

J. Manganeli

(1-page short-form resume)

Joe Manganelli, AIA, NCARB, LEED AP BD+C, PhD
44 Kenlauren Avenue, Greenville, SC 29607
jmanganelli@jmanganelli.net
www.jmanganelli.net
864.906.0064

Goal:

My goal is improving the capacity of the built environment to enhance human health, well-being, & performance.

Professional & Research Experience:

Owner, Design, Researcher: Providing human factors, information architecture & user experience research and design consulting, xplr design, llc

Architect IV: Leading/contributing to the design of industrial facilities, Fluor Enterprises (2017-Present)

Human Factors SME: Providing support for projects, Fluor Enterprises (2018-Present)

Part-Time Instructor: Teaching user experience research and design, Kent State University School of Library and Information Science (2014-present)

Postdoctoral Fellow: Contributing to the design and execution of distracted driving research and other driving-related research, Clemson University International Center for Automotive Research (2014)

Graduate Research Assistant: Contributing to environmental, product, and systems design and research, and instructing undergraduate and graduate students, Clemson University (2008-2013)

Designer 3: Contributing to the design of industrial facilities, O'Neal, Incorporated (2008/2009)

Designer 3: Contributing to the design of commercial & institutional facilities, Freeman & Major, LLC (2006-2008)

Designer 1, 2, 3: Contributing to the design of educational, institutional, and municipal facilities, HUNT Engineers, Architects, Land Surveyors, P.C. (2004-2006)

Detailer & Assistant Project Manager: Contributing to the design of specialty industrial equipment, architectural metalwork, and museum-quality displays, AccuFab, Inc. (2002-2004)

License/Accreditation:

Registered Architect in South Carolina (#9599), NCARB (#87172), LEED AP BD+C (#33505)

Skills (for basic to expert classification of skills, see long-form resume for details):

Human Factors, Information Architecture & Usability Analyses:

Usability analysis, use case elicitation, requirements definition, Cognitive Work Analysis, interviewing (individual, contextual inquiry, focus groups), card sorts, task analysis, heuristic evaluations, cognitive walk-throughs, affinity diagrams, blueprinting, ethnography, surveys, wireframing, Delphi method, Kano method

Systems Analysis:

Model-based Systems Engineering (MBSE), House of Quality (HoQ), Functional Analysis System Technique (FAST), Systems Modeling Language (SysML)

Design:

Conceptual design through construction administration, space planning, facilities evaluations and feasibility studies, program requirements development and management, field observations and reports, coordinating technical reports, client/engineer/contractor coordination, budget estimates, code research, sketching, rendering, technical detailing, technical spec writing, product & materials research, presentation materials

Software:

AutoCAD Architecture, Bentley AECOsims, Revit, Dynamo, SketchUp, Rhino, Grasshopper, MODO, LumenRT, MS Office Suite, Bluebeam PDF Revu, Xmind, Photoshop, Illustrator, Xara, Comcheck-EZ, SPSS, MagicDraw+SysML plugin, BSD SpecLink-E, SpecText/Master Spec, Axure, OpenStudio

Programming Languages:

Elementary HTML, CSS, Python

Education:

Clemson University – Clemson, South Carolina

Doctor of Philosophy, Planning Design & the Built Environment (PDBE) Program (December, 2013)

Master of Science, Applied Psychology, Human Factors Focus (May, 2016)

Auburn University – Auburn, Alabama

Bachelor of Architecture (May, 2002) - Cum Laude, Honors Scholar, Tau Sigma Delta, Golden Key

Bachelor of Liberal Arts (May, 2002) - Spanish - Cum Laude, Honors Scholar, Sigma Delta Pi

J. Manganeli

(11-page long-form resume)

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Goal:

My goal is to improve the capacity of the built environment to enhance human health, well-being, & performance.

Education:

Doctor of Philosophy, Planning Design & the Built Environment (PDBE) Program, *Clemson University (2013)*

Dissertation: *Designing Complex, Interactive, Architectural Systems with CIAS-DM: A Model-Based, Human-Centered, Design & Analysis Methodology*

Master of Science, Applied Psychology, Human Factors Focus, *Clemson University (2016)*

Thesis: *Wayfinding in a Complex Indoor Environment: Correlation of Wayfinding Experience, Survey Knowledge, and Route Knowledge*

Bachelor of Architecture, *Auburn University (2002): Cum Laude*, Honors Scholar, Tau Sigma Delta, Golden Key

Thesis: *Architecture as a Codifier of Belief Systems: The Minimal Dwelling, an Experiment Reconceptualizing the Home*

Bachelor of Liberal Arts (Spanish), *Auburn University (2002): Cum Laude*, Honors Scholar, Sigma Delta Pi

License/Accreditation

Registered Architect in South Carolina (#9599), NCARB (#87172), LEED AP BD+C (#33505)

Snapshot of Professional & Research Experience:

Owner, Design, Researcher: Providing human factors, information architecture & user experience research and design consulting, *xplr design, llc*

Registered Architect: Contributing to the design of industrial facilities, *Fluor Enterprises (2017-Present)*

Innovation Catalyst: *Helping to transform Fluor's culture and work processes to be more innovative, Fluor Enterprises (2017-present)*

Human Factors SME: Providing support for projects, *Fluor Enterprises (2018-Present)*

Sustainability Consultant: Providing support for projects, *Fluor Enterprises (2016-Present)*

Part-Time Instructor: Teaching user experience research and information architecture, *Kent State University School of Library and Information Science (2014-present)*

Postdoctoral Fellow: Contributing to the design and execution of distracted driving research and other driving-related research, *Clemson University International Center for Automotive Research (2014)*

Graduate Research Assistant: Contributing to environmental, product, and systems design and research, and instructing undergraduate and graduate students, *Clemson University (2008-2013)*

Designer 3: Contributing to the design of development of industrial facilities, *O'Neal, Incorporated (2008/2009)*

Designer 3: Contributing to the design of commercial, residential, & institutional facilities, *Freeman & Major, LLC (2006-2008)*

Designer 1, 2, 3: Contributing to the design of educational, institutional, and municipal facilities, *HUNT Engineers, Architects, Land Surveyors, P.C. (2004-2006)*

Detailer & Assistant Project Manager: Researching and designing specialty industrial equipment, architectural metalwork, and museum-quality displays, *AccuFab, Inc. (2002-2004)*

Designer 1: Contributing to the design of ecclesiastic, residential, healthcare, and light commercial facilities *Paul Carpenter Davis Architecture, P.C. (1999-2000)*

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Detailed Lists of Professional & Research Experience:

Human Factors, User Experience, & Information Architecture Practice & Research Experience:

Researcher: Fluor representative on the South Carolina Manufacturing Alliance (SCMA) Cognitive Computing Advisory Council, working with IBM, Sage Automotive, and Nephron Pharmaceuticals to pilot use of cognitive computing to optimize manufacturing processes (2016-2018)

Researcher: Various innovation initiatives for Fluor (2017-present)

Researcher: Various usability analyses for businesses (2016)

Project Contributor, Coordinator, Researcher: Planning, management, and execution of a business process model for BIM workflows, *National Institute of Building Sciences buildingSMART alliance Council Information Standards Sub-Committee* (2016)

Project Contributor, Coordinator, Researcher: Planning, management, and execution of a survey to determine how to better align organization's BIM standards with industry need, *National Institute of Building Sciences buildingSMART alliance Council Thought Leadership Sub-Committee* (2016)

Project Developer, Coordinator, Researcher: Acquiring a website needs analysis & competitive benchmarking project and coordinating a team of 2 colleagues during project execution, *U.S. Green Building Council SC Chapter* (2014-2015)

Project Developer, Coordinator, Researcher: Acquiring a website heuristic evaluation project and coordinating a team of about 10 students during project execution, *North American Rain Systems* (2014)

Project Developer, Coordinator, Researcher: Acquiring a website heuristic evaluation project and coordinating a team of about 8 students during project execution, *US Green Building Council South Carolina Chapter* (2014)

Postdoctoral Fellow & Project Leader: Developing data collection protocol, collecting & analyzing data, writing report, and coordinating a team of 10, *DOT (ICAR) HFCV Mobile Device Vehicle Integration Assessment: Report on Experiment 3: Driving Simulator Assessment of Distracting Effects of Various Interaction Modes DTNH22-11-D-00237/0008* (2013-2014)

Project Developer & Researcher: Acquiring and conducting a website heuristic evaluation project, *ThoroughCare* (2013)

Project Developer, Coordinator, Researcher: Acquiring a website heuristic evaluation project and coordinating a team of 4 students during project execution, *Care.it* (2013)

Project Developer, Coordinator, Researcher: Acquiring a phone app needs analysis project and coordinating a team of 3 students during project execution, *FitSnap* (2013)

Project Developer, Coordinator, Researcher: Acquiring a phone app heuristic evaluation project and coordinating a team of 3 students during project execution, *SoundFest* (2013)

Co-Developer, Co-coordinator, Co-researcher: Participating on a team of 4 with a flat organization to acquire, coordinate, and research a needs analysis for a local restaurant and then design a new responsive website, *356 Sushi* (2013)

Co-coordinator & Co-researcher: Participating on a team of approximately 10 with a flat organization to conduct a heuristic evaluation of 10 Chrysler vehicles, develop a technical report, and present the materials to Chrysler, *Chrysler (ICAR) Vehicle Heuristic Evaluation Study* (2012)

Researcher: Identifying and evaluating three cross-platform apps, facilitating think-aloud evaluation + oral survey sessions, analyzing survey data, and helping develop a technical report for Microsoft as part of a team of about 6 students, *Microsoft (through Clemson University HFES) Comparative Cross-Platform Heuristic Evaluation & Market Research* (2012)

Co-organizer, Co-coordinator, Co-researcher: Participating on a team of 4 with a flat organization to coordinate and research a needs analysis for the campus fire department and then design a new web-based inventory system, *Clemson University Fire Department Inventory Management System* (2011)

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Environmental Design Research Experience:

Researcher: Fluor Innovation Unwrapped participant, applying designing thinking and CX methods to solve the wicked problems of a pharmaceutical client (2018-2019)

Researcher: Founder and Chair of the Fluor Smart Infrastructure Steering Committee (SISC), a global steering committee developing a comprehensive cross-business-line strategy for engaging the smart infrastructure space (2018-2019)

Contributor: National Institute of Standards and Technology (NIST) public working group on Internet-of-Things-Enabled Smart City Framework (IES City Framework), including being a co-author and reviewer of findings (2016-2018)

Project Developer & Research Lead: Developing the human machine living systems taxonomy (2015-present)

Project Developer & Research Lead: Developing the Ecological Niche Construction Design Checklist (2015-present)

Contributor: National Institute of Building Sciences (NIBS) Thought Leadership and Information Standards Subcommittees of the buildingSmart Alliance (bSA) Council, including helping develop a new model view definition for BIM standards and framing arguments for development of minimum viable bim and open bim (2016-present)

Project Developer & Research Lead: Assessing the psychological processes at work when subject matter experts navigate in a large, complex, multi-level building, *Greenville Health System & Clemson University wayfinding in complex, multi-level buildings study (2013-2015)*

Project Developer & Research Lead: Developing and evaluating a model-based, iterative, and participatory design/analysis method + custom software-based analysis tool for complex building needs analysis and requirements definition, *CIAS-DM: Development and evaluation of design method + tool (2011/2013)*

Researcher: Needs analysis, requirements definition, systems modeling, and conceptual design and coordinating a team of up to 7, *Assistive Robotic Table, NSF # IIS-1116075 (2011/2013)*

Project Developer & Research Lead: Developing and conducting needs analysis, market research, user experience design, systems modeling, and conceptual design of a next-generation networked and interactive refrigerator, *Electrolux Next-Generation Refrigerator as Part of a Smart Home Ecosystem of Networked Appliances and Systems (2010/2011)*

Researcher: Conducting interviews with hospital caregivers and data analysis with a team of 6, *Overbed Table Study (2010/2011)*

Researcher: Researching, designing, and building full-scale, low-fidelity cardboard prototypes of bedside tables; conducting interviews and data analysis as a part of a team of 5, *comforTABLE SMART Nightstand (2009/2010)*

Researcher: Conducting secondary research and conceptual design as part of a team of 4, *R-Tex (2008/2009)*

Architectural Design Project Experience:

Architect IV: Performing technical design, human factors consulting, archviz, sustainability consulting (LEED), and discipline lead roles on projects related to the design of heavy industrial facilities (bio-tech, pharmaceutical, & consumer product manufacturing), *Fluor Enterprises (2019-present)*

Architect III: Performing technical design, human factors consulting, archviz, and sustainability consulting (LEED) roles on projects related to the design of heavy industrial facilities (bio-tech, pharmaceutical, & consumer product manufacturing), *Fluor Enterprises (2017-2019)*

Building Design Specialist: Performing technical design, archviz, and sustainability consulting (LEED) related to the design of heavy industrial facilities (bio-tech, pharmaceutical, & consumer product manufacturing), *Fluor Enterprises (2014-2017)*

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Designer 3: Conducting space planning, conceptual design, assessment of implementing LEED for a heavy industrial parts manufacturing facilities project, *O'Neal, Inc. (2008)*

Designer 3: Conducting space planning, conceptual design, product and materials research, and technical detailing for an automotive components supplier facility, *O'Neal, Inc. (2008)*

Designer 3: Conducting design development, technical specifications, and construction documents for miscellaneous paper mill renovations, *O'Neal, Inc. (2008)*

Designer 3: Collaborating on conceptual design through construction administration and responsible for project coordination of a bus maintenance facility, *Freeman & Major Architects, LLC (2006-2008)*

Designer 3: Providing technical detailing for a university parking garage, *Freeman & Major Architects, LLC (2006-2008)*

Designer 3: Collaborating on design development, construction documents, and construction administration for a mixed use office and retail facility, *Freeman & Major Architects, LLC (2006-2008)*

Designer 3: Providing technical detailing, construction documents, and construction administration for a mixed use design studio and event space, *Freeman & Major Architects, LLC (2006-2008)*

Designer 1, 2, 3: Providing a facility evaluation, energy study, and conceptual design for the renovation of a private social club, *HUNT Engineers, Architects, & Land Surveyors, P.C. (2004-2006)*

Designer 1, 2, 3: Providing conceptual design, technical detailing, technical specifications, construction administration, and project coordination for district-wide SA-BOCES vocational school facilities renovations, *HUNT Engineers, Architects, & Land Surveyors, P.C. (2004-2006)*

Designer 1, 2, 3: Providing conceptual design through construction documents including technical specifications for a new town hall for Caitlin, NY, *HUNT Engineers, Architects, & Land Surveyors, P.C. (2004-2006)*

Designer 1, 2, 3: Providing technical design, technical specifications writing, code research, product and materials research, and project coordination for the Alfred University Harder Hall window replacement project, *HUNT Engineers, Architects, & Land Surveyors, P.C. (2004-2006)*

Designer 1, 2, 3: Providing facilities evaluations, space programming, code research, product and materials research, conceptual design, project coordination, budget estimating, and project budget management for Schuyler County site selection and conceptual design for consolidated county facilities, *HUNT Engineers, Architects, & Land Surveyors, P.C. (2004-2006)*

Designer 1, 2, 3: Providing space planning, code research, design development, construction documents, and technical specifications for district-wide renovations for the Alfred-Almond Central School District, *HUNT Engineers, Architects, & Land Surveyors, P.C. (2004-2006)*

Designer 1, 2, 3: Providing code compliance and maintenance issues check of the facilities of several school districts in Western New York State for the New York State Education Department, *HUNT Engineers, Architects, & Land Surveyors, P.C. (2004-2006)*

Designer 1, 2, 3: Providing site evaluation, technical design, materials & product research, code reviews, technical specifications, and construction documents for the Cornell University Olin Library Entry Renovation, *HUNT Engineers, Architects, & Land Surveyors, P.C. (2004-2006)*

Designer 1, 2, 3: Providing site evaluations, budget estimating, master planning, and space programming as part of district-wide renovations for Olean School District, *HUNT Engineers, Architects, & Land Surveyors, P.C. (2004-2006)*

Designer 1, 2, 3: Providing project development, site visits and documentation, team leadership for a team of about 8, production of documents of record, and project budget management for statewide facilities documentation of correctional facilities for the New York State Department of Corrections and Community Supervision, *HUNT Engineers, Architects, & Land Surveyors, P.C. (2004-2006)*

Detailer & Assistant Project Manager: Providing conceptual design for an office expansion for the company, *AccuFab, Inc., Custom Steel Fabrication (2002-2004)*

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Detailer & Assistant Project Manager: Providing technical detailing and project management for display frames for the Architectural League of New York, *AccuFab, Inc., Custom Steel Fabrication (2002-2004)*

Detailer & Assistant Project Manager: Providing technical detailing and project management for custom ornamental handrails for White Hall, Cornell University, *AccuFab, Inc., Custom Steel Fabrication (2002-2004)*

Detailer & Assistant Project Manager: Providing technical detailing, product and materials research, and project management for Lamoreaux Landing Winery structural fasteners and stairs, *AccuFab, Inc., Custom Steel Fabrication (2002-2004)*

Detailer & Assistant Project Manager: Collaborating on the graphic design and layout for the company brochures, *AccuFab, Inc., Custom Steel Fabrication (2002-2004)*

Detailer & Assistant Project Manager: Providing product and materials research, estimating, design, project management, and technical detailing for various custom parts handling equipment projects for Borg-Warner Automotive, *AccuFab, Inc., Custom Steel Fabrication (2002-2004)*

Detailer & Assistant Project Manager: Providing product research, budget estimating, technical detailing, and project management for custom gift shop display carts for Cayuga Medical Center, *AccuFab, Inc., Custom Steel Fabrication (2002-2004)*

Side Projects:

Estimator & Fabricator: Planning and fabricating custom wood & stainless steel tables for the iMSE Lab, *iMSE (2011/2012)*

Designer: Providing design and prototyping services for custom office and lab furniture, *Sonoco Institute (2011)*

Designer & Project Manager: Providing design, detailing, and project management for a custom medical cart, *Roger C. Peace Rehabilitation Hospital (2010/2011)*

Designer & Fabricator: Providing design and fabrication for graduate studio workstations, *Sonoco Institute (2010)*

Designer: Collaborating on the design of a custom convention kiosk, *Sonoco Institute (2010)*

Space Planner: Providing program development and space planning for the Home Lab patient care testing lab (handed off to Design Strategies, PLLC, of Greenville, SC, for detailed design, construction documents, & contract administration), *Roger C. Peace Rehabilitation Hospital, Greenville Health System (2009)*

Designer & Fabricator: Providing design and fabrication of a 1:8 scale model of the Home Lab for use as a prototyping environment to explore interactive, assistive architectural features, *iMSE (2009)* features

Teaching Experience:

Part-Time Instructor: User experience design in practice, information architecture, content strategy, user and task analysis, *Kent State University School of Information (iSchool) UXD curriculum focused on principles of user experience design and information architecture (2014-present)*

Graduate Teaching Assistant: Graduate design studio, *Clemson University March II Digital Studio (2010)*

Studio Instructor: 1st year 'Architectural Graphic Communication' studio, *Clemson University (2010)*

Graduate Teaching Assistant: Robot-architecture seminar, *Clemson University Topics in Architecture (2009)*

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Grant Writing:

Primary Co-Author: Contributing much of the literature and concept, *NSF H-CPS (2011)*

Minor Co-Author: Contributing minor graphical content, *Assistive Robotic Table, NSF Grant Award # IIS-1116075, (2010) – NSF award, \$250,000*

Author: Contributing all content and writing, *Siemens GO PLM Software Grant (2010) – awarded by Siemens, \$1,500,000*

Minor Co-Author: Contributing editing, content generation, and graphics, *comforTABLE (2009) NSF IIS Proposal*

Credentials & Affiliations:

Registered Architect in South Carolina, AIA, NCARB, LEED AP BD+C, MSc, PhD

Fellowships/Grants/Gifts:

Clemson University Graduate Research Assistantship (~\$100,000 total): 2009-2013

Siemens GO PLM Software Grant (in-kind gift, \$1,500,000): 2010-2012

Auburn University Philpott Endowed Scholarship (Partial Tuition Waiver): 2000-2002

Publications:

Articles & Technical Reports:

Bhat, V., Fracsella, A., Brutti, A., Jeong, S., Burns, M., Manganelli, J., Murrillo, M., Hierro, J., Binkley, D., Verga, E.S., Zaslavsky, A. (2018). *A Consensus Framework for Smart City Architectures*. A technical report published by the National Institute of Standards and Technology, retrieved from: <https://pages.nist.gov/smartcitiesarchitecture/>.

Threatt, A., Merino, J., Brooks, J., Healy, S., Manganelli, J., Walker, I., Green, K. (2017). "The Design, Prototyping, and Formative Evaluation of an Assistive Robotic Table (ART) for Stroke Patients." in *Health Environments Research & Design Journal*, 10(3), pp. 152-169.

Manganelli, J., Smith, C. (2016). "Cultivating Perspectival Acuity: The Value and Cost of Integrating Theory, Craft, Research, and Practice." in the *Journal of Systemics, Cybernetics, and Informatics*, 14(5), pp. 52-58.

Brooks, J., Seeanner, J., Hennessey, S., Manganelli, J., Crisler, M., Rosopa, P., Jenkins, C., Anderson, M., Drouin, N., Belle, L., Truesdail, C., Tanner, S. (2017). "Interactive Tools for Measuring Visual Scanning Performance and Reaction Time." in *American Journal of Occupational Therapy*, (71), doi:10.5014/ajot.2017.020461.

Yanik, P., Threatt, A., Merino, J., Manganelli, J., Brooks, J., Green, K., Walker, I. (2016). "A Novel Approach to Lifelong Learning for Robotic Response to Gesture." in *WSEAS Transactions on Computer Research*, Vol. 4, 2016, pp.138-152.

Manganelli, J. (2015). "Tending the Artifact Ecology: Cultivating Architectural Ecosystems." Retrieved from: <http://datastructureformdesign.com/2015/10/04/tending-the-artifact-ecology-cultivating-architectural-ecosystems/>

Healy, S., Manganelli, J., Rosopa, P., Brooks, J.O. (2015). "An Exploration of the Nightstand and Over-the-Bed Table in an Inpatient Rehabilitation Hospital." *Health Environments Research & Design Journal*, 8(2), pp. 43-55.

Manganelli, J. (2014). Reframing A/E/C/O/O Project Delivery. *Journal of the National Institute of Building Science*, 2 (6), pp. 12-15.

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Manganelli, J., Threatt, A., Brooks, J. O., Healy, S., Merino, J., Yanik, P., Walker, I., Green, K. "Confirming, Classifying, and Prioritizing Needed Over-the-Bed Table Improvements Via Methodological Triangulation." *Health Environments Research & Design Journal*, 8(1), pp. 94-114.

Manganelli, J., Threatt, A., Brooks, J.O., Merino, J., Yanik, P., Healy, S., Walker, I., Green, K. (2014). "Examination of How and Why Over-the-Bed Tables Are Used: Use Cases and Needs from Healthcare Providers." *Health Environments Research & Design Journal*, 7(2), pp. 104-126.

Manganelli, J., Threatt, A., Brooks, J.O., Smolentzov, L., Mossey, M., Healy, S., Walker, I., Green, K. (2013) "Examination of Overbed Tables: Health Care Provider & User Preferences." *Health Environments Research & Design Journal*, 6(3), pp. 9-29.

Brooks, J. O., Smolentzov, L., Mossey, M., Carroll, C., Kendrick, K., Sprogis, K., Manganelli, J., Healy, S. L., Walker, I., & Green, K. (2012). "Group Differences in Preferences for a Novel Nightstand." *Health Environments Research & Design Journal*, 5 (4), pp. 88-97.

Brooks, J.O., Smolentzov, L., DeArment, A., Logan, W., Green, K., Walker, I., Honchar, J., Guirl, C., Beeco, R., Blakeney, C., Boggs, A., Carroll, C., Duckworth, K., Goller, L., Ham, S., Healy, S., Heaps, C., Hayden, C., Manganelli, J., Mayweather, L., Mixon, H., Price, K., Reis, A., Yanik, P. (2011), "Towards a 'Smart' Nightstand Prototype: An examination of nightstand table contents and preferences," *Health Environments Research & Design Journal*, 4 (2), pp. 91-108.

Conference Proceedings:

Manganelli, J. (2019 forthcoming). "The Etiquette of Interacting with Our Fastidious Neighbors: Modeling Intelligent High-Performance Building Systems as a Social Organization Using an Agent-Based Modeling Paradigm." ---

Manganelli, J. (2019). "Tomorrow's Workflows Today: Augmenting BIM, Project Delivery, and Operations Workflows to Support Smart City Assets." to be presented at the *National Institute of Building Sciences Building Innovation 2019 Conference*, Washington, DC, January 7-10, 2019, retrieved from: <https://portal.nibs.org/files/wl/?id=tbJ1U8Yxsl91f52NriLwWaXVo3rZjOGJ>

Burns, M., Manganelli, J., Wollman, D., Boring, R., Gilbert, S., Griffor, E., Lee, Y., Nathan-Roberts, D., Smith-Jackson, T. (2018). "Elaborating the Human Aspect of the NIST Framework for Cyber-Physical Systems." in *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 62(1), pp. 450-454, retrieved from: <https://doi.org/10.1177/1541931218621103>

Burns, Martin J., Manganelli, Joe. (2018). "Using the IES-City Framework." Paper Presented at 4th *IEEE International Conference on Smart Computing (SMARTCOMP) 2018*, Taormina, Sicily, Italy, June, 18-20, 2018.

Manganelli, J. (2018). "BIM+Blockchain in the Smart City: Concepts, Early Work, and Potential Usefulness, *National Institute of Building Sciences Building Innovation Conference 2018*, Washington, D.C., January 8-11, 2018

Manganelli, J., Mulder, J.B.F. (2017). "Thoughts on Application of Evolutionary Software Development for Complex, Large-Scale, Integrated, Open Systems." Presented at the 7th *Enterprise Engineering Working Conference* and part of the *Proceedings of the EEWFC Forum 2017*, Antwerp, Belgium, May 9-11, 2017. Retrieved from: <http://ceur-ws.org/Vol-1838/>

Manganelli, J., Smith, C. (2016) "Cultivating Perspectival Acuity: The Value and Cost of Integrating Theory, Craft, Research, and Practice." Paper presented at *Research and Consulting Symposium on Research and Consulting, the World Multi-Conference on Systemics, Cybernetics, and Informatics*. July 5-8, 2016, Orlando, FL.

Frankel, M., Edelson, J. (2015). *Getting to Outcome-Based Building Performance: Report from a Seattle Summit on Performance Outcomes*. (I was a participant in this summit who contributed ideas that ended up in the report, and I am listed as a summit participant and contributor in the report.) retrieved from: <https://newbuildings.org/performance-outcomes-event-report>

Manganelli, J., Brooks, J.O. (2015). "Comparing Two Model-Based, Human-Centered Complex, Interactive Systems Modeling Methods: Lessons Learned." Presentation at the *Institute for Industrial*

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Engineers Annual Conference, May 30th, 2015, Nashville, TN. Retrieved from:
<https://www.xcdsystem.com/iee2015/proceedings/index.cfm?pgid=34&search=1&qtype=Session&sid=10926&submit=Go>

Kapadia, A. Walker, I.D., Green, K.E., Manganelli, J.C., Houayek, H., James, A., Kanuri, V.K.T., Mokhtar, T., Siles, I., and Yanik, P. (2010) "Architectural Robotics: an Interdisciplinary Course Rethinking the Machines We Live In". In the *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*, Anchorage, Alaska, USA, May 2010, pp. 48-53.

Conferences with Published Abstract:

Manganelli, J. (2018). "Agents' Cognition in the Smart City: Agent Architecture Assessment Framework." Poster with extended abstract at the *Academy of Neuroscience for Architecture Conference 2018*, La Jolla, CA. Sept. 19-21, 2018. Retrieved from:
<http://anfarch.org/wp-content/uploads/2019/02/2018-ANFA-Posters-Booklet.pdf>, p. 53

Manganelli, J. (2018). "Standards, Risks, Cybersecurity, Blockchain, and the Building Industry: CEaVa and NIST Frameworks." presented at *AECNext Conference 2018*, Anaheim, CA, June 5, 2018.

Manganelli, J. (2016). "Designing for Complex, Interactive Architectural Ecosystems: Developing the Ecological Niche Construction Design Checklist." Poster at the *Academy of Neuroscience for Architecture Conference 2016*, La Jolla, CA. Sept. 22-24, 2016.

Manganelli, J., Farr, R., Brooks, J., Gugerty, L. (2016). "Wayfinding in a Large, Complex Environment." Poster at *Academy of Neuroscience for Architecture Conference 2016*, La Jolla, CA. Sept. 22-24, 2016.

Gerontological Society of America (2013): Poster presenter on behalf of the labs at Greenville Hospital System and the Clemson University International Center for Automotive Research

Manganelli, J., Green, K., Brooks, J., Mocko, G., Walker, I., Healy, S., Kopera, K., Threatt, A., Merino, J., Yanik, P. (2012). "Patterns in Architecture, Cognition, Systems, and Software: Representing and Analyzing Cognition during the Design Process." Poster at *Academy of Neuroscience for Architecture Conference 2012*, La Jolla, CA. Sept. 20-22, 2012. Retrieved from: <http://www.anfarch.org/documents/ManganelliPoster.pdf>

Workshops:

eCAADe, TU Delft, Netherlands (2013): Co-organizer of (and presenter at) the *Hands-on with Custom Digital Workflows* workshop at the conference

Professional, Methodological, & Software Experience & Proficiency:

General:

Conceptual design through construction administration with focus on space planning and program development, requirements development and management, facilities evaluations and feasibility studies, field observations and reports, coordinating and editing technical reports, client/engineer/contractor interaction/coordination, budget estimates, code research (IBC, ANSI, LEED, NFPA), sketching, rendering (modo/maxwell/photoshop), technical detailing, stair detailing, spec writing (technical divisions), product and materials research, usability analysis, use case development, use case elicitation, survey design, facilitator, presentation drawings & posters

Methods:

Design/Creativity/Analysis:

Found object studies, precedence studies, exquisite corpse, iteration, play, free-sketching, procedural/algorithmic, parti, creativity exercises, wireframing, storyboarding, Ulrich & Eppinger's Product Design & Development method, Apple's Look/Feel/Role/Implementation Prototyping method, ASHRAE Guideline Zero (OPR/BOD), mindmapping

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44 Kenlauren Avenue, Greenville, SC 29607
jmanganelli@jmanganelli.net
www.jmanganelli.net
864.906.0064

Research Design:

Validation Square research design method, design science research design methods, qualitative research design, case study research design, correlational study research design

Human Factors, Information Architecture, User Experience Research, & Usability Analysis:

Cognitive Work Analysis (CWA), interviews (structured, semi-structured, unstructured), contextual inquiry (scenario enactments), focus groups, open & closed card sorts, task analysis, heuristic evaluations, cognitive walk-throughs, affinity diagramming, ethnography, oral & written surveys (design, analysis, & administration), Delphi method, Kano method, MoSCoW method

Graphical & Statistical Analysis:

Frequency analysis, affinity diagramming, descriptive statistics, linear regression, multiple regression, ANOVA, Venn diagramming, qualitative research methods

Systems Analysis:

Object-Oriented Systems Engineering Method (OOSEM), Model-based Systems Engineering (MBSE), House of Quality (HoQ), Functional Analysis System Technique (FAST), Systems Modeling Language (SysML), Design Structure Matrix (DSM), Domain Mapping Matrix (DMM)

Spoken Languages:

English (native)

Spanish (speak, read, write (basic to proficient); once fairly fluent but now out of practice)

Programming Languages:

Elementary HTML, CSS, Python

Software:

Expert:

SketchUp, Rhino 5, MODO (modeling), Word, Excel, Outlook, PowerPoint, Bluebeam PDF Revu, XMind, AutoCAD Architecture

Proficient:

Bentley AECOsim, LumenRT, Revit, Dynamo, Vectorworks, Marionette, Photoshop, Illustrator, Xara Designer Pro, MODO (lighting, texturing, rendering), Comcheck-EZ, Grasshopper plug-in for Rhino 5, MagicDraw+SysML plugin, SPSS, Vegas, Blueberry Recorder, HitFilm Pro, Affinity Designer, Affinity Photo, Axure

Basic:

InDesign, Comcheck-Plus, eQuest, OpenStudio, Eclipse, Dreamweaver, BSD SpecLink-E, SpecText / Master Spec, Treejack, Chalkmark

Areas of Research Interest:

Complex, interactive, architectural systems; emerging project types, smart buildings/cities, embodied cognition; Cognitive Work Analysis; Model-Based Systems Engineering Methods; OOSEM; SysML; agent-based modeling; requirements definition for complex, interactive systems; Building Information Modeling tools & methods; project delivery methods; information architecture; usability; sustainable design as a complex, systems challenge

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Design Competitions:

USGBC Emerging Green Builders Natural Talent Design Competition – Atlanta Region (2007): Honorable mention – design of the Mill Creek Nature Center for the Georgia Wildlife Federation

USGBC Emerging Green Builders Natural Talent Design Competition (2006): Design of the Soundview Nature Center, Bronx, NY

USGBC Emerging Green Builders Natural Talent Design Competition (2005): Community center design for Goshen, IN

Flight 93 Memorial Design Competition (2004)

Red Abstract Art Competition (2004): Honorable mention

9/11 Memorial Design Competition (2003)

Service, Participation, and Community Activities:

Session Chair: *HFES Conference 2018, Philadelphia, PA*

Session Co-Chair: *HFES Conference 2018, Philadelphia, PA*

Session Chair: *HFES Conference 2017, Austin, TX*

Volunteer: Meals on Wheels, Greenville, SC (2014-present)

Newsletter Editor: Human Factors and Ergonomics Society Environmental Design Technical Group (2018)

Member: *National Institute of Building Sciences (NIBS) buildingSMART alliance Council Thought Leadership Sub-Committee (2016-Present)*

Member: *National Institute of Building Sciences (NIBS) buildingSMART alliance Council Information Standards Sub-Committee (2016-Present)*

MLAB Member: *USGBC-SC (2014-2017) (MLAB Co-Chair in 2017)*

Board Member: *USGBC-SC (2014-2016) (Chapter Vice Chair in 2016)*

Board Member: *USGBC-SC (2014-2015) (Chapter Treasurer in 2015)*

Session Co-Chair: *WMSCI (Conference) 2016, Orlando, FL*

Session Co-Chair: *HFES Conference 2014, Chicago, IL*

Participant: Focusing on defining human requirements, *National Institute of Building Sciences, "Getting to Outcome-Based Performance Summit" (2014)*

Steering Committee Member: Focusing on membership initiatives, *USGBC-SC Upstate Branch Steering Committee (2013-2014):*

Usability Chair: Focusing on providing opportunities for HFES student membership to get project experience, *Clemson University HFES Student Organization (2013-2014)*

Attendee: *Building Dynamics Symposium, Banff, AB, Canada (2013)*

Volunteer: Cheer staff, *Greenville Para-Cycling Open (2013)*

Organizer, Facilitator, Administrator: Conducting a student-led initiative to design a program logo, *Planning, Design, and the Built Environment (PDBE) Program (2012)*

Attendee: *AIA TAP: Broadening the Perspectives of Technology in Architectural Practice, Palo Alto, CA (2012)*

Webmaster: Focusing on maintaining and improving the Clemson University HFES web properties, *Clemson University HFES Student Organization Officer (2012-2013)*

Volunteer/Laborer: *Hands on Greenville, United Way (2008, 2012-2013)*

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Studio Juror: *Clemson's School of Architecture (2007-2011)*

Attendee: *Systems Thinking Conference, SDM, MIT, Cambridge, MA (2008, 2009, 2010)*

Assistant Organizer: *Assisting in finding and organizing monthly lectures, USGBC-SC Upstate Branch Steering Committee Programs Committee (2007-2009)*

Guest Lecturer: *Architecture & Genius Presentation, Undergrad Class, Clemson University (2009)*

Guest Lecturer: *Intro to Architecture Presentation, Bryson Middle School, National Engineer's Week (2008)*

LEED AP Student Team Adviser: *Clemson Student Group, LEED Habitat House Design Competition (2006)*

Volunteer/Laborer: *Pickens County Habitat for Humanity (2006-2007)*

Host/Mentor: *Architectural Awareness Junior High School Program, Hornell, NY (2005-2006)*

Organizer & Participant: *Philosophy Discussion Club, Cornell University, Ithaca, NY (2004-2005)*

Session Facilitator & Assistant Organizer: *NYSAIA Annual Conference, Ithaca, NY (2004)*

Participant: *Design Computing and Cognition 2004, Cambridge, MA, Visual & Spatial Reasoning in Design III Workshop*

Participant: *Hegel Graduate Reading Group, Cornell University, Ithaca, NY (2003)*

Volunteer/Laborer: *Communitas Design/Build, Auburn, AL (2000)*

Volunteer/Laborer: *Civic Restoration Project, Opelika, AL (1999)*

Training:

Completed Harvard Business Publishing New Leaders Training Program (2018)

Awards/Recognition:

Runner Up, Article of the Year, Fluor P4 Publication Program (2017)