ANJALI JOSEPH

Spartanburg Regional Healthcare System Endowed Chair in Architecture + Health Design Director, Center for Health Facilities Design and Testing Professor, School of Architecture Adjunct Associate Professor, Department of Public Health Sciences 2-141, Lee Hall, Clemson University, Clemson SC 29634 Email: anjalij@clemson.edu

EDUCATION

2001-2006	 Ph.D. in Architecture, Georgia Institute of Technology, Atlanta, GA Major Area of Study: Architecture, Culture and Behavior Minor Area of Study: Health Systems Dissertation: Where Older Adults Walk: Assessing the Relationship Between Physical Environmental Factors and Walking Behavior of Older Adults
1999-2001	Master of Architecture, Kansas State University, Manhattan, KS
	Major area of focus: Environment and Behavior Studies Thesis: Developing Therapeutic Criteria for Designing Environments for People with AIDS

1994-1999 Bachelor of Architecture, School of Planning and Architecture, New Delhi, India

PROFESSIONAL EXPERIENCE

2018-	Spartanburg Regional Healthcare System Endowed Chair in Architecture + Health Design
	Director of Center for Health Facilities Design and Testing Professor of Architecture
	Associate Professor, Public Health Sciences
	Clemson University
2015 -2018	Spartanburg Regional Healthcare System Endowed Chair in Architecture + Health Design
	Director of Center for Health Facilities Design and Testing
	Associate Professor of Architecture Associate Professor, Public Health Sciences
	Clemson University
2013 -2014	Director of Grants and Research Advisory Services, The Center for Health Design
2012-2013	Vice President, Director of Research, The Center for Health Design
2005-2012	Director of Research, The Center for Health Design
2003	Research intern, Anshen + Allen Architects
1997	Intern Architect, Upal Ghosh and Associates, New Delhi, India
AWARDS AND RECOGNITION	

2018 Recognized as Researcher of 2018 *as part of the HCD 10*, awarded to one standout individual in each of 10 categories in the healthcare design field by the *Healthcare Design Magazine*

2018	Journal of Interior Design Excellence in Scholarship Award at the Interior Design Educator's Council for paper titled, Developing Evidence-based Tools for Designing and Evaluating Hospital Inpatient Rooms
2017	Healthcare Environments Award in conceptual category for RIPCHD.OR from The Center for Health Design
2017	Gold Level EBD Touchstone Award in Conceptual Category for RIPCHD.OR from The Center for Health Design
2017	Recognized as Chartered Fellow Member of the Chartered Association of Building
	Engineers (CABE)
2016	Recognized as Clemson University Professor of the Game at Clemson-NC State game
2014	CHD received EDRA Organizational Award for Excellence in Design Research, Education and Application
2010	Voted among the top 25 most influential people by Healthcare Design Magazine
2011	Voted among the top 25 most influential people by Healthcare Design Magazine
2006	Received ARCC King Student Medal for Excellence in Architectural + Environmental Research for Ph.D. Dissertation
2004-2005	Awarded Active Living Research Dissertation Grant
2005	First place award for paper - Harris-Kojetin, L., Kiefer, K., Joseph, A., & Zimring, C. (2005). Encouraging physical activity among retirement community residents - the role of campus commitment, programming, staffing, promotion, financing and accreditation. <i>Senior Housing and Care Journal, 13</i> (1), 3-20.
Student Award	ls

2018	Doctoral student Deborah Wingler awarded the Frankie O. Felder Graduate Student Award
2018	Doctoral student Rutali Joshi awarded 3rd place in the Graduate Research and
	Discovery Symposium (GRADS) 2018 poster competition- "Perception versus potential of
	functionality of corridors".
2017	Doctoral student Deborah Wingler awarded New Investigator Award from the Center for
	Health Design for her dissertation study
2017	Doctoral student Deborah Wingler awarded American Association of Healthcare Interior
	Designers (AAHID) Graduate Research Fellowship for her dissertation
2017	Doctoral student Deborah Wingler awarded Doctoral Dissertation completion grant from
	Clemson University
2017	MS Architecture student Rutali Joshi awarded 2nd Place -
	GRAD Research Symposium Poster Competition; Clemson University
2017	MS Architecture student Rutali Joshi awarded 3rd Place- 3-Minute Graduate Thesis
	Competition; Clemson University

RESEARCH EXPERIENCE:

Funded Projects

2015-2019 Principal Investigator, Learning Lab Director, Realizing Improved Patient Care through Human Centered Design in the OR (RIPCHD.OR) (P30 HS24380-01). The purpose of this 4-year project is to develop ergonomic and safe operating room design that impact patient safety outcomes such as surgical site infections and medical errors. Sponsor: Agency for Healthcare Research and Quality (AHRQ) Budget: \$4 million Collaborators: Medical University of South Carolina (MUSC) and Health Sciences South Carolina (HSSC)

- 2015-2019 Principal Investigator, Design of Healthcare Spaces and Products of the Future. The purpose of this project is to develop innovative concepts and design solutions to support collaboration in ambulatory care workspaces of the future. Gift sponsor: Haworth (via Watt Family Innovation Center) Budget: \$310,000 Collaborator: Materials Sciences, Clemson University
- 2017 Principal Investigator: Literature Review on Patient-Provider Communication and the Role of the Built Environment. The purpose of this project is to conduct an indepth literature review on the role of the built environment in supporting patient-provider communication in outpatient environments. Sponsor: Steelcase Health Budget: \$13,874
- 2015-2016 Principal Investigator, Literature Review: Impact of Light on Health Outcomes. The purpose of the project is to synthesize the peer reviewed literature linking lighting and daylight with outcomes in healthcare settings. Sponsor: Battelle in operation of Pacific Northwest National Laboratories (PNNL) Budget: \$31,999
- 2015-2017 Consultant, Disseminating a web-enabled Safety Risk Assessment (SRA) toolkit for designing safer healthcare facilities. The purpose of this project is to develop a webenabled interface for a proactive design safety risk assessment tool. Sponsor: Agency for Healthcare Research and Quality (AHRQ) Collaborators: The Center for Health Design (PI), National Center for Human Factors in Healthcare (NCHFH), Graybox
- 2012-2015 Principal Investigator, Developing and Disseminating a Safety Risk Assessment (SRA) Toolkit for Integrating Safety in the Healthcare Facility Design Process. This three-year (2012 - 2015 research project aimed to develop an online tool that will enable facility design stakeholders to implement the safety risk assessment (SRA) outlined in the FGI 2014 Guidelines for Design and Construction of Healthcare Facilities. Three multi-disciplinary seminars were organized to achieve grant objectives. Collaborators: Medstar Institute for Innovation (MI2), Kaiser Permanente, the Innovation Learning Network (ILN) and the American Society for Healthcare Engineers (ASHE). The project involved extensive collaboration with a multidisciplinary group of industry experts. Sponsors: Agency for Healthcare Research and Quality (AHRQ) and Facility Guidelines Institute (FGI)

Budget: \$300,000

2012-2015 Principal Investigator, Developing a Patient Room Interior Design Checklist and Evaluation Tool. This project aimed to develop over the course of three years an evidencebased patient room interior design checklist and evaluation tool for three types of patient rooms - medical surgical, intensive care and labor and delivery. Sponsor: American Society for Interior Designers (ASID)

Budget: \$100,000

2014 Research Consultant, Identifying drivers of bed capacity at Parkview Regional Medical Center, Fort Wayne, Indiana. The purpose of this three-phase project is to identify the drivers of bed capacity at PRMC and based on the findings develop a predictive model for forecasting bed capacity at PRMC. Role included literature reviews, developing interview protocols and conducting interviews with stakeholders at PRMC Project Sponsor: Parkview Regional Medical Center, Fort Wayne, IN Collaborator: hMetrix

- **2014 Director**, *Research Advisory Services*. Developed and launched The Center for Health Design's Research Advisory Services. This program provides research consulting services including research support, whitepapers and tool applications to the healthcare design industry.
- 2012-2014 Principal Investigator, Impact of Positive Distractions in X-ray Rooms on Patient and Parent Outcomes at Nemours Children's Hospital, Florida. This experimental study evaluated three different types of x-ray environments for their impacts on patient distress and parent satisfaction. Collaborator: Nemours Children's Hospital, Florida, Shireen Kanakri, Texas A&M University Sponsor: Philips Healthcare Budget: \$91,548
- **2006-2013 Research Coalition (RC) member**, CHD Research team representative and voting member on the Research Coalition (A group of industry volunteers that support CHD's research objectives). Responsibilities included developing a research agenda for the RC, coordinating with RC co-chairs, developing and managing an RFP process for funding research and supporting development of projects initiated by RC members
- **2005-2013** Research leader, *The Pebble Project.* Through the Pebble Project (an international initiative for organizations pursuing an evidence-based design process), Dr. Joseph has collaborated extensively with more than 30 organizations across the United States, Canada and United Kingdom to facilitate the translation of design ideas into research questions and studies. Dr. Joseph also worked with team members to develop tools and resources for Pebble Partners including Pebble whitepapers and a Pebble Acute Care Post-Occupancy Evaluation Tool. She has co-authored several articles in conjunction with Pebble Partner organizations.
- 2012- Project leader, Knowledge Repository. Dr. Joseph conceived the idea and led the development of an online database of references and article summaries of peer reviewed articles published in the evidence-based design field. Currently, the repository houses around 2000 references and 250 key point summaries. Web address: http://www.healthdesign.org/search/articles

Sponsors/Collaborators: American Institute of Architects Academy of Architecture for Health (AIA AAH), Facility Guidelines Institute (FGI), American Society for Healthcare Engineering (ASHE), Nursing Institute for Healthcare Design (NIHD) and Research Design Connections.

Budget: \$150,000

- 2012-2014 Principal Investigator: Developing Evidence Based Design Resources for Residential Care Settings. This project involved conducting a systematic review of the literature on the impact of residential care built environments on patients, staff and families, developing conceptual models demonstrating relationships identified through the review and developing key point summaries for articles found through the review. Sponsor: Hulda B. and Maurice Rothschild Foundation Budget: \$50,000
- 2009-2012 Principal Investigator, Community Health Center Design. The Center has developed white papers on several design-related topics, a Clinic Design website, a cost-benefit tool, an online design and construction manual, an online Post Occupancy Evaluation Tool and a series of five national seminars to assist those involved with the design of Community Health Centers for underserved populations. Web address: http://www.healthdesign.org/clinic-design Collaborators: Primary Care Development Corporation (PCDC), Community Health Association of Mountain/Plain States (CHAMPS), IFF

Sponsors: Kresge Foundation, California HealthCare Foundation (CHCF) Budget: \$500,000

- 2010-2011 Principal Investigator, Developing a Resident Safety Risk Assessment Framework This project involved developing a safety risk assessment framework for residential care settings based on a literature review. Sponsor: Hulda B. and Maurice Rothschild Foundation Budget: \$25,000
- 2010 Research Consultant, *Razi Health Clinics Post Occupancy Evaluation.* This involved conducting a post occupancy evaluation at 8 clinics for Razi Healthcare in Hyderabad India. The project involved developing tools, on-site POEs and interviews. Sponsor: Architecture for Humanity Budget: \$15,000
- 2010-2011 Principal Investigator, Designing for Patient Safety: Developing methods to integrate patient safety concerns into the facility design process. The two-day workshop focused on how varied industries incorporate safety into design through tools and processes. The findings were used to guide amended language for the Safety Risk Assessment in the 2014 Guidelines.
 Collaborators: Facility Guidelines Institute, Virtua Health Sponsor: Agency for Healthcare Research and Quality (AHRQ) Budget: \$50,000
- **2010-2011 Principal Investigator**, *Green Cleaning in Healthcare*. This project involved a) establishing a conceptual framework for green cleaning through literature review, b) conducting case study interviews with representatives from five major healthcare facilities, and c) conducting an online questionnaire survey of high-priority research questions around green cleaning. Sponsor: Healthier Hospital Initiatives and Healthcare Without Harm Budget: \$40,000
- 2008-2010 Principal Investigator, An Open Source Searchable Database to Assess the Impact of Environmental Strategies on Outcomes in Healthcare). The goal of the project was to develop an open source database and content linking sustainable healthcare design strategies with healthcare outcomes. The database and website called RIPPLE included information on design strategies and outcomes from five healthcare facilities in the area of environmental safety.
 Collaborators: Affinity Health, Jersey Shore University Medical Center, Advocate Lutheran General Hospital, St. Alphonsus Regional Medical Center, Dublin Methodist Hospital Sponsor: U.S. Green Building Council Budget: \$149,796
- 2010 Principal Investigator, Literature Review on Telemetry Environments Sponsor: Philips Healthcare Budget: \$20,000
- 2009-2010 Project Leader (CHD), Developing an Aesthetics Index for the US Army Medical Command (CHD subcontract \$33,500). CHD conducted a literature review to define the characteristics of facility 'aesthetics' that may be quantifiable. Collaborators: The Innova Group (primary government contractor) Sponsor: US Army Medical Command
- 2009-2010 Principal Investigator, Patient Experience in MRI Environments. This study evaluated the impact of positive distractions on patient experience in two MRI rooms in a hospital radiology department. Sponsor: Philips Healthcare

Budget: \$76,000

- 2008-2010 Principal Investigator, *EBD Industry Survey*. An annual survey was developed and conducted in 2009 and 2010 among industry stakeholders to evaluate perceptions and awareness of Evidence-Based Design in the industry. Sponsor: Herman Miller Budget: \$75,000
- **2008-2009 Principal Investigator**, *Impact of Philips Ambient Experience on Staff Experience and Satisfaction.* This study evaluated the effect of positive distractions on staff experience in MRI and CT rooms using a survey.

Sponsor: Philips Healthcare

Budget: \$63,300

- 2008-2009 Project Leader (CHD), Safety and Quality in Healthcare: A Framework for Evaluating Evidence-Based Design. (CHD subcontract \$81,020). The AHRQ-funded project considered how organizations find, evaluate and use evidence during varied phases of their design process and resulted in an informational guide for C-Suite executives. Collaborators, Battelle, Manila Institute Sponsor: Agency for Healthcare Research and Quality
- 2008 Principal Investigator, Conducting a Research Workshop to Identify Research Opportunities for Philips Healthcare Ambient Experience Solutions Sponsor: Philips Healthcare

Budget: \$35,820

- 2007-2008 Principal Investigator, Evidence for Innovation: Transforming Children's Healthcare through the Physical Environment. The project focused on developing a book compiling multiple resources – literature review, best practices and business case - around designing pediatric environments. Collaborators: National Association of Children's Hospitals and Related Institutions (NACHRI), Blair Sadler Sponsor: NACHRI
- **2006-2007 Principal Investigator**, *Literature review on Long-Term Care Environments* Sponsor: Laguna Honda Foundation through the California HealthCare Foundation
- **2005-2006** Research lead, *Developing Whitepapers for Evidence Based Design*. Authored whitepapers on high priority topics in EBD. Sponsor: Robert Wood Johnson Foundation
- 2003-2004 Research Assistant to Dr. Craig Zimring, Georgia Institute of Technology, Comprehensive Literature Review on the Impact of Healthcare Environments on Patients and Staff. Key researcher conducting the literature review, analysis and write up for the Georgia Tech team.
 Collaborators: Texas A&M University, Georgia Tech.

Sponsor: Robert Wood Johnson Foundation

2002-2003 Research Assistant to Dr. Craig Ziming Georgia Institute of Technology

Active Living by Design: Creating Activity-Enhancing Residential Settings for Seniors. Key researcher involved in proposal development, survey development, analysis and writing. Collaborators: American Association of Homes and Services for the Aging, Dr. Ruth Dalton (Georgia Tech PI) Sponsor: Robert Wood Johnson Foundation

2001-2002 Research Assistant to Dr. Craig Ziming, Georgia Institute of Technology

Creating a Comprehensive Database and Web Site of Federal Courts. Participated in Courthouse POEs and helped developed database for Courthouse website. Sponsor: US. General Services Administration

ACADEMIC EXPERIENCE

2018-	Professor, School of Architecture, Clemson University
2015 -	Associate Professor, School of Architecture, Clemson University
2016 -	Associate Professor, Public Health Sciences, Clemson University (secondary
	appointment
2014	Invited Lecturer, Evidence Based Design – Research to Practice, University of Northern lowa
2013	Invited Lecturer, Evidence Based Design – Research to Practice, Kent State University
Spring 2005	Studio Instructor, Common Freshman Year, Georgia Institute of Technology
2003-2004	Research Assistant to Dr. Craig Zimring, Georgia Institute of Technology, Comprehensive literature review on the impact of healthcare environments on patients and staff
2002-2003	Research Assistant to Dr. Craig Ziming Georgia Institute of Technology Active Living by Design: Creating Activity-Enhancing Residential Settings for Seniors
2001-2002	Research Assistant to Dr. Craig Ziming Georgia Institute of Technology Creating a comprehensive database and web site for Federal Courthouses
1999-2001	Graduate Teaching Assistant in Structural Mechanics, Kansas State University

TEACHING AND ADVISING

Courses Taught:

S 15, 16, 17, 18	ARCH 8900/8650: Topics in Health Policy, Planning and Administration
F15, S16, F16, S17	PDBE 8050: Advanced Readings in Architecture and Health
F16	ARCH 8900 001 (Special topics seminar on OR)
S 16	ARCH 6990: Independent studies

Student Advising:

Ph.D Students (current): Herminia Machry Deborah Wingler Roxana Jafari Rutali Joshi

M.Arch Thesis Committee member (current) Emily McGowan

MS Arch Thesis committee chair (graduated) Rutali Joshi

MS Arch Thesis Committee member (graduated) Tatiana Epimakhova

SELECTED PRESENTATIONS AND PUBLICATIONS

Peer Reviewed Publications

Submitted, under review

- Joseph, A., Reid, J. & Kearney, J. Planning patient care areas. Book chapter submitted for Textbook on Simulation in Healthcare. Editors – Ellen Deutsch, Shawna Perry & Harshad Gurnaney
- 2. Wingler, D., Robb, A., **Joseph, A.**, Bayramzadeh, S. Demonstrating how virtual reality can support objective evaluations of healthcare facility design.

Published

- 1. **Joseph, A.,** Henriksen, K. & Malone, E. (accepted for publication). The Architecture of Safety: An emerging priority for improving patient safety. Health Affairs (abstract accepted for special theme issue on patient safety)
- Joseph, A., Khoshkenar, A., Taaffe, K. M., Catchpole, K., Machry, H., & Bayramzadeh, S. (2018). Minor flow disruptions, traffic-related factors and their effect on major flow disruptions in the operating room. *BMJ Quality & amp; Safety*. doi:10.1136/bmjqs-2018-007957
- Mousavi, E. S., Jafarifiroozabadi, R., Bayramzadeh, S., Joseph, A., & San, D. (2018). An observational study of door motion in operating rooms. *Building and Environment*, 144, 502-507. doi:https://doi.org/10.1016/j.buildenv.2018.08.052
- Wingler, D., Machry, H., Bayramzadeh, S., Joseph, A., & Allison, D. (2018). Comparing the Effectiveness of Four Different Design Media in Communicating Desired Performance Outcomes With Clinical End Users. *HERD*, 1937586718796626. doi:10.1177/1937586718796626
- 5. Bayramzadeh, S., **Joseph, A.,** Allison, D., Shultz, J., & Abernathy, J. (2018). Using an integrative mock-up simulation approach for evidence-based evaluation of operating room design prototypes. *Applied Ergonomics, 70*, 288-299. doi:https://doi.org/10.1016/j.apergo.2018.03.011
- Bayramzadeh, S., Joseph, A., San, D., Khoshkenar, A., Taaffe, K., Jafarifiroozabadi, R., Neyens, D., & RIPCHD.OR Study Group. (2018, January). The impact of operating room layout on circulating nurse's work patterns and workflow disruptions: A behavioral mapping study. *Health Environments Research & Design Journal*. doi: 10.1177/1937586717751124. PMID: 29355033
- Neyens, D.M., Bayramzadeh, S., Catchpole, K., Joseph, A., Taaffe, K., Jurewicz, K., Khoshkenar, A., San, D., & RIPCHD.OR Study Group. (2018, March 30). Using a systems approach to evaluate a circulating nurse's work patterns and workflow disruptions. *Applied Ergonomics*. pii: S0003-6870(18)30078-4. doi: 10.1016/j.apergo.2018.03.017. PMID: 29609835
- Catchpole, K., Neyens, D. M., Abernathy, J., Allison, D., Joseph, A., & Reeves, S. T. (2017). Framework for direct observation of performance and safety in healthcare. *BMJ Quality & Safety*. doi:10.1136/bmjqs-2016-006407
- 9. Joseph A, Bayramzadeh S, Zamani Z, Rostenberg B. (2017) Safety, Performance, and Satisfaction Outcomes in the Operating Room: A Literature Review. *HERD*. :1937586717705107.
- 10. **Joseph, A.,** Wingler, D., & Zamani, Z. (2017). Balancing the Human Touch with the Need for Integrating Technology in Ambulatory Surgical Environments: Barriers and Facilitators to Nursing Work and Care Team Interactions. *Journal of Interior Design*, n/a-n/a. doi:10.1111/joid.12089
- Quan, X., Joseph, A., & Nanda, U. (2017). Developing Evidence-based Tools for Designing and Evaluating Hospital Inpatient Rooms. *Journal of Interior Design*, n/a-n/a. doi:10.1111/joid.12091 (*Journal of Interior Design Excellence in Scholarship Award*)
- 12. Ibrahim, A. M., Dimick, J. B., & **Joseph, A.** (2016). Building a Better Operating Room: Views from Surgery and Architecture. *Annals of Surgery*. doi:10.1097/sla.000000000001777
- Quan, X., Joseph, A., Nanda, U., Moyano-Smith, O., Kanakri, S., Ancheta, C., & Loveless, E. A. (2016). Improving Pediatric Radiography Patient Stress, Mood, and Parental Satisfaction Through Positive Environmental Distractions: A Randomized Control Trial. *Journal of Pediatric Nursing*, *31*(1), e11-22. doi:10.1016/j.pedn.2015.08.004
- 14. Taylor, E., Quan, X., & **Joseph, A**. (2015). *Testing a tool to support safety in healthcare facility design*. Paper presented at the 6th International Conference on Applied Human Factors and Ergonomics (AHFE

2015) ad the Affiliated Conferences, Krakow, Poland

- 15. Joseph, A., Choi, Y.-S., & Quan, X. (2015). Impact of the Physical Environment of Residential Health, Care, and Support Facilities (RHCSF) on Staff and Residents: A Systematic Review of the Literature. *Environment and Behavior*. doi:10.1177/0013916515597027
- Taylor, E., Hignett, S., & Joseph, A. (2014). The environment of safe care: considering building design as one facet of safety. Proceedings of the International Symposium of Human Factors and Ergonomics in Healthcare, 3(1), 123–127.
- Taylor, E., Joseph, A., Quan, X., & Nanda, U. (2014). Designing a tool to support patient safety: Using research to inform a proactive approach to healthcare facility design. In Advances in Ergonomics In Design, Usability & Special Populations: Part III (Vols. 1-20, Vol. 18, pp. 7889– 7899). Krakow, Poland: AHFE International/CRC Press (Taylor & Francis Group).
- 18. Joseph, A., Keller, A., Quan, X., Taylor, E., Nanda, U. & Hua., Y. (2014) Building a knowledge base for evidence-based healthcare facility design. *The Intelligent Buildings International Journal, 11 (44).*
- Taylor, E., Joseph, A., & Quan, X. (2012). Designing for Patient Safety Considering a Patient Safety Risk Assessment. *Advances in Human Aspects of Healthcare* (Vol. 3, pp. 249-258). Purdue University, Indiana: CRC Press.
- Joseph, A., & Malone, E. (2012). The Environment: An Often Unconsidered Patient Safety Tool. AHRQ WebM&M: Morbidity and Mortality Rounds on the Web. From http://webmm.ahrq.gov/perspective.aspx?perspectiveID=130
- Quan, X., Joseph, A., & Ensign, J. (2012). Impact of imaging room environment: Staff job stress and satisfaction, patient satisfaction, and willingness to recommend. *Health Environments Research & Design Journal*, 5(2), 61-79.
- 22. Henriksen, K., **Joseph, A.,** & Zayas-Caban, T. (2009). The human factors of home health care: A conceptual model for examining safety and quality concerns. *Journal of Patient Safety, 5*, 229-236.
- 23. Gulwadi, G., **Joseph, A.**, & Keller, A. (2009). Exploring the impact of the physical environment on patient outcomes in ambulatory care settings. *Health Environments Research & Design Journal*, 2(2), 21-41.
- 24. Ulrich, R., Zimring, C., Zhu, X., DuBose, J., Hyun-Bo, S., Choi, Y.-S., Quan, X., **Joseph, A**. (2008). A review of the research literature on evidence-based healthcare design. *Health Environments Research & Design Journal, 1*(3), 61-125.
- Joseph, A., & Hamilton, K. (2008). The Pebble Projects: Coordinated evidence-based case studies. *Building Research and Information*, 36(2), 129-145. (Also Translated into Chinese for Urbanism and Architecture, 2011)
- 26. Joseph, A., & Rashid, M. (2007). The architecture of safety: Hospital design. *Current Opinion in Critical Care, 13*, 714-719.
- Joseph, A., & Zimring, C. (2007). Where active older adults walk: Understanding the factors related to path choice for walking among active retirement community residents. *Environment & Behavior*, 39(1), 75-105.
- Joseph, A., Zimring, C., Harris-Kojetin, L., & Kiefer, K. (2006). Presence and visibility of outdoor and indoor physical activity features and participation in physical activity among older adults in retirement communities. *Journal of Housing for the Elderly* 19(3-4).
- Zimring, C., Joseph, A., Nicoll, G. L., & Tsepas, S. (2005). Influences of building design and site design on physical activity: Research and intervention opportunities. *American Journal of Preventive Medicine*, 28(2, Supplement 2), 186-193.
- 30. Harris-Kojetin, L., Kiefer, K., **Joseph, A.,** & Zimring, C. (2005). Encouraging physical activity among retirement community residents the role of campus commitment, programming, staffing, promotion, financing and accreditation. *Senior Housing and Care Journal, 13*(1), 3-20. (received first place award for this paper

Conference Proceedings

- Joseph, A., Wingler, D., Bayramzadeh, S., Machry, H. (2017). Using a systems framework and methodology for observing behavior in operating room environments. Association of Canadian Ergonomists & Symposium on Human Factors in Organizational Design and Management (ACE-ODAM 2017), Banff, Alberta, Canada.
- Joseph, A., Wingler, D., Bayramzadeh, S. & Abernathy, J. (2017). Integrating research, education and practice in the healthcare facility design process through the use of physical mockups. Association of Canadian Ergonomists & Symposium on Human Factors in Organizational Design and Management (ACE-ODAM 2017), Banff, Alberta, Canada.
- 3. Khoshkenar, A., Taaffe, K., Muhs, M., Fredendall, L., Ferrand, Y., San, D., & Joseph, A. (December 2017). "Simulation-based design and traffic flow improvements in the operating room," in *Proceedings of the 2017 Winter Simulation Conference*, Washington, DC.
- 4. Wingler, D., Joseph, A., & Joshi, R. (2018). An Ergonomic Evaluation of Preoperative and Postoperative Workspaces in Ambulatory Surgery Centers. In V. Duffy & N. Lightner (Eds.), Advances in Human Factors and Ergonomics in Healthcare and Medical Devices: Proceedings of the AHFE 2017 International Conferences on Human Factors and Ergonomics in Healthcare and Medical Devices, July 17–21, 2017, The Westin Bonaventure Hotel, Los Angeles, California, USA (pp. 11-21). Cham: Springer International Publishing.

Whitepapers and selected articles

- 1. Joseph, A & Allison, D. (2018, October). Designing a Safer OR. Healthcare Design Magazine.
- 2. Joseph, A. (2016, April 14). Overcoming challenges while designing clinics. *Healthcare Executive*.
- 3. The Center for Health Design. (October 2015). Safety Risk Assessment Toolkit (PDF version). CHD Insights & Solutions. Retrieved from https://www.healthdesign.org/insights-solutions/safety-risk-assessment-toolkit-pdf-version
- 4. The Center for Health Design. (2015). Patient room design checklist and evaluation tool. *Insights and Solutions*. Retrieved from https://www.healthdesign.org/insights-solutions/patient-room-design-checklist-and-evaluation-tool
- 5. Joseph, A. (2015, March 5). Design Principles and Trends in Assisted Living. Healthcare Executive. https://www.healthcareexecutive.in/design-principles-and-trends-in-assisted-living
- 6. **Joseph, A**., & Taylor, E. (2014). Safety first: Designing healthcare spaces to avoid adverse events. Healthcare Design Magazine, February 18, 2014.
- 7. Nanda, U., **Joseph, A**., & Malone, E. (2013). Impact of affordable care on healthcare design. Contract, October 2013.
- 8. Nanda, U., Joseph, A., & Piatkowski, M. (2013). Designing the med-surg room. Healthcare Design Magazine, December 2, 2013.
- 9. **Joseph, A.,** Quan, X., & Keller, A. (2013). Top 10 evidence-based design features that improve healthcare outcomes. *Hospital Infrabiz Magazine*. Retrieved from http://www.hospitalinfrabiz.com/top-10-evidence-based-design-features-that-improve-healthcare-outcomes.html
- 10. **Joseph, A**., & Quan, X. (2012). Summary of the literature review: Resident Safety Risk Assessment. Concord, CA: The Center for Health Design.
- 11. Nanda, U., Malone, E., & **Joseph, A**. (2012). *Achieving EBD goals through flooring selection & design*. Concord, CA: The Center for Health Design.
- 12. Taylor, E., Quan, X., Nanda, U., & **Joseph, A.** (2012). Creating standardization for Post-Occupancy Evaluation. Healthcare Design Magazine, October 8, 2012.
- 13. **Joseph, A.,** Quan, X., Taylor, E., & Jelen, M. (2011). *Designing for patient safety: Developing methods to integrate patient safety concerns in the design process*. Concord, CA: The Center for Health Design.
- 14. **Joseph, A.,** & Quist, C. (2012, March 15). Building a foundation for EBD research. *Healthcare Design Magazine*.

- 15. **Joseph, A.** (2012). Research at The Center for Health Design: Looking ahead. *Healthcare Design Magazine*, August 20
- 16. Quan, X., **Joseph, A**., & Jelen, M. (2012). Green cleaning in healthcare: Moving toward a systematic approach. Healthcare Design Magazine, 12, 24-32.
- 17. Quan, X., **Joseph, A.,** & Jelen, M. (2011). *Green cleaning in healthcare: Current practices and questions for future research:* Healthcare without harm.
- 18. Quan, X., & **Joseph, A**. (2011, December 13). Creating a foundation for evidence-based healthcare design research and practice. *Healthcare Design Magazine*.
- 19. Gandhi, T., & **Joseph, A.** (2011). Getting it right the first time: A process-driven facility design approach at Virtua Health. Healthcare Design Magazine, March 31, 2011.
- 20. Quan, X., Malone, E., **Joseph, A**. & Pati, D. (2011). *Healthcare Environmental Terms and Outcome Measures: An Evidence-Based Design Glossary.* Concord, CA: ,The Center for Health Design.
- 21. **Joseph, A.,** Keller, A., Taylor, E., & Quan, X. (2011). *Designing safety-net clinics for cultural sensitivity* (White Paper). Promising Practices in Safety-Net Clinic Design. California: The Center for Health Design/California Healthcare Foundation.
- 22. Taylor, E., **Joseph, A.**, Keller, A., & Quan, X. (2011). *Designing safety-net clinics for flexibility* (White Paper). Promising Practices in Safety-Net Clinic Design. California: The Center for Health Design/California Healthcare Foundation.
- 23. Quan, X., **Joseph, A**., Keller, A., & Taylor, E. (2011). *Designing safety-net clinics for innovative care delivery models* (White Paper). Promising Practices in Safety-Net Clinic Design. California: The Center for Health Design/California Healthcare Foundation.
- 24. **Joseph, A.** (2011). Healthcare design trends in India. *Healthcare Design Magazine*, October 2011.
- 25. Taylor, E., & **Joseph, A.** (2010). HCD 10: Has the Use of Evidence-Based Design Changed in the Last Year? *Healthcare Design Magazine*, November 15
- 26. Taylor, E., & **Joseph, A.** (2010). Has the Use of Evidence-Based Design Changed in the Last Year?: Results from the Second Annual Survey of Design Research in Healthcare Settings. *Healthcare Design Magazine*, October 31
- 27. Sadler, B., **Joseph, A.**, Keller, A., & Rostenberg, B. (2009). *Using Evidence Based Environmental Design to Enhance Safety and Quality*. Boston: Insitute for Healthcare Improvement
- 28. **Joseph, A.** (2008). Hospitals That Heal: Hospital Design for the 21st Century. *Asian Hospital & Healthcare Management,* (Healthcare Management). Retrieved from http://www.asianhhm.com/healthcare_management/hospitals_heal.htm
- 29. Calkins, M., & **Joseph, A.** (2008). The Evidence in Support of SAGE Design Principles. *Long-Term Living,* March 1.
- 30. Joseph, A. (2008). Impact of medical technology on the design of health care settings. *Hospital and Health Networks*, 82(5).
- 31. **Joseph, A**. (2007). Design Strategies to Reduce Hospital-Acquired Infections. *Health Management, 9.*
- 32. **Joseph, A.** (2006). Less Infectious by Design. *Cleanroom Technology,* (November 16, 2006). Retrieved from
 - http://www.cleanroomtechnology.com/technical/article_page/Less_infectious_by_design/51444
- 33. **Joseph, A.** (2006). Health promotion by design in long-term care settings Concord, CA: The Center for Health Design
- 34. **Joseph, A.** (2006). *The role of the physical environment in promoting health, safety, and effectiveness in the healthcare workplace* Concord, CA:The Center for Health Design.

- 35. **Joseph, A.** (2006). *The Impact of Design on Infections in Healthcare Facilities*. Concord, CA: The Center for Health Design
- 36. **Joseph, A**. (2006). *The Impact of Light on Outcomes in Healthcare Settings.* Concord, CA: The Center for Health Design
- 37. **Joseph, A.** (2006). Sound Control for Improved Outcomes in Healthcare Settings. Concord, CA: The Center for Health Design
- 38. **Joseph**, A., Bosch, S., Frederick, C., & Jackson, M. (2007). Researching the effectiveness of a participatory evidence-based design process. *Healthcare Design*, *7*, 8-10.
- 39. Joseph, A., & Fritz, L. (2006, March). Ceiling lifts reduce patient-handling injuries. *Healthcare Design, 6,* 10-13.
- 40. Ulrich, R. P., Quan, X., Zimring, C. P., **Joseph, A.,** & Choudhary, R. (2004). *The Role of the Physical Environment in the Hospital of the 21st Century: A Once-in-a-Lifetime Opportunity.* Concord: The Center for Health Design.

Books and Book sections

- 1. **Joseph, A.,** Allison, D., Joshi, R. (Editors) (2018). Realizing Improved Patient Care through Human-Centered Design in the Operating Room (RIPCHD.OR). (Internal CHFDT publication) http://issuu.com/clemsonchfdt/docs/ripchd.or_volume_2
- Joseph, A., Wingler, D. & Allison, D. (Editors) (2016). Realizing Improved Patient Care through Human-Centered Design in the Operating Room (RIPCHD.OR). (Internal CHFDT publication) <u>http://issuu.com/clemsonchfdt/docs/ripchd.or_volume_1/1</u>
- Joseph, A., Taylor, E., & Quan, X. (2017). Creating safer healthcare environments using an evidence-based design process. In V. K. Singh (Ed.). Innovative, Lean & Evidence Based Healthcare Facilities Planning and Design, CRC Press.
- 4. **Joseph, A.,** & Nanda, U. (Eds.). (2013). *Development of tools for healthcare environments research and practice*: EDRA.
- Levin, D., & Joseph, A. (2009). Foreward and Book sections. In Joint Commission Resources (Ed.), *Planning, Design and Construction of Healthcare Facilities, Second Edition*. Chicago, IL: Joint Commission on Accreditation of Healthcare Organizations.
- 6. Harris, D., **Joseph, A.**, Becker, F., Hamilton, D. K., Shepley, M. M., & Zimring, C. (2008). *A Practitioner's Guide to Evidence-Based Design*. Concord, CA: The Center for Health Design.
- Joseph, A., Keller, A., & Kronick, K. (2008). Tranforming care in children's hospitals through environmental design: Literature Review. In NACHRI (Ed.), *Evidence for Innovation: Transforming Children's Health Through the Physical Environment* (pp. 18-47). Alexandria, VA: National Association of Children's Hospitals and Associated Institutions (NACHRI).
- 8. Ulrich, R., Zimring, C., Quan, X., & **Joseph, A.** (2005). The Environment's Impact on Stress. In S. Marberry (Ed.), *Improving Healthcare with Better Building Design* (pp. 37-62). Chicago, IL: ACHE.
- 9. Zimring, C., Ulrich, R., **Joseph, A.,** & Quan, X. (2005). The Environment's Impact on Safety. In S. Marberry (Ed.), *Improving Healthcare with Better Building Design* (pp. 63-80). Chicago, IL: ACHE.
- Joseph, A., Zimring, C., Harris-Kojetin, L., & Kiefer, K. (2005). Presence and Visibility of Outdoor and Indoor Physical Activity Features and Participation in Physical Activity Among Older Adults in Retirement Communities. In S. Rodiek & B. Schwarz (Eds.), The Role of the Outdoors in Residential Environments for Aging (pp. 141-166). New York: Haworth Press Inc.

Peer-Reviewed and Invited Presentations

1. Wingler, D., **Joseph, A.** (2018, September 21-22). More Than Feelings: Examining Child and Parent Affective Responses to the Ambulatory Surgical Environment. Academy of Neuroscience for Architecture Conference. La Jolla, CA.

- Wingler, D., Joseph, A. (2018, August 26-30). Developing a Methodology for Collecting Realtime Data of Child and Parent Responses During the Ambulatory Surgical Environment. Congress of International Ergonomics Association. Florence, Italy.
- 3. Wingler, D., Martin, L., **Joseph, A.** (2018, June 11-13). Understanding the Impact of Induction room vs. Operating Theater on Child and Parent Anxiety During the Ambulatory Surgical Process. European Healthcare Design. London, UK.
- 4. Wingler, D., Joseph, A., Martin, L. (2018, November 10-13). AAHID/Steelcase Health Student Fellowship Presentation. Healthcare Design Conference. Phoenix, AZ.
- 5. Machry, H., & **Joseph, A.** (2018, September 28). *Understanding Family Engagement in the NICU from the Built Environment Perspective*. Fifteenth Research Symposium: Transforming Clinical Practice and Education. Greenville, SC.
- 6. **Joseph, A.,** Joshi, R., Wingler, D., O'hara, S. (2018, August 26-30). *Integrating technology in patient care spaces: Using scenario-based evaluations to compare design alternatives in virtual reality.* International Ergonomics Association. Florence, Italy.
- 7. Bayramzadeh, S., **Joseph, A.,** Allison, D. (2018, June 6-9). Using simulation-based mock-up evaluations to proactively engage clinicians during healthcare facility design and renovation projects. Environmental Design Research Association (EDRA) 49 Conference. Oklahoma City, OK.
- 8. Wingler, D., **Joseph, A**., Bayramzadeh, S., Machry, H. (2018, June 6-9). *Engaging end-users in architectural design decision-making: A comparison of four design communication. media.* Environmental Design Research Association (EDRA) 49 Conference. Oklahoma City, OK.
- Jafarifiroozabadi, R., Bayramzadeh, S., Joseph, A., Mousavi, E. (2018, June 6-9). Patterns of Door Openings in Operating Rooms. Environmental Design Research Association (EDRA) 48 Conference. Oklahoma City, OK.
- 10. Ossmann, M., **Joseph, A.**, Wingler, D. (2018, June 6-9). *Place making: Health as home.* Environmental Design Research Association (EDRA) 48 Conference. Oklahoma City, OK.
- 11. **Joseph, A.**, Wingler, D., Robb, A., Bayramzadeh, S. (2018, June 11-12). *Integrating technology in patient care spaces: Using scenario-based evaluations to compare design alternatives in virtual reality.* European Healthcare Design. London, UK
- 12. **Joseph, A.,** Taaffe, K., Khoshkenar, A., Bayramzadeh, S. (2018, June 11-12). *How large should the OR be? Using a multi-disciplinary systems approach to designing safer operating rooms.* European Healthcare Design. London, UK.
- 13. Wingler, D., Martin, L., **Joseph, A.** (2018, June 11-13). Understanding the Impact of Induction room vs. Operating Theater on Child and Parent Anxiety During the Ambulatory Surgical Process. European Healthcare Design. London, UK.
- 14. Joseph, A., Khoshkenar, A., Taaffe, K., Bayramzadeh, S., Catchpole, K., & Machry, H. (2018, May 19-22). *Minor disruptions, traffic levels, and their effect on major flow disruptions in the operating room.* 2018 IISE Annual Conference. Orlando, FL.
- 15. Lee, B., San, D., Taaffe, K., Fredendall, L., Ferrand, Y., Khoshkenar, A., **Joseph, A.**, Reeves, S., & RIPCHD.OR team. (May 2018). *Reduction of patient and surgery preparation time in the operating room.* Annual meeting of the Production and Operations Management Society, Houston, TX.
- Lee, B., San, D., Taaffe, K., Fredendall, L., Ferrand, Y., Khoshkenar, A., Fiore, A., Joseph, A., Reeves, S. & RIPCHD.OR team (April 2018). *Potential benefits of a separate instrument setup room or induction room adjacent to the operating room*. Health Sciences Center Research Showcase, Greenville Health System, Greenville, SC
- Lee, B., San, D., Taaffe, K., Muhs, M., Khoshkenar, A., Fredendall, L., Ferrand, Y., & Joseph, A. (February 2018). *Monitoring task flows for aseptic practices in the operating room*. Presentation at the 2018 Healthcare Systems Process Improvement Conference, Atlanta, GA.
- Khoshkenar, A., Taaffe, K., Fredendall, L., Ferrand, Y. San, D., & Joseph, A. (February 2018). *Traffic flow improvements in the operating room using a Markov chain simulation model.* Presentation at the 2018 Healthcare Systems Process Improvement Conference, Atlanta, GA.
- 19. Joseph, A., Bayramzadeh, S., Machry, H., & Wingler, D. (2017). *Realizing improved patient care through human centered design in the OR: Phase 2 findings.* Healthcare Design Conference. Kissimmee, FL.
- 20. Bayramzadeh, S., **Joseph, A.,** & Machry, H. (2017, July 17-21). Operating room layout configuration: a tool to improve staff experience, performance, and efficiency. Applied Human Factor and Ergonomics

(AHFE) International Conference. Los Angeles, CA.

- Wingler, D., Joseph, A., & Joshi, R. (2017). An Ergonomic Evaluation of Preoperative and Postoperative Workspaces in Ambulatory Surgery Centers. July 17–21, 2017, The Westin Bonaventure Hotel, Los Angeles, California, USA (pp. 11-21).
- 22. **Joseph, A.,** Catchpole, K., & Allison, D. (2017, June 12-14). *Using a systems approach to designing a safer and more ergonomic operating room.* Poster presented at the European Healthcare Design Conference London, UK.
- Lee, B., Shvorin, D., Fredendall, L., Taaffe, K., Ferrand, Y., Muhs, M., San, D., Joseph, A., & Reeves, A. (2017, May). Correlation of Microbial Load and Movement within the Operating Room. Presented at the Clemson University Research Symposium, Clemson, SC.
- Taaffe, K., Khoshkenar, K., Muhs, M., Fredendall, L., Ferrand, Y., San, D., Joseph, A., Reeves, S. (2017, May). Simulation-based Design Improvements in the Operating Room. Presented at the Clemson University Research Symposium, Clemson, SC.
- 25. Machry, H., & **Joseph, A.** (2017, May 31-June 3). *The built enviroment as a factor in the engagement process in healthcare.* Paper presented at the Environmental Design Research Association (EDRA), Madison, WI.
- 26. **Joseph, A.**, Wingler, D., & Joshi, R. (2017, May 31 June 3). *Designing preoperative and postoperative workspaces to support communication between patients, staff and care partners in ambulatory surgery centers: An ergonomic evaluation.* Paper presented at the Environmental Design Research (EDRA) conference, Madison, WI.
- Bayramzadeh, S., Joseph, A., Wingler, D., & Machry, H. (2017, May 31-June 3). Developing Methods to Observe and Analyze Behaviors in Operating Room Environments. *Environmental Design Research Association (EDRA)* 48 Conference. Madison, WI.
- Machry, H., Joseph, A., Wingler, D., & Mathews, R. (2017, May 31-June 3). Spatial Implications of Essential Surgical Flows in Ambulatory Surgery Centers. *Environmental Design Research Association* (*EDRA*) 48 Conference. Madison, WI.
- 29. Joseph, A. (2017). Architecture + Health: Healthcare spaces of the future. Presentation at the Watt Innovation Forum, Clemson, SC.
- Joseph, A., & Wingler, D. (2017, March 31). Balancing the Human Touch with the Need for Integrating Technology in Ambulatory Surgical Environments: Barriers and facilitators to nursing work and care team interactions. Poster presented at the Greenville Health System Health Sciences Research Showcase, Greenville, SC.
- 31. Joseph, A., & Reeves, S. (2017). *Improving Patient Care through Human-Centered Design in the OR*. Paper presented at the AHRQ PSLL Webinar series, Webinar.
- 32. Joseph, A. (2017). Grant seeking workshop. Clemson University
- Catchpole, K., Joseph, A., Machry, H., & Zamani, Z. (2016, Nov. 12-15). Realizing Improved Patient Care through Human Centered Design in the OR: Phase 1 Findings. Healthcare Design Conference. Houston, TX.
- 34. Allison, D., Catchpole, K., & **Joseph, A.** (2016, Nov. 12-15). *Bench to Bedside: Integrating Research Education and Practice in Architecture and Health.* Healthcare Design Conference. Houston, TX.
- 35. Lee, B., Fredendall, L., Taaffe, K., & **Joseph, A.** (2016, Nov. 13-16). *Operating Room Management When Considering Microbial Loads*. INFORMS 2016 Annual Conference. Nashville, TN.
- Lee, B., Fredendall, L., Taaffe, K., & Joseph, A. (2016, Nov. 18-21). Operating Room Management When Considering Microbial Loads. 48th Annual Meeting of the Decision Sciences Institute. Austin, TX.
- Shvorin, D., Taaffe, K., Fredendall, L., Ferrand, Y., San, D., Lee, B., Bhide, K., & Joseph, A. (2016, Oct. 26-29). *Operating Room Management When Considering Microbial Loads*. International Annual Conference of the American Society for Engineering Management. Charlotte, NC.
- 38. **Joseph, A.,** Davis, R., & Wilkerson, A. (October 4, 2016). *Evidence-Based Design for Healthcare Lighting: Where's the evidence?* Paper presented at the DOE Healthcare Lighting Webinar Series,

Webinar.

- 39. Joseph, A. (2016, September 23). *Designing Safer Operating Rooms Using A Systems Approach*. The Carolinas anesthesiology 2016 annual meeting, Charleston, SC.
- Joseph, A., Wingler, D., Zamani, Z., & Wilson, S. (2016, May 18-21). Communication, coordination and collaboration: Understanding the nature of work for pre-operative and post-operative nurses in Ambulatory Surgical Environments. Paper presented at the EDRA 47: Innovation - Shifting Ground, Raleigh, North Carolina.
- 41. **Joseph, A.**, Zamani, Z., & Machry, H. (2016, May 18-21). *Addressing patient safety outcomes associated with the operating room's built environment* Paper presented at the EDRA 47: Innovation Shifting Ground, Raleigh, North Carolina.
- 42. Joseph, A., Zamani, Z., Machry, H., & Davis, R. (2016, May 18-21). *Impact of light on outcomes in healthcare settings A review of the literature.* Paper presented at the EDRA 47: Innovation Shifting Ground, Raleigh, North Carolina.
- 43. Davis, R., **Joseph, A.,** & Rizzo, P. (2016, April 13). *Research to application: Lighting for Healthcare.* Paper presented at the Lightfair International (LFI), San Diego.
- 44. **Joseph, A.,** Zamani, Z., & Quan, X. (2015, November 16). *Designing ambulatory care facilities: An evidence-based design checklist.* Presentation at the 2015 Healthcare Design Conference (HCD 15), Washington, DC.
- 45. Taylor, E., Quan, X., & **Joseph, A.** (2015, July). Testing a tool to support safety in healthcare facility design. Research presented at the 6th International Conference on Applied Human Factors and Ergonomics, Las Vegas.
- 46. Quan, X., & **Joseph, A.** (2015). Connecting Research and Design: The Development of an Evidencebased Tool for Designing and Evaluating Hospital Inpatient Rooms. Paper presented at the EDRA 46 Brainstorm: Dynamic interactions of environment-behavior and neuroscience, Los Angeles.
- 47. Joseph, A., Taylor, E., & Quan, X. (2015). Designing for Safety Seminar. One-day pre-conference workshop at the ASHE PDC, San Antonio, TX.
- Joseph, A., & Taylor, E. (2015, March 18). Using a Safety Risk Assessment in the healthcare facility design process. Presentation at the American Society of Healthcare Engineers Conference-Planning Design and Construction (ASHE PDC), San Antonio, TX.
- 49. Joseph, A., & Taylor, E. (2014, November 18). Safety by design: How teams can proactively use design to reduce adverse events. Presentation at the Healthcare Design Conference, San Diego, CA.
- 50. Joseph, A. (2014, November 17). An evidence-based toolkit for designing and evaluating the inpatient room interior design. Presentation at the Healthcare Design Conference, San Diego, CA.
- 51. **Joseph, A.** (2014). *Designing safer, higher quality healthcare facilities using an evidence-based design process.* <u>Invited presentation</u> at the Vital Quadro Healthcare Workshop, Dubai, UAE.
- 52. **Joseph, A.,** Taylor, E., & Malone, E. (2014, March). *Designing for Safety: Assessing Risks in the Healthcare Built Environment*. Presentation at American Society of Healthcare Engineers Planning Design and Construction (ASHE PDC), Orlando, FL.
- 53. Joseph, A. (2013, October). *The Role of the Built Environment in Safe Patient Handling and Movement.* Invited paper presented at the Board on Human Systems Integration (BOHSI) planning meeting, National Academy of Sciences, Washington, DC.
- 54. **Joseph, A.** (2013). ACE Talks: Fostering Collaboration through Evidence-Based Design. Keynote presentation at ACE Summit and Reverse Expo, New Orleans.
- 55. **Joseph, A**., Malone, E., Bosch, S., Shepley, M., & Pasha, S. (2013, November). *Innovations in Research 2013* Presentation at Healthcare Design Conference. Orlando, FL.
- Joseph, A., Quan, X., Robinson, P., & Kanakri, S. (2013, November). Examining the Effects of Positive Distraction in Pediatric Environments: A Methodological Comparison of Two Studies. Paper presented at the Healthcare Design Conference, Orlando, FL.

- 57. **Joseph, A.** (2013, February). *Healthcare Innovation Through Evidence-Based Design*. <u>Keynote</u> <u>panel presentation</u> at the Safe and Sustainable Hospitals Conference, New Delhi, India.
- 58. Nanda, U., & **Joseph, A.** (2013, May). *The Dilemma of Checklists: An Opportunity and a Challenge.* Presentation at the EDRA 44, Providence, RII.
- Joseph, A., Loveless, E., Quan, X., Nanda, U., & Kanakri, S. (2013, June). Examining the Effects of Positive Distractions in Pediatric Environments: An Experimental Study. Paper presented at the EDRA 44, Providence, RI.
- 60. **Joseph, A.,** & Calkins, M. (2013, April). *Impact of Residential Care Environments: A Systematic Review of the Literature.* Paper presentation at the Environments for Aging, New Orleans.
- 61. Joseph, A. (2012, October). *Innovation...For Whom? For What? Lessons From Other Industries.* Harvard Medical School 2nd Annual Innovations Conference, Boston, MA.
- Joseph, A. (2012, May). Development of Tools for Healthcare Environments Research and Practice: A Glossary of Built Environment Terms and Measures. Paper presented at the EDRA 43, Seattle.
- 63. **Joseph, A.** (2012, October). *The Impact of Light on Outcomes in Healthcare Settings.* Presentation at the International Association of Lighting Designers (IALD), Vancouver, CA.
- 64. **Joseph, A.**, Quan, X., Taylor, E., & Nanda, U. (2012, November). *Standardization for Post-Occupancy Evaluation*. Presentation at the Healthcare Design Conference, Phoenix, AZ.
- 65. **Joseph, A.,** & Taylor, E. (2012, November). *Designing for Patient Safety: Findings from a National Seminar*. Roundtable presentation at the Healthcare Design Conference, Phoenix, AZ.
- 66. **Joseph, A.,** Becker, F., Nanda, U., & Zadeh, R. (2012, November). *Innovations in Research 2012*. Presentation at the Healthcare Design Conference, Phoenix, AZ.
- 67. Joseph, A. (2012, June). *Designing for Patient Safety*. Presentation at the Boston Society of Architects Forum, Boston, MA.
- 68. **Joseph, A.** (2011, March). *Evidence--Based Design Research at The Center for Health Design.* Webinar Presentation for Sanford Rose Webcast Series.
- 69. Joseph, A. (2010, March). *New Ways of Thinking: The Future of Senior Living.* Invited <u>Keynote</u> <u>Panel Presentation</u> at the Environments for Aging 2010, San Diego.
- 70. Joseph, A. (2011, April). *Making the Connection: Linking Building Design to Healthcare Outcomes.* Invited presentation at CleanMed 2011, Phoenix, AZ.
- 71. Joseph, A. (2011, April). *Improving Safety and Quality of Care Through Healthcare Facility Design.* <u>Keynote presentation</u> at the Fourth Annual Healthcare Infrastructure Summit, Minett, ON.
- 72. **Joseph, A.**, & Keller, A. (2011, November). *Promising Practices in Safety-Net Clinic Design.* Presentation at the Healthcare Design Conference, Washington DC.
- 73. Joseph, A., & Taylor, E. (2011, December). *Designing for Patient Safety: Findings from a National Seminar*. Webinar presentation for Healthcare Design Conference.
- 74. **Joseph, A.**, Weinberg, F., Malone, E., & Shepley, M. (2011, November). *Innovations in Research* 2011. Presentation at the Healthcare Design Conference Nashville,TN.
- Joseph, A., Pati, D., & Lorenz, S. (2011, November). The Role of Post-Occupancy Evaluation in the Evidence-Based Design Process - Where Do We Go Next? Presentation at the Healthcare Design Conference, Nashville, TN.
- 76. Taylor, E., & **Joseph, A.** (2010, November). *2010 Survey of Design Research in Healthcare Settings.* Presentation at the Healthcare Design Conference, Las Vegas.
- 77. **Joseph, A.,** & Keller, A. (2010, November). *Making the Connection: Linking Building Design to Healthcare Outcomes.* Presentation at the Greenbuild International Conference and Expo, Chicago, IL.
- Quan, X., & Joseph, A. (2010, November). Impact of Imaging Room Environment on Patients and Staff: Scientific Evaluation of an Innovative Design Intervention. Presentation at the Healthcare Design Conference, Las Vegas.

- 79. Barach, P., **Joseph, A**., Solet, J., Calkins, M., & Nanda, U. (2010, November). *Innovations in Research 2010.* Presentation at the Healthcare Design Conference, Las Vegas.
- 80. **Joseph, A**. (2010, May). *Research Priorities in Evidence-Based Design.* Presentation at the CleanMed Conference, Baltimore, MD.
- 81. **Joseph, A.** (2010). *Designing for Patient Safety: Developing a Patient Safety Risk Assessment.* Presentation at the 2010 FGI Guidelines Workshop Series, Boston, Phoenix
- Joseph, A., & Taylor, E. (2009, November). 2009 Survey of Design Research in Healthcare Settings: The Use and Impact of Evidence Based Design. Presentation at the Healthcare Design Conference, Orlando, FL.
- 83. **Joseph, A**. (2009, November). *The Center for Health Design: USGBC Grant Project Update.* Presentation at the Healthcare Design Conference, Orlando, FL.
- Lu, Z., & Joseph, A. (2009, March). Walking for Healthy Aging: Designing Communities to Support Walking Among Independent and Assisted Living Residents. Paper presentation at the Environments for Aging, Boston, MA.
- 85. **Joseph, A.,** Keller, A., Barach, P., & Franey, B. (2009, November). *The Center for Health Design Research Roundup.* Presentation at the Healthcare Design Conference, Orlando, FL.
- Joseph, A. (2008). Bringing the User into the Center of the Healthcare Experience: The Role of Design. Presentation at the 11th EuHPN Annual Workshop: Designing for the User, Belfast, Northern Ireland.
- 87. Joseph, A., Keller, A., & Harris, M. (2008, November). *Transformation by Design: Building Environments for High Quality Children's Healthcare*. Presentation at the Healthcare Design Conference, Washington, D.C.
- 88. Barach, P., **Joseph, A.,** Franey, B., Zimring, C., & Solet, J. (2008, November). *Creating the Research Roadmap for Developing Safe and High Quality Buildings: Are We There Yet?* Presentation at the Healthcare Design Conference, Washington, D.C.
- Geboy, L., Joseph, A., Pati, D., & Zborowsky, T. (2007, November). *Towards a New Paradigm of Healthcare Design Practice: Informing Decision Making Through Research*. Presentation at the Healthcare Design Conference, Dallas, TX.
- 90. Malone, E., **Joseph, A.**, Sadler, B., & Herbert, C. (2008, December). *How the Built Environment Helps Reduce Infections.* Presentation at the IHI 20th Annual Forum, Nashville, TN.
- 91. Joseph, A., Collins, K., & Wurmser, T. (2008, July). *Getting Noise and Speech Privacy Issues* Heard in the Design of Healthcare Facilities. Invited presentation at Acoustics '08, Paris, France.
- 92. Joseph, A. (2008, February). *Evidence-Based Design: What It Is and Why We Need to Know About It.* Invited Presentation at IIDA Healthcare Forum, Boston, MA.
- 93. Joseph, A., & Carpenter, A. (2007). *Health Promotion by Design in Long-Term Care Settings.* Presentation at Environments for Aging, Atlanta, GA.
- 94. Joseph, A., & Sadler, B. (2007, December 10). How Compelling New Research on Physical Layout and Design Can Directly Enhance Quality Improvement Initiatives. Paper presented at the 19th IHI Annual National Forum on Quality Improvement in Healthcare, Orlando, FL.
- 95. Joseph, A. (2006-2010). *Pebble Project Research Orientation.* Pebble Colloquium (different locations).
- 96. **Joseph, A.** (2007). Where People Walk: Assessing the Relationship between Physical Environmental Factors and Walking Behavior of Residents in Retirement Communities. Paper presented at the Active Living Research Conference, San Diego, CA.
- 97. Joseph, A. (2007). Evidence-Based Design Research. Paper presentation at EDRA 38, Sacramento, CA
- 98. Joseph, A. & Cama, R. (2006). Evidence-Based Design Research. Presentation at the American Society of Interior Designers (ASID) Conference, San Diego, CA

- Joseph, A. (2004, Nov 6-10). A Framework for Studying the Impact of Facility Design on Physical Activity Among the Elderly. Poster presentation at the 132nd Annual Meeting of the American Public Health Association Conference (APHA), Washington DC.
- 100. Joseph, A., Zimring, C., Harris-Kojetin, L. & Kiefer, K. (2004, Nov 6-10). Building and site design considerations for promoting physical activity among elderly residents of continuing care retirement communities. Presentation at 132nd Annual Meeting of American Public Health Association Conference (APHA), Washington DC.
- 101. **Joseph, A.** & Zimring, C. (2004, June). Promoting Physical Activity in Retirement Communities. Workshop organizer at EDRA 35, Albuquerque, NM
- 102. **Joseph, A.** & Zimring (2003, June). Research Framework for Promoting Physical Activity Among the Elderly. Poster presentation at EDRA 34, Minneapolis, MN

SERVICE

Service on National committees 2016-2020 Appointed by the Agency for Healthcare Research and Quality to serve as regular member of a national study section titled, 'Healthcare Safety and Quality Improvement Research (HSQR)' that reviews NIH grants applications on topics in this area (4-year term) 2017,2018 Invited Juror, CHD Touchstone Awards 2017 Reviewer for EDRA Core Research award 2016, 2017 Invited AIA Design Jury member for Healthcare Design Awards Program 2017 Reviewer for Healthcare Design Conference 2017 Research Track 2016 Invited Coach for 'Practice EBD' workshop at Healthcare Design conference 2016 -Member of IDEAS Institutional Review Board panel 2016 Reviewer for 2016 ACSA Fall Conference, Building for Health and Well-Being: Structures.Cities.Systems 2016 Participated in a video interview for a short film production on designing environments for people with dementia (part of an NIH funded project) Member of Independent Review Panel to review Defense Health Agency's (DHA) Military 2014-2015 Construction Standards 2014 Reviewer on AHRQ Special Emphasis Panel (SEP) for Patient Safety Learning Laboratories: Innovative Design and Development to Improve Healthcare Delivery Systems (P30) 2015 Reviewer, Healthcare Design Conference Research Track 2007-2013 CHD's Research Coalition key staff liaison, including developing a peer reviewed RFP process for funding research and reviewing deliverables 2012-2015 Member of AIA AAH research committee 2012-2014 Developer, coordinator and reviewer for the Research Track of the Healthcare Design Conference 2013 Member of review committee for Institute for Patient Centered Design award 2011 Reviewer for Green Build Conference research track Reviewer for Development of Master's Degree Program in Health Facilities Engineering 2009-2011 and Management (MHFEM) and Master's Degree Program in Health Facilities Planning and Design (MHFPD) in India Member of Healthcare Guidelines Revision Committee (HGRC) of the Facility Guidelines 2006-2010 Institute 2006-2010 Member of Facility Guidelines Institute Research Committee

Service on University Committees

2017-2018	Faculty review committee member for Provost's Distinguished Professor Program
2017-2018	Clemson University Faculty Search Committee member for:
	 Jenkins Endowed Professor of Automotive Engineering
	 Thomas L. Hash Endowed Chair SmartState Endowed Chair in Sustainable Development
2016-2017	Clemson University Faculty Search Committee member for:
	 Smart State Chair in Automotive Systems Integration
2016 2015-2016	Participated in video interview for closeout of Clemson University 'Will to Lead' campaign Clemson University Faculty Search Committee member (Provost appointee) for:
	 Hansjörg Wyss Endowed Chair for Regenerative Medicine
	 Benmosche Endowed Chair in Civil Engineering
	 Norville Endowed Chair in Bioengineering
2015-2016	Search Committee member for Smart State Endowed Chair in Human Factors and Clinical Practice at MUSC
2015-2017	Faculty Scholar with the Clemson University School of Health Research (CUSHR)
2015	Committee member - Clemson University's 2020 Road Map, Phase 2: Recruiting and

Retaining Top Faculty/Mentoring Junior Faculty

Service on Department Committes

2017-2018	Strategic Planning Committee (chair)
2016-2018	Clemson University Faculty Search Committee member for:
	 Mickel Endowed Chair in Architecture and Director of IMSI
2016-2017	School of Architecture Faculty Exhibit committee for NAAB accreditation

Editorial committees and service

2014-2016	Editorial Board member, Environment and Behavior Journal
2008-2018	Editorial Advisory Board member, Health Environments Research and Design Journal
2018-2019	Peer reviewer, Journal of Patient Safety
2006-2018	Peer reviewer, Health Environments Research and Design Journal,
2006-2018	Peer reviewer, Environment & Behavior Journal,
2015-2016	Peer reviewer, Applied Ergonomics
2006-2014	Peer reviewer, Science of the Total Environment, International Journal of Nursing Studies,
2006-2014	Peer reviewer, International Journal of Nursing Studies,
2006-2014	Peer reviewer, International Psychogeriatrics,
2006-2014	Peer reviewer, Journal of Applied Gerontology

MEMBERSHIP

2016-2017	Member of Human Factors and Engineering Society (HFES)
2017-	Chartered Fellow Member of the Chartered Association of Building Engineers

2015-2017 CHD Affiliate+ Member

2010-2017 Member, EDRA

2003-2006 Student member, EDRA

LINKS TO SELECTED PUBLICATIONS

- Joseph, A., Khoshkenar, A., Taaffe, K. M., Catchpole, K., Machry, H., & Bayramzadeh, S. (2018). Minor flow disruptions, traffic-related factors and their effect on major flow disruptions in the operating room. *BMJ Quality & amp; Safety.* doi:10.1136/bmjqs-2018-007957 https://qualitysafety.bmj.com/content/early/2018/08/29/bmjqs-2018-007957
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- Quan, X., Joseph, A., Nanda, U., Moyano-Smith, O., Kanakri, S., Ancheta, C., & Loveless, E. A. (2016). Improving Pediatric Radiography Patient Stress, Mood, and Parental Satisfaction Through Positive Environmental Distractions: A Randomized Control Trial. *J Pediatr Nurs*, 31(1), e11-22. doi:10.1016/j.pedn.2015.08.004

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