department of Civil and Environmental Engineering (CEE)

Chair of Civil and Environmental Engineering Department	July 2021
Dean's Professor	2020-Present
Professor (with Tenure)	2019-Present
Director of Center for Intelligent Environments (CENTIENTS)	2019-Present
Director of CEE Graduate Programs	2017-2021
Associate Professor (with Tenure)	2015-2019
Stephen Schrank Early Career Chair in Civil and Environmental Engineering	2012-2019
Assistant Professor (Tenure Track)	2008-2015

Southern California Institute of Architecture

Lecturer	2007-2008

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	

RESEARCH INTERESTS

User-Centered Built Environments

Human-built environment interactions; Occupancy and behavior driven control of building systems; Modeling user preferences; Energy-aware and comfort-driven smart built environments; User-centered design and operation of built environments; People-centered AI for built environments

Responsive and Adaptive Built Environments

Cognitive built environments; 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; Modeling occupancy and associated energy loads; Online learning for predicting human & building behavior

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

(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)

(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

(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

(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

(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

(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

(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

(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

(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

(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

(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

(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 Constr*uction, 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

(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

(44) Ghahramani A*, Zhang K*, Dutta K, Yang Z, **Becerik-Gerber B**. (2016) "Energy Savings from Temperature Setpoints and Deadband: Quantifying the Influence of Building and System Properties on Savings," *Journal of Applied Energy,* Vol. 165, pp: 930-942, http://dx.doi.org/10.1016/j.apenergy.2015.12.115

(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

(56) Aryal A*, Ghahramani A*, **Becerik-Gerber B**. (2017) "Monitoring Fatigue in Construction Workers Using Physiological Measurements," *Journal of Automation in Construction*, Special Issue on Safe Construction through Wearable Protection Devices, Vol 82, pp:154-165, http://dx.doi.org/10.1016/j.autcon.2017.03.003

(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

(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, http://dx.doi.org/10.1080/19401493.2016.1267801

(59) Ghahramani A*, Castro G*, Ahmadi-Karvigh S*, **Becerik-Gerber B**. (2018) "Towards Unsupervised Learning of Thermal Comfort Using Infrared Thermography," *Journal of Applied Energy,* Vol. 211, pp: 41-49, https://doi.org/10.1016/j.apenergy.2017.11.021

(60) Ahmadi-Karvigh S*, Ghahramani A*, **Becerik-Gerber B**, Soibelman L. (2018) "Real-Time Activity Recognition for Energy Efficiency in Buildings," *Journal of Applied Energy*, Vol. 211, pp: 146-161, https://doi.org/10.1016/j.apenergy.2017.11.055

(61) Ozcelik G*, **Becerik-Gerber B**. (2018) "Benchmarking Thermoception in Virtual Environments to Physical Environments for Understanding Human-Building Interactions," *Journal of Advanced Engineering informatics*, Vol. 36, pp: 254-263, https://doi.org/10.1016/j.aei.2018.04.008

(62) Ghahramani A*, Dutta K*, **Becerik-Gerber B**. (2018) "Energy Trade Off Analysis of Optimized Daily Temperature Setpoints," *Journal of Building Engineering*, Vol. 19, pp: 584-591, https://doi.org/10.1016/j.jobe.2018.06.012

(63) Aryal A*, **Becerik-Gerber B**. (2018) "Energy Consequences of Comfort-driven Temperature Setpoints in Office Buildings," *Journal of Energy and Buildings,* Vol.177, pp: 33-46, https://doi.org/10.1016/j.enbuild.2018.08.013

(64) Khashe S*, Lucas G, **Becerik-Gerber B**, Gratch, J. (2018) "Establishing Social Dialogue Between Buildings and Their Users," *International Journal of Computer-Human Interaction,* https://doi.org/10.1080/10447318.2018.1555346

(65) Ozcelik G*****, **Becerik-Gerber B**. Chugh R*. (2019) "Understanding Human-Building Interactions Under Multimodal Discomfort," *Journal of Building and Environment,* Vol. 151, pp: 280-290, https://doi.org/10.1016/j.buildenv.2018.12.046

(66) Carneiro JP*, Aryal A*, **Becerik-Gerber B**. (2019) "Influencing Occupant's Choices by Using Spatiotemporal Information Visualization in Immersive Virtual Environments," *Journal of Building and Environment,* Vol. 150, pp: 330-338, https://doi.org/10.1016/j.buildenv.2019.01.024

(67) Ahmadi-Karvigh S*, **Becerik-Gerber B**, Soibelman L. (2019) "Intelligent Adaptive Automation: Activity-Driven and User-Centered Building Automation," *Journal of Energy and Buildings,* Vol: 188-189, pp: 184-199, https://doi.org/10.1016/j.enbuild.2019.02.007

(68) Aryal A*, **Becerik-Gerber B**, Anselmo F, Roll S, Lucas G. (2019) "Smart Desks to Promote Comfort, Health and Productivity in Offices: A Vision for Future Workplaces," *Frontiers in Built Environment, Indoor Environment section,* Vol. 5, pp: 76, doi: 10.3389/fbuil.2019.00076

(69) Aryal A*, **Becerik-Gerber B**. (2019) "Personalized Thermal Comfort Modeling using Wrist-worn Temperature Sensor, Thermal Camera and Ambient Temperature Sensor: A Comparison Study," *Journal of Building and Environment*, Vol: 160, https://doi.org/10.1016/j.buildenv.2019.106223

(70) Carneiro JP*, Aryal A*, **Becerik-Gerber B**. (2019) "Understanding the Influence of Orientation, Time-of-Day and Blind Use on User's Lighting Choices and Energy Consumption using Immersive Virtual Environments," *Journal of Advances in Building Energy Research,* https://doi.org/10.1080/17512549.2019.1639075

(71) Lin J, Zhu R*, Li N, **Becerik-Gerber B**. (2020) "How Occupants Respond to Building Emergencies: A Systematic Review of Behavioral Characteristics and Behavioral Theories," *Journal of Safety Science,* Vol: 122, https://doi.org/10.1016/j.ssci.2019.104540

(72) Lin J, Zhu R*, Li N, **Becerik-Gerber B**. (2020) "Do People Follow the Crowd in Building Emergency Evacuation? A Cross-Cultural Immersive Virtual Reality-Based Study," *Advanced Engineering Informatics*, Vol: 43, https://doi.org/10.1016/j.aei.2020.101040

(73) Zhu R*, Lin J, **Becerik-Gerber B**, Li N. (2020) "Human-Building-Emergency Interactions and Their Impact on Emergency Response Performance: A Review of State of the Art," *Journal of Safety Science,* Vol: 127, https://doi.org/10.1016/j.ssci.2020.104691

(74) Zhu R*, Lin J, **Becerik-Gerber B**, Li N. (2020) "Influence of Architectural Visual Access on Emergency Wayfinding: A Cross-cultural Study in China, United Kingdom and United States," *Journal of Fire Safety,* Vol: 113, https://doi.org/10.1016/j.firesaf.2020.102963

(75) Zhu R*, Lucas G, **Becerik-Gerber B**, Southers E. (2020) "Building Preparedness in Response to Active Shooter Incidents: Results of Focus Group Interviews," *International Journal of Disaster and Risk Reduction*, Vol. 48, https://doi.org/10.1016/j.ijdrr.2020.101617

(76) Aryal A*, **Becerik-Gerber B**. (2020) "Thermal Comfort Modeling with when Personalized Comfort Systems are in Use: Comparison of Sensing and Learning Methods," *Building and Environment,* Vol: 185, https://doi.org/10.1016/j.buildenv.2020.107316

(77) Xiao Y*, **Becerik-Gerber B**, Lucas G, Roll S. (2021) "Impacts of Working from Home During COVID-19 Pandemic on Physical and Mental Well-being of Office Workstation Users," *Journal of Occupational and Environmental Medicine,* Vol 63, Issue 3, https://doi.org/10.1097/jom.0000000000002097

(78) Awada M*, **Becerik-Gerber B**, Hoque S, O'Neill Z Pedrielli G, Wen J, Wu T. (2021) "Ten Questions Concerning Occupant Health in Buildings during Normal Operations and the COVID-19 Pandemic," *Building and Environment,* Vol 188, https://doi.org/10.1016/j.buildenv.2020.107480

(79) Fukumura Y, McLaughlin Gray J., Lucas G, **Becerik-Gerber B**, Shawn C. Roll. (2021) "Worker Perspectives on Incorporating Artificial Intelligence into Office Workspaces: Implications for the Future of Office Work," International Journal of Environmental Research and Public Health, Vol. 18, 10.3390/ijerph18041690

(80) Awada M*, Zhu R*, **Becerik-Gerber B**, Lucas G, Southers E. (2021) "An Integrated Emotional and Physiological Assessment of VR-Based Active Shooter Incident Experiments," *Advanced Engineering Informatics,* Vol. 47, https://doi.org/10.1016/j.aei.2020.101227

(81) Aryal A*, **Becerik-Gerber B**, Roll S, Lucas G. (2021) "Intelligent Agents to Improve Thermal Satisfaction by Controlling Personal Comfort Systems Under Different Levels of Automation," IEEE Internet of Things Journal, vol. 8, no. 8, pp. 7089-7100, https://doi.org/10.1109/JIOT.2020.3038378

(82) Awada M*, Lucas G, **Becerik-Gerber B**, Roll S. (2021) "The Impact of Work from Home (WFH) on Work Productivity and Worker Experience," *Journal of Work,* https://doi.org/10.3233/WOR-210301

(83) Fukumura Y, Schott J, **Becerik-Gerber B**, Lucas G, Roll S. (2021) "Negotiating Time and Space when Working from Home: Experiences during COVID-19," *Journal of Occupation, Participation and Health,* https://doi.org/10.1177/15394492211033830

(84) Pang Z, **Becerik-Gerber B**, Hoque S, O'Neill Z, Pedrielli G, Wen J, Wu T. (2021) "How Work from Home had Affected the Occupant's Well-being in the Residential Built Environment: An International Survey amid the COVID-19 Pandemic," *ASME Journal of Engineering for Sustainable Buildings and Cities, Special Issue of Well-being in the Built Environment,* https://doi.org/10.1115/1.4052640

(85) Adami P*, Rodrigues P*, Wood P, **Becerik-Gerber B**, Soibelman L, Copur-Gencturk, Y, Lucas G. (2021) "Effectiveness of VR-based Training on Improving Construction Workers' Knowledge, Skills, and Safety Behavior in Robotic Operations," *Advanced Engineering Informatics, Special Issue on Emerging Learning Technologies for Future of Work and Education in Engineering,* Vol. 50, https://doi.org/10.1016/j.aei.2021.101431

(86) Awada M*, **Becerik-Gerber B**, White E, Hoque S, O'Neill Z Pedrielli G, Wen J, Wu T. (2021) "Occupant Health in Buildings: Impact of the COVID-19 Pandemic on the Opinions of Building Professionals and Implications on Research," *Building and Environment*, Vol: 207, https://doi.org/10.1016/j.buildenv.2021.108440

(87) Awada M*, **Becerik-Gerber B**, Lucas G, Roll S. (2021) "Associations between Satisfaction with Indoor Environmental Quality and Worker Health while Working from Home during COVID-19 Pandemic," *ASME Journal of Engineering for Sustainable Buildings and Cities, Special Issue of Well-being in the Built Environment,* https://doi.org/10.1115/1.4052822

(88) Adami P*, Rodrigues P*, Wood P, **Becerik-Gerber B**, Soibelman L, Copur-Gencturk, Y, Lucas G. (2022) "Impact of VR-based Training on Human-Robot Interaction in Teleoperated Construction Robots," *Journal of Computing in Civil Engineering*, Vol. 36, Issue 3, https://doi.org/10.1061/(ASCE)CP.1943-5487.0001016

(89) Zhu R*, Lucas G, **Becerik-Gerber B**, Southers E, Landicho E. (2022) "The Impact of Security Countermeasures on Human Behavior in Active Shooter Incidents" *Scientific Reports,* 12:929, https://doi.org/10.1038/s41598-022-04922-8

(90) Rodrigues P*, Awada M*, Xiao Y*, Aryal A*, Fukumura Y, Lucas G, **Becerik-Gerber B**, Roll S. (2022) "Automated Ergonomic Assessment of Office Worker Postures using RGB and Depth Cameras" *Advanced Engineering Informatics,* Vol. 52, 101596, https://doi.org/10.1016/j.aei.2022.101596

(91) Awada M*, **Becerik-Gerber B**, Lucas G, Roll S. (2022) "Cognitive Performance, Creative and Stress Levels of Neurotypical Adults under Different White Noise Levels," Scientific Reports, 12:14566, https://doi.org/10.1038/s41598-022-18862-w

Refereed Journal Papers (In Review)

(92) Adami P*, Singh R, Rodrigues P*, **Becerik-Gerber B**, Soibelman L, Copur-Gencturk Y, Lucas G. "Participants Matter: Effectiveness of VR-based Training on the Knowledge, Trust in the Robot, and Self-Efficacy of Construction Workers and University Students," *Advanced Engineering Informatics*, Resubmitted August 2022

(93) Liu R*, Zhu R*, **Becerik-Gerber B**, Lucas G, Southers E. "Be Prepared: How Training and Emergency Type Affect Evacuation Behavior," *Journal of Computer Assisted Learning,* Submitted June 2022

(94) Zhu R*, **Becerik-Gerber B**, Lin J, Li N. "Data-driven Agent-based Evacuation Simulation for Building Safety Design Using Machine Learning and Discrete Choice Models, *Advanced Engineering Informatics*, Submitted June 2022

(95) Rodrigues P, Singh R, Oytun M, Adami P, Woods P, **Becerik-Gerber B**, Soibelman L, Copur-Gencturk Y, Lucas G. "A Taxonomy for Human-Robot Interaction in Construction," *Automation in Construction*, Submitted August 2022

(96) **Becerik-Gerber B**, Lucas L, Aryal A, Awada M*, Berges M. Billington S, Boric-Lubecke O, Ghahramani A, Heydarian A, Holscher C, Jazizadeh F, Khan A, Langevin J, Liu R*, Marks F, Mauriello ML, Murnane E, Noh H, Pritoni M, Roll S, Schauman D, Seyedrezaei M*, Taylor J, Zhao J, Zhu R*. "Human-Building Interaction: The Next Frontier in Convergent Research and Innovation for Intelligent Built Environments," Nature Scientific Reports, Submitted August 2022

(97) **Becerik-Gerber B**, Lucas L, Aryal A, Awada M*, Berges M. Billington S, Boric-Lubecke O, Ghahramani A, Heydarian A, Jazizadeh F, Zhu R*, Liu R*, Marks F, Roll S, Seyedrezaei M*, Taylor J, Holscher C, Khan A, Langevin J, , Mauriello ML, Murnane E, Noh H, Pritoni M, , Schauman D, Zhao J. *"Ten Questions Concerning Human-Building Interaction Research,"* Journal of Building and Environment, Submitted August 2022

Refereed Journal Papers (In Preparation)

(98) Seyedrezaei M*, **Becerik-Gerber** B. Toward Social Justice in the Built Environment: A Systematic Review, *Building and Environment*

(99) Awada M*, Liu R*, Seyedrezaei M*, Lu Z*, Xenakis M*, **Becerik-Gerber B**, Lucas G, Roll S, Narayana S. "Ten Questions Concerning Stress and the Built Environment," *Building and Environment*

Refereed Conference Papers (Published/In Press)

Reviewed by two or three referees, single/double blind reviews

(1) **Becerik B**. (2004) "Suggestions for Improving Adoption of Online Collaboration and Project Management Technology," *20th Annual Conference of Association of Researchers in Construction Management (ARCOM),* 1-3 September, 2004, Edinburgh, http://www.arcom.ac.uk/-docs/proceedings/ar2004-1221-1233_Becerik.pdf

(2) **Becerik B**. (2005) "Innovative Use of Construction Project Extranets to Facilitate Project Collaboration and Management," *AEC2005, 3rd International Conference on Innovation in Architecture, Engineering and Management,* 15-17 June 2005, Rotterdam

(3) **Becerik B**, Soto-Rosa G. (2007) "Management and Control Technology for Water/Waste Water Utility Programs," *AWWA/WEF Information Management & Technology Conference*, March 4-7, 2007, Austin, Texas

(4) Hajian H*, **Becerik-Gerber B**. (2009) "A Research Outlook for Real-time Project Information Management by Integrating Advanced Field Data Acquisition Systems and Building Information Modeling," *2009 ASCE International Workshop on Computing in Civil Engineering,* 24-27 June 2009, Austin, Texas, http://dx.doi.org/10.1061/41052(346)9

(5) **Becerik-Gerber B**, Samara R*. (2009) "An Assessment of Building Information Modeling Value and Use," *International Council for Research and Innovation in Building and Construction – IT in Construction (CIB W78), Managing IT in Construction,* 1-3 Oct 2009, Istanbul, Turkey, http://itc.scix.net/cgi-bin/works/Show?w78-2009-1-27

(6) **Becerik-Gerber B**, Gerber D, Kunz A. (2010) "Building Information Modeling and Lean Construction: Technology, Methodology, and Advances from Practice," *IGLC 18: 18th Annual Conference of the International Group for Lean Construction,* July 14-16, 2010, Haifa, Israel

(7) Li N*, **Becerik-Gerber B**. (2010) "Exploring the Use of Wireless Sensor Networks in Building Management," icccbe2010 & eg-ice10: *The International Conference on Computing in Civil and Building Engineering 2010 & The XVII EG-ICE Workshop on Intelligent Computing in Engineering 2010,* June 30- July 2, 2010, Nottingham, UK, http://www.engineering.nottingham.ac.uk/icccbe/proceedings/pdf/pf46.pdf

(8) **Becerik-Gerber B**, Kent D*. (2010) "Implementation of Integrated Project Delivery and Building Information Modeling on a Small Commercial Project," *2010 Associated Schools of Construction Annual International Conference*, and *International Council for Research and Innovation in Building and Construction – W89,* April 07-10, 2010 at the Wentworth institute of Technology

(9) Hajian H*, **Becerik-Gerber B**. (2010) "Scan to BIM: Factors Affecting Operational and Computational Errors and Productivity Loss," *The 27th International Symposium on Automation and Robotics in Construction (ISARC),* June 25-27, 2010, Bratislava, Slovakia, http://www.iaarc.org/publications/fulltext/Scan_to_BIM_factors_affecting_operational_and_computational_errors_and_productivity_loss.pdf

(10) Kwak J, Varakantham P, Tambe M, Klein L*, Jazizadeh J*, Kavulya G*, **Becerik-Gerber B**, Gerber D. (2011) "Towards Optimal Planning for Distributed Coordination Under Uncertainty in Energy Domains," 2nd International Workshop on Agent Technologies for Energy Systems (ATES 2011) – A Workshop of the 10th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2011), May 2, 2011, Taipei, Taiwan

(11) Calis G*, Deora S, Li N*, **Becerik-Gerber B**, Krishnamachari B. (2011) "Assessment of WSN and RFID Technologies for Real-Time Occupancy Information," *The 28th International Symposium on Automation and Robotics in Construction*, June 29-July 2, 2011, Seoul, South Korea, http://www.iaarc.org/publications/fulltext/S05-4.pdf

(12) Jog G M, Li S*, **Becerik-Gerber B**, Brilakis I. (2011) "Civil and Environmental Engineering Challenges for Data Sensing and Analysis," *ASCE Workshop of Computing in Civil Engineering,* June 19-22, 2011, Miami, FL, http://dx.doi.org/10.1061/41182(416)14

(13) Klein L*, Li N*, **Becerik-Gerber B**. (2011) "Comparison of Image-Based and Manual Field Survey Methods for Indoor As-Built Documentation Assessment," *ASCE Workshop of Computing in Civil Engineering,* June 19-22, 2011, Miami, FL, http://dx.doi.org/10.1061/41182(416)8

(14) Jazizadeh F*, Kavulya G*, Klein L*, **Becerik-Gerber B**. (2011) "Continuous Sensing of Occupant Perception with Indoor Ambient Factors," *ASCE Workshop of Computing in Civil Engineering,* June 19-22, 2011, Miami, FL, http://dx.doi.org/10.1061/41182(416)20

(15) Li N*, Li S*, **Becerik-Gerber B**, Calis G*. (2011) "Design and Evaluation of Algorithm and Deployment Parameters for an RFID-Based Indoor Location Sensing Solution," *ASCE Workshop of Computing in Civil Engineering,* June 19-22, 2011, Miami, FL, http://dx.doi.org/10.1061/41182(416)10

(16) Kavulya G*, Gerber D, **Becerik-Gerber B**. (2011) "Designing In Complex System interaction: Multi-Agent Based Systems for Early Design Decision Making," *The 28th International Symposium on Automation and Robotics in Construction*, June 29-July 2, 2011, Seoul, South Korea, http://www.iaarc.org/publications/fulltext/S21-2.pdf

(17) Li S*, Li N*, Calis G*, **Becerik-Gerber B**. (2011) "Impact of Ambient Temperature, Tag/Antenna Orientation and Distance on the Performance of Radio Frequency Identification in Construction Industry," *ASCE Workshop of Computing in Civil Engineering,* June 19-22, 2011, Miami, FL, http://dx.doi.org/10.1061/41182(416)11

(18) Jazizadeh F*, Kavulya G*, **Becerik-Gerber B**. (2011) "Effects of Color, Distance and Incident Angle on Quality of 3D Point Clouds," *ASCE Workshop of Computing in Civil Engineering,* June 19-22, 2011, Miami, FL, http://dx.doi.org/10.1061/41182(416)21

(19) Li S*, Li N*, **Becerik-Gerber B**, Calis G*. (2011) "RFID-based Occupancy Detection Solution for Optimizing HVAC Energy Consumption," *The 28th International Symposium on Automation and Robotics in Construction*, June 29-July 2, 2011, Seoul, South Korea, http://www.iaarc.org/publications/fulltext/S17-4.pdf

(20) Klein L*, Kavulya G*, Jazizadeh F*, Kwak J, **Becerik-Gerber B**, Tambe M. (2011) "Towards Optimization of Building Energy and Occupant Comfort Using Multi Agent Simulation," *The 28th International Symposium on Automation and Robotics in Construction (ISARC)*, June 29-July 2, 2011, Seoul, South Korea, http://www.iaarc.org/publications/fulltext/S07-5.pdf

(21) Yang Z*, Li N*, **Becerik-Gerber B**, Orosz M. (2012) "A Multi-Sensor Based Occupancy Estimation Model for Supporting Demand Driven HVAC Operations," Simulation for Architecture and Urban Design (SimAUD), March 26-30, 2012, Orlando, FL, http://dl.acm.org/citation.cfm?id=2339455

(22) Yang Z*, Li N*, **Becerik-Gerber B**, Orosz M. (2012) "A Non-Intrusive Occupancy Monitoring System for Demand Driven HVAC Operations," *CRC 2012: Construction Research Congress*, May 21-23, 2011, West Lafayette, IN, http://dx.doi.org/10.1061/9780784412329.084

(23) Jazizadeh F*, **Becerik-Gerber B**. (2012) "A Novel Method for Non-Intrusive Load Monitoring of Lighting Systems in Commercial Buildings," *ASCE Workshop of Computing in Civil Engineering,* June 17-20, 2012, Clearwater Beach, FL, http://dx.doi.org/10.1061/9780784412343.0066

(24) Li N*, **Becerik-Gerber B**. (2012) "Assessment of a Smart Phone-Based Indoor Localization Solution for Improving Context Awareness in the Construction Industry," *ASCE Workshop of Computing in Civil Engineering,* June 17-20, 2012, Clearwater Beach, FL, http://dx.doi.org/10.1061/9780784412343.0071

(25) Li S*, **Becerik-Gerber B**. (2012) "Evaluating Physiological Load of Workers with Wearable Sensors," *ASCE Workshop of Computing in Civil Engineering,* June 17-20, 2012, Clearwater Beach, FL, http://dx.doi.org/10.1061/9780784412343.0051

(26) Oskouie P*, Gerber D, Alves T, **Becerik-Gerber** B. (2012) "Extending the Interactions of Building Information Modeling and Lean Construction," *20th Annual Conference of the International Group for Lean Construction*, July 18-20, 2012 in San Diego, California, USA

(27) Jazizadeh F*, Kavulya G*, Kwak J, **Becerik-Gerber B**, Tambe M. (2012) "Human-Building Interaction for Energy Conservation in Office Buildings," *CRC 2012: Construction Research Congress*, May 21-23, 2011, West Lafayette, IN, http://dx.doi.org/10.1061/9780784412329.184

(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, <u>Tambe M</u>, Jazizadeh J*, Kavulya G*, Klein L*, **Becerik-Gerber B**, Hayes T, <u>Wood W</u>. (2012) "SAVES: A Sustainable Multiagent Application to Conserve Building Energy," A*utonomous 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, <u>Tambe M</u>, Jazizadeh J*, Kavulya G*, Klein L*, **Becerik-Gerber B**, Hayes T, <u>Wood W</u>. (2012) "Sustainable Multiagent Application to Conserve Energy," – Demo Paper- A*utonomous 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*, <u>Masri S</u>, **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, <u>Tambe M</u>, **Becerik-Gerber B**, <u>Wood W</u>. (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, <u>Tambe M</u>, **Becerik-Gerber B**, <u>Wood W</u>. (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**, <u>Krishnamachari B</u>, <u>Soibelman L</u>. (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**, <u>Tambe M</u> (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, <u>Soibelman L</u>. (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**, <u>Orosz M</u>. (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

(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*, Ozcelik 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," *ICCCBE2016: 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.

Refereed Conference Papers (In Review)

Null

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)

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

Keynotes/Frontiers Lectures

(1) "Energy Conservation in Commercial Buildings", <u>Keynote Lecture</u>, A Place at the Table, May 31-June1, 2014, San Diego, CA

(2) "Investigation of Human-Building Interactions for Adaptive and Responsive Environments," <u>Frontiers in Engineering Lecture</u>, College of Engineering, Pennsylvania State University, April 6, 2015

(3) "Future of Building Information Modeling: Virtual and Augmented Reality for Architecture, Engineering and Construction," <u>Keynote Lecture</u> at SindusCON, October 22, 2015, Sao Paulo, Brazil

(4) "Cognitive Built Environments," <u>Keynote Lecture</u>, 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," <u>Keynote Lecture</u>, 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," <u>Frontiers in Civil Engineering Lecture</u>, Stanford University, Palo Alto, CA, November 16, 2017

(7) "People Centric AI for Sustainable and Resilient Civil Infrastructure," <u>Keynote Lecture</u>, 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

Presentations (Talks, Panels and Poster Presentations)

(14) "Extranet Update: A Study with the U.S. GSA," Conference: Drivers for Design and Real Estate Technology, November 6-7, 2003, Cambridge, MA

(15) "Lessons learned from GSA's Project Management Practices," GSA Learning from Our Legacy Seminar, 2-3 December 2003, New York City, NY

(16) "The Tools of Effective Project Management," Executive Education Management Seminars, 18-19 December 2003, Boston, MA

(17) "Critical Enhancements for Improving the Adoption of Online Project Management Technology," Project Management Institute, North America Global Congress, 23-26 October 2004, Anaheim, LA

(18) "Value of Online Collaboration and Project Management Systems in Design and Construction," e-Builder 2006 User Conference, November 1-3, 2006, Coconut Grove, FL

(19) "On-Demand Collaborative Project Management," Autodesk University 2006, 28 November – December 1, 2006, Las Vegas, NV

(20) "The Value of Enterprise Project Management," Meridian Systems User Conference, 24-26 April 2007, San Diego, CA

(21) "Bringing Data Together with Dashboards, Schedule Integration and Project Management Systems," Meridian Systems User Conference, 29 April- 1 May 2008, Scottsdale, AZ

(22) "Implementing BIM: Risks, Challenges and Rewards," 2008 National Collegiate FM Technology Conference, 20-22 August 2008, Los Angeles, CA

(23) "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

(24) "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

(25) "Architecture, Livability and Land Use," USC Megacities Workshop, November 10-11, 2008 – Los Angeles, CA

(26) "BIM in Education – Headliners," Architecture Engineering and Construction Science and Technology (AEC-ST) Conference, 8-11 December 2008, Washington DC

(27) "BIM and Higher Education Transformation," Architecture Engineering and Construction Science and Technology (AEC-ST) Conference, 7-10 December 2009, Washington DC

(28) "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

(29) "BIM for Construction Management," Panelist, CMAA Southern California Chapter, Long Beach, California, August 12, 2010

(30) "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

(31) "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

(32) "Energy Security and Resilient Control Systems," Invited presentation, USC Information Sciences Institute (ISI), November 15-16, 2011, Los Angeles, California

(33) "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

(34) "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

(35) "Towards Cyber-Social-Physical Systems," Invited presentation, Japan Institute of Architecture, December 16, 2011, Tokyo, Japan

(36) "Adaptive and Sustainable Built Environments," Invited presentation, Toyohashi University of Technology, December 20, 2011, Toyohashi, Japan

(37) "Interactive Built Environments," Invited presentation, Interactive Architecture Workshop, Hawaii International Conference on Systems Science (HICSS), Jan 4-7, 2012, Maui, Hawaii

(38) "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

(39) "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

(40) "Energy Networks: Awareness Through Information," Invited presentation, USC Integrated Media Systems Center Symposium, Los Angeles, California, March 8, 2012

(41) "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

(42) "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

(43) "Occupancy and Behavior Driven Building Energy Management," Invited presentation, Turkish Construction Professionals of Southern California [TCP-CA], Los Angeles, CA, February 1, 2013

(44) "Interactive and Sustainable Buildings," Invited presentation, Civil and Environmental Engineering Department of University of California, Los Angeles, Los Angeles, CA, February 26, 2013.

(45) "Integrated Human-Building Systems," Invited presentation at the USC Diploma Innovation Program, Los Angeles, CA, March 7, 2013

(46) "A New Paradigm for Integrated Building Systems," Invited presentation, Arup, Inc., Los Angeles, CA, March 14, 2013

(47) "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

(48) "Home for Everyone", USC Engineering/Social Work Collaborative Retreat, Los Angeles, CA, April 23, 2013

(49) "The Flipped Campus, Reimagining Learning Spaces, Places and Motion," Panelist, 2013 Teaching with Technology Conference, USC, Los Angeles, CA, May 6, 2013

(50) "Integrated Sensor Systems for Building Energy Efficiency," Invited presentation, Robotics and Automation School of Tsinghua, Beijing, China, October 8, 2013

(51) "Adaptive and Responsive Built Environments", Invited presentation, Middle East Technical University, Ankara, Turkey, December 27, 2013

(52) "Automation and Responsive Environments", Invited presentation, Istanbul Technical University, Department of Civil and Environmental Engineering, Istanbul, Turkey, January 3, 2014

(53) "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

(54) "Making the Transition to Assistant Professor," Invited presentation, USC Center for Excellence in Teaching, Los Angeles, CA, March 30, 2014

(55) "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

(56) "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

(57) "The Nexus of Cyber-Physical-Social Systems for Engineering and Design," Invited presentation, Georgia Tech, Atlanta, GA, February 22, 2016

(58) "Smart Interactions," Panelist, "Positions on Smart Environments" panel, 104th ACSA Annual Meeting, Seattle, WA, March 19, 2016

(59) "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

(60) "Technology Solutions for Overcoming Homelessness," Panelist, USC Homelessness in Los Angeles Summit, Los Angeles, CA, April 27, 2016

(61) "Intelligent Built Environments: Recent Works and Challenges," Invited presentation, INRIA (French Institute for Research in Computer Science and Automation), Paris, France, October 3, 2016

(62) "Responsive & Adaptive Environments," Invited presentation, Cambridge University, Civil Engineering Department, Cambridge, UK, March 13, 2017

(63) "Resilient, Smart, Sustainable & Healthy Built Environments," College of Design, Construction and Planning, University of Florida, Gainesville, FL, April 24, 2017

(64) "Artificial Intelligence for Energy Efficient Buildings," Clean Technology Council, Thousand Oaks, CA, November 7, 2017

(65) "Smart & Autonomous Mechanical Building Services," Mechanical Services Strategic Research Agenda Workshop, Arup Engineering, Marina Del Rey, CA, February 15, 2018

(66) "Cognitive Built Environments for Sustainable and Resilient Infrastructure," Future of Engineering Panel, USC Board of Trustees meeting, Ojai, CA, March 24, 2018

(67) "Cognitive Built Environments," Invited presentation, Georgia Tech, Atlanta, GA, April 11, 2018

(68) "Sustainable, Smart and Resilient Communities and Cities," Invited presentation, University of Concordia, Montreal, CA, May 8, 2018

(69) "Cognitive Built Environments at the Convergence of Sensing," Invited presentation, Imperial College London, Centre for Systems Engineering and Innovation, London, UK, June 20, 2018

(70) "People-Centric AI for the Built Environment," Invited presentation, The Alan Turing Institute, London, UK, June 28, 2018

(71) "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

(72) "Advanced Methods for Enabling Intelligent Environments," Invited Talk, University of Nebraska, Omaha, Nebraska, May 2019

(73) "Intelligent Built Environments: A Vision for Research and Education," Invited Talk, University of Washington, Seattle, Washington, January 2020

(74) "Interactive and Intelligent Built Environments," Invited Online Talk, Purdue University, IN, November 2020

(75) "The Role of Built Environment on Worker Productivity and Health during the COVID-19 Pandemic," Viterbi vs. Pandemic Lecture Series, November 2020

(76) "Improving Efficiency and Making Better Decisions with AI and Data Science," ASCE Virtual Roundtable, December 2020

(77) "Human-Building Interactions for Intelligent Built Environments," Department of Civil, Architectural and Environmental Engineering, Drexel University, February 12, 2021

(78) "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

(79) "Women in Leadership" panel, organized by Georgia Tech, March 29, 2022

(80) "Leveraging A Transdisciplinary Approach to Develop Effective AI Solutions that reduce Risk and Promote Worker Health," NIOSH AI Interest Group, June 9, 2022

(81) "AI & Other Technologies to Support Worker Health & Well-being," Office Ergonomics Research Committee, June 28, 2022

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

HONORS & AWARDS

2022 Academy of Television Arts & Sciences, Los Angeles Area Emmy   2022
Received an Emmy for independent programming as a co-producer of "Lives, Not Grades"

Elected to National Academy of Construction (NAC)   2021
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.

Outstanding Engineering Merit Award, Orange County Engineering Council   2020
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.

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

2018

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

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

Outstanding Reviewer Recognition, ASCE Journal of Computing in Civil Engineering

2015 & 2021

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 19th annual U.S. Frontiers of Engineering symposium

2013

Charles M Eastman Best Paper Award - This award recognizes the importance of developing top young researchers in the field of "application of integrated IT throughout the life-cycle of the design, construction and occupancy of buildings and related facilities." The award is named after a seminal

2013

researcher in this field who has, over his illustrious career, supervised and mentored many of the top researchers found across the world

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
Ph.D. Scholarship, Turkish Higher Education Council	2002

FUNDING

External Funding (Awarded)

(1) Title: Smart Target Pilot Study
Sponsor: Optira, Inc.
Period of Performance: 2009-2010
Role: **Project 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: **Project Investigator**
Total Amount: $20,354, Becerik-Gerber's share: $20,354

(3) Title: RFID Based Indoor Location Sensing
Sponsor: Lyngsoe Systems
Role: **Project 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** (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: **Project 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: **Project 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: **Project 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: **Project 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: **Project 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** (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: **Project 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: **Project 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: **Project 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: **Project 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: **Project 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: **Project 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: **Project 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** (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** (PI: Becerik-Gerber; 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: 2022-2023
Role: **Co-PI** (Co-PIs: Shawn Roll, Gale Lucas)
Total Amount: $131,079, Becerik-Gerber's share: $38,768

(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** (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

Total awarded funding to date (as PI and/or Co-PI):	$12,188,599
Total awarded funding (Becerik-Gerber's share):	$3,874,030

Internal Funding (Awarded)

(1) Title: <u>C</u>enter for <u>I</u>ntelligent <u>E</u>nvironments, <u>T</u>echnology and <u>S</u>ociety (CENTIENTS) [Internal Grant]

Sponsor: Viterbi School of Engineering

Period of Performance: 2018-2019

Role: **Project 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: **Project 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), *Undergraduate Level*, USC, Department of Civil and Environmental Engineering   2018-2020

> 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, Department of Civil and Environmental Engineering   2011–Present

> The goal of this course is to introduce students to the advanced research methods in the area of 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 are able to 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, Department of Civil and Environmental Engineering

2008–Present

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

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

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 2021

MENTORSHIP

Faculty

(1) Kelly Sanders, Assistant Professor – *Astani Civil and Environmental Engineering,* Viterbi School of Engineering, University of Southern California

2014-2020

(2) Bora Gencturk, Assistant Professor - *Astani Civil and Environmental Engineering,* Viterbi School of Engineering, University of Southern California

2016-2019

Visiting Scholars

(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

(1) Nan Li, Ph.D. – *Viterbi Fellow*

Graduated in 2014

2009-2014

   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

   <u>First Position</u>: 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)

Graduated in 2015

2009-2015

   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

   <u>First Position</u>: 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*
Graduated in 2016

2011-2016

> **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
>
> <u>First Position</u>: As of September 2016, *Post-doc* at Stanford University, Department of Civil and Environmental Engineering

(4) Ali Ghahramani, Ph.D.– *Provost Fellow*
Graduated in 2017

2013-2017

> **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
>
> <u>First Position</u>: As of March 2017, *Post-doc* at Center for the Built Environment of University of California at Berkeley
>
> <u>Second Position:</u> National University of Singapore as a Presidential Young Professor

(5) Arsalan Heydarian, Ph.D. student – *Viterbi Fellow*
Graduated in 2017

2012-2017

> **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
>
> <u>First Position</u>: 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)
Graduated in 2017

2012-2017

> **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
>
> <u>First Position</u>: As of Fall 2017, BIM Graphics Support Manager at STV, Delta T2-T3 Modernization Program at LAX

(7) Saba Khashe, Ph.D. student
Graduated in 2017

2013-2017

> **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

<u>First Position</u>: As of January 2018, UX designer and researcher at Ahura Systems

(8) Simin Ahmadi-Karvigh, Ph.D. student (co-advised with Prof. Lucio Soibelman)

Graduated in 2018

2013-2018

Dissertation Title: Activity-Driven and User-Centered Automation of Appliances and Lighting Systems

Screening exam: Jan 2014; Qualifying exam: January 2017; Defense: May 2018

<u>First Position</u>: As of June 2018, Data Scientist at Apple Inc.

(9) Gokce Ozcelik, Ph.D. student – *Viterbi Fellow*

Graduated in 2019

2014-2019

Dissertation Title: Understanding Human-Building Systems Interactions Through Perceptual Decision-Making Processes

Screening exam: Jan 2016; Qualifying exam: Sept 2018; Defense: May 2019

<u>First Position</u>: 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

<u>First Position</u>: 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

<u>First Position</u>: As of Spring 2023, TT Assistant Professor at the Moss Department of Construction Management Department of Florida International University

*Recipient of **Outstanding Teaching Assistant Award** in the Civil and Environmental Engineering Department in 2018

2017-Present

*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)

Research Topic: Human-Robot Collaboration on Construction Sites

2019-Present

Screening exam: Jan 2020; Qualifying exam: N/A; Defense: N/A

(13) Mohamad Awada, Ph.D. student – *Annenberg Fellow*

2019-Present

Research Topic: Health and Well-Being in Buildings

*Recipient of **Outstanding Research Assistant Award** in the Civil and Environmental
Engineering Department in 2022

Screening exam: Jan 2020; Qualifying exam: N/A; Defense: N/A

(14) Ruying Liu, Ph.D. student – *Annenberg Fellow*

    Research Topic: Understanding Human-Building Interactions During Emergencies   2020-Present

    Screening exam: January 2022; Qualifying exam: N/A; Defense: N/A

(15) Patrick Borges Rodrigues, Ph.D. student – *DIA Fellow* (co-advised with Prof. Lucio Soibelman)

    Research Topic: Human-Robot Collaboration on Construction Sites

        *Recipient of **Outstanding Teaching Assistant Award** in the Civil and Environmental   2020-Present
Engineering Department in 2022

    Screening exam: January 2021; Qualifying exam: N/A; Defense: N/A

(16) Ala Nekouaght Tak, PhD student – *Viterbi Fellow* (co-advised with Prof. Lucio Soibelman)

    Research Topic: Energy efficiency in buildings   2021-Present

    Screening exam: January 2022; Qualifying exam: N/A; Defense: N/A

(17) Mirmahdi Seyedrezaei, PhD student – *Viterbi Fellow*

    Research Topic: Social equity in the built environment   2021-Present

    Screening exam: January 2022; Qualifying exam: N/A; Defense: N/A

Master Students

(1) David Kent, Master of Construction Management   2009

    Research Topic: Integrated Project Delivery (IPD) and its applications, acceptance and use in the
construction industry

(2) Edward Kim, Master of Construction Management   2009

    Research Topic: Tradeoffs between sustainable design and end user comfort

(3) Samara Rice, Master of Construction Management   2009

    Research Topic: Return on investment of building information modeling from the owner's perspective

(4) Gursimran Rooprai, MS in Green Technology   2010

    Research Topic: Building performance metrics for sustainable buildings

(5) Laura Klein (Mino), MS in Civil Engineering (Structural Engineering)   2008-2011

    Research Topic: Investigation of reality capture methods for as-built BIM documentation

(6) Shuai Li, MS in Civil Engineering   2010-2012

    Research Topic: Grand challenges of civil engineering; Indoor location sensing in built environments

(7) Manthan Kanabar, MS in Civil Engineering   2012

    Research Topic: Building information modeling for collaborative construction management

(8) Hamid Hajian, MS in Civil Engineering, and Engineering Degree   2009-2012

    Research Topic: Impact of target locations and types on 3D laser scanning accuracy

(9) Geoffrey Kavulya, MS in Civil Engineering, and Engineering Degree   2010-2013

    Research Topic: Adjustable autonomy to enable sustainable energy reduction in commercial buildings

(10) Omid Davtalab, MS in Civil Engineering   2012-2013

    Research Topic: Data mining/processing for bridge maintenance planning

(11) MohammedReza Raissi Fard, MS in Civil Engineering   2012-2013

    Research Topic: Cloud computing applications for AEC business models

(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 – *Merit Scholar Researcher*   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– *Merit Scholar Researcher*   2013-2014

    Research Topic: Situational awareness on construction sites using laser scanners

(10) Alexander Coco, BS in Astronautical Engineering 2016 – *Merit Scholar Researcher*   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 – *Merit Scholar Researcher*　　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)

(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, PhD. 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, PhD. 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

SERVICE

External Service

Editorships Duties

(1) Associate Editor, ASCE *Journal of Computing in Civil Engineering*	2011-Present
(2) Guest Editor, ASCE *Journal of Computing in Civil Engineering*, 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
(3) Specialty Editor for *Journal of Buildings*, Special Issue Topic: Understanding Human-Building Interactions for Intelligent Built Environments	2015-2016
(4) Guest Editor, *Applied Energy,* Special Issue for 3rd ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys 2016) (David Irwin, co-Guest Editor)	2017-2018
(5) 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
(6) 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
(7) Editorial Board Member for Nature Scientific Reports (Civil Engineering)	2021-Present

(8) 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 *Journal of Computing in Civil Engineering*	2010-Present
(2) Reviewer, *Journal of Information Technology in Construction*	2010-Present
(3) Reviewer, *Advanced Engineering Informatics*	2011-Present
(4) Reviewer, *Automation in Construction*	2009-Present
(5) Reviewer, ASCE *Journal of Construction Engineering and Management*	2011-Present
(6) Reviewer, *Journal of Building and Environment*	2012-Present
(7) Reviewer, *Journal of Applied Energy*	2012-Present
(8) Reviewer, IEEE *Transactions on Human-Machine Systems*	2013-Present
(9) Reviewer, ASCE *Journal of Management in Engineering*	2013-Present
(10) Reviewer, *Journal of Energy and Building*	2013-Present
(11) Reviewer, *Journal of Information and Management*	2014-Present
(12) Editorial Review Board Member, *Engineering, Construction and Architectural Management (ECAM) Journal*	
(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, *Journal of Energy*	2015-Present
(16) Reviewer, *Building Simulation Journal*	2017-Present
(17) Reviewer, *Building Engineering*	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

Technical Reviewer for Awards

(1) TR35, Technology Review, MIT	2017-2020
(2) Chair professorship panel for Dr. Virshal Garg	March 2022

Professional Committee Memberships and Duties

(1) Member, ASCE Technical Council on Computing and Information Technology, *Data Sensing and Analysis Committee* (Formerly Intelligent Computing)	2010–Present
(2) Member, ASCE Technical Council on Computing and Information Technology, *Educational Committee*	2010–Present
(3) Member, ASCE Technical Council on Computing and Information Technology, *Visualization, Information Modeling, and Simulation Committee*	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 *Journal of Computing in Civil Engineering*	2012

(9) Participant, Annexx 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

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, *NSF Workshop*, Connecting Woman Faculty in Sustainable Building Research, Dalian, China, July 5-6, 2018 — 2018

(5) Co-organizer, *NSF Workshop*, Connecting Woman Faculty in Sustainable Building Research, Syracuse, NA, September 23rd, 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) Co-organizer /Co-moderator of "Ask me Anything" Webinars, National Academy of Construction — Fall 2022

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

Internal Service

University Service

(1) Member, USC 2020 Sustainability Plan, Greenhouse Gas Emissions Sub-Committee	2016
(2) USC Mentoring Awards Selection Committee	2019
(3) New Computer Science Architect Selection Committee	2020
(4) USC IYA Dean Search Committee	2021
(5) Presidential Sustainability Working Group Committee on Campus Sustainability Goals	2021
(6) USC Center for Sustainability Solutions Research Advisory Board Member	2020-2021
(7) USC Healthy Campus, Advisory Committee Member	2022

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

(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	2012

three students (Latino and female engineering students) continued to be part of PI Becerik-Gerber's research group.

(3)	Presentation to middle school students (6th 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 necessary to explain fundamental concepts of earth science. Our focus is to help students to develop positive attitudes toward STEM.	2012 - 2013
(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

(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,   2016

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.

(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-   2017

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.

(22) Two high school students joined iLAB for 7 weeks during Summer 2018 as part of the Viterbi 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.   2018

(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   2019

experiments.

(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 women leaders who represent "hidden talent"](#) in their home countries and showed them our efforts to prepare women and girls for STEM careers.	2019
(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 & 2022
(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   2021-2022
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.

IN THE NEWS

(1) The Value of Building Information Modeling: Can we Measure the ROI of BIM?, AECbytes, August 31, 2009,
http://www.aecbytes.com/viewpoint/2009/issue_47.html

(2) Innovation in the Construction Management Classroom, Viterbi News, February 8, 2010,
http://viterbi.usc.edu/news/news/2010/innovation-comes-to.htm

(3) New Sensors and Tools to Track the Multiple Personalities of Buildings, Viterbi News, September 9, 2011,
http://viterbi.usc.edu/news/news/2011/the-many-lives.htm

(4) Using Cell Phones to Negotiate Energy-Efficient Settings in Office Buildings, Technology Review, August 22,
2012, http://www2.technologyreview.com/tr35/profile.aspx?trid=1315

(5) Future Smart Building, Eski 10 – Turkish TV (In Turkish), http://www.eksi10.tv/videos/2200/

(6) Smart Homes, Iridescent: https://www.youtube.com/watch?v=71OxXtFv8mw

(7) Future of Interactive Environments: https://www.youtube.com/watch?v=z0RXChZvYN0

(8) Buildings Have Personalities, Too, Viterbi Magazine, Spring 2013 Issue,
http://viterbi.usc.edu/assets/155/85198.pdf (Page 10)

(9) Power To the People, New Technology Lets Occupants Work With Building Systems Rather Than Against Them,
To Improve Their Comfort While Reducing Energy Costs (2013), Green Source Magazine, May 2013,
http://greensource.construction.com/features/other/2013/1305-Power-To-The-People.asp?page=2

(10) Building Communication, Engineering Innovation Podcast and Radio Series, National Academy of Engineering,
June 14, 2013, https://www.nae.edu/default.aspx?id=20186

(11) Meet Your Tech Future, (2014) USC Trojan, Magazine Winter 2014, http://tfm.usc.edu/winter-2014/meet-your-tech-future

(12) What if the building you occupied was more than just a space? Escape Velocity Episode 5: "Kate 2600," May 3rd,
2017, https://viterbischool.usc.edu/news/2017/05/escape-velocity-episode-5-kate-2600/

(13) Are You Ready for Office Buildings With Alexa-Like Personalities?, PC Mag Magazine, April 24, 2018,
https://www.pcmag.com/news/360545/are-you-ready-for-office-buildings-with-alexa-like-personali

(14) How researchers are designing smart desks of the future, VentureBeat, September 3, 2018,
https://venturebeat.com/2018/09/03/how-researchers-are-designing-smart-desks-of-the-future/

(15) Smart desk knows what you need for healthier habits, ECNMag, September 21, 2018,
https://www.ecnmag.com/article/2018/09/smart-desk-knows-what-you-need-healthier-habits

(16) USC students go into refugee camps, Viterbi news, September 26, 2018,
https://viterbischool.usc.edu/news/2018/09/usc-students-go-into-moria-refugee-camp-to-research-solutions-to-the-global-refugee-crisis/

(17) Sentient Office Buildings Adjust to Workers' Personal Comfort and Well Being, November 16, 2018, https://www.voanews.com/a/sentient-office-buildings-adjust-to-workers-personal-comfort-and-well-being/4659437.html?fbclid=IwAR3oXGIEPVtgKlDPXssUh4olqWoKkdQvdkVKLO-zhccFLtBbTsXpHId0NfU

(18) AI for Good, Viterbi Magazine, Fall 2018, https://lnkd.in/gmtzQNE

(19) How to improve communication between people and smart buildings, USC News, https://news.usc.edu/153526/improving-communication-between-people-and-smart-buildings/

(20) Real Estate Turns to Tech, January 2019, Los Angeles Business Journal

(21) Talk Nerdy Podcast: https://www.carasantamaria.com/podcast/burcin-becerik-gerber

(22) Partnering Academia and Engineering Diplomacy: Answers to Global Challenges, https://www.uscpublicdiplomacy.org/blog/partnering-academia-and-engineering-diplomacy-answers-global-challenges?fbclid=IwAR1Ied9qu2F9_3NrfFU0qWpCbKieKjyI7mm3nGDrlzU8Bki4hNrq_QpnfaU

(23) Designing Tomorrow's Workstations, Today, USC Chan Magazine, Spring 2019, https://chan.usc.edu/news-and-events/magazine/spring2019/tomorrows-workstation

(24) Lives, Not Grades, USC Viterbi Magazine, Spring 2019, https://magazine.viterbi.usc.edu/spring-2019/features/lives-not-grades/

(25) 2019 Viterbi Awards, Min Family Challenge, Spring 2019, https://www.youtube.com/watch?feature=youtu.be&v=gTRYW3clyZo&app=desktop

(26) Building Automation Technology Can Get Personal, May 2019, https://www.iotworldtoday.com/2019/05/07/building-automation-technology-could-get-personal/

(27) Interview with the Psychology of Technology Institute on Building Intelligent Environments, May 2019: https://www.psychoftech.org/videointerviews/2019/5/20/interview-with-burcin-becerik-gerber-building-intelligent-environments

(28) ARUP Research and USC Collaboration on Smart Workspaces: https://www.youtube.com/watch?v=XZmVBXpDcVQ

(29) USC Center for Intelligent Environments (CENTIENTS) launch: https://viterbischool.usc.edu/news/2019/06/the-future-of-artificial-intelligence-comes-alive-in-our-buildings/

(30) NSF MX3 Workshop on Human Building Interaction: https://spark.adobe.com/page/7uL4JLiBBrCPj/

(31) Futuristic Buildings Senses Threats and Reacts, August 18, 2019: https://www.voanews.com/silicon-valley-technology/futuristic-building-senses-threats-and-reacts

(32) Virtual Reality and People Centric Design, Alan Turing Institute Blog: https://www.turing.ac.uk/blog/virtual-reality-and-people-centric-design-buildings

(33) USC students work with refugees to engineer solutions for better camp life, https://www.pri.org/stories/2019-09-11/usc-students-work-refugees-engineer-solutions-better-camp-life

(34) Your homework assignment: Improve refugees' lives: https://news.usc.edu/trojan-family/usc-students-tackle-refugee-research-projects/

(35) Human Building Interaction (HBI), an emerging interdisciplinary field, defined by researchers, September 23, 2019: https://www.youtube.com/watch?v=zwarPoJgpJ0

(36) USC Viterbi Researchers Awarded Nearly $2 Million by NSF's Pilot Convergence Accelerator and AccelNet Programs, September 25, 2019, https://viterbischool.usc.edu/news/2019/09/usc-viterbi-researchers-awarded-nearly-2-million-by-nsfs-pilot-convergence-accelerator-program/

(37) Can a Building Help Thwart the Next Active Shooter? October 29, 2019: https://viterbischool.usc.edu/news/2019/10/can-a-building-help-thwart-the-next-active-shooter/ and https://magazine.viterbi.usc.edu/spring-2020/whats-next/can-a-building-help-thwart-the-next-active-shooter/

(38) NBC News, Researchers Use Active Shooter Simulator to Design Safer Schools, November 22, 2019:
https://www.nbclosangeles.com/on-air/as-seen-on/Active-Shooting-Simulator_Los-Angeles-565310992.html

(39) Lives, Not Grades Teaser 2020, https://vimeo.com/416469768

(40) Six Innovative Ideas to Aid People in Crisis, May 2020, https://viterbischool.usc.edu/news/2020/05/how-to-aid-refugees-during-covid-19-six-innovative-ideas/

(41) Building Trust between Construction Workers and Construction Robots; How virtual reality can help robots change the face of construction industry, October 2020, https://viterbischool.usc.edu/news/2020/10/building-trust-between-construction-workers-and-construction-robots/

(42) This Building might Save your Life, ASCE Podcast, November 2020, https://source.asce.org/this-building-might-save-your-life/

(43) How Working from Home Changed Us, After March's stay-at-home orders took effect, USC researchers studied the impact of widespread work from home (WFH) on well-being and productivity, November 2020, https://spark.adobe.com/page/Y0qo979qipi9c/

(44) "Viterbi vs. Pandemics" Lecture 11: Environmental Influences on Work from Home, November 2020, https://viterbischool.usc.edu/news/2020/11/viterbi-vs-pandemics-lecture-11-environmental-influences-on-work-from-home/

(45) US News, December 2020, https://www.usnews.com/news/health-news/articles/2020-12-10/working-at-home-brings-its-own-health-perils-survey

(46) Work-from-home survey reveals pandemic's impacts upon employees' physical and mental health, productivity and daily routines, November 17,2021, https://chan.usc.edu/news/latest/work-from-home-survey-reveals-pandemics-impacts-upon-employees-physical-and-mental-health-productivity-and-daily-routines

(47) This USC Professor's Course Is Churning Out Startup Founders, https://dot.la/usc-professors-course-startup-founders-2655777694.html

(48) "Tech for Good" Debuts at USC, https://viterbischool.usc.edu/news/2021/12/tech-for-good-week-debuts-at-usc/

(49) Dr. Becerik-Gerber elected to National Academy of Construction, https://viterbischool.usc.edu/news/2021/11/burcin-becerik-gerber-elected-to-national-academy-of-construction/