

HEATHER BURPEE

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University of Washington

Integrated Design Lab (UW IDL)

INTEGRATED DESIGN LAB

UNIVERSITY of WASHINGTON // **W**



Heather is a Research Associate Professor of Architecture and Co-Director at the University of Washington Integrated Design Lab (IDL) where she specializes in whole building energy efficiency. Her work bridges practice, research, and education with collaboration between practitioners, faculty, and students. She leads major national and international research initiatives that develop roadmaps for achieving deep energy goals and has experience working directly with design teams establishing and realizing deep energy reduction, health & wellness objectives, and other performance-related goals. Her focus is on collaborative, integrated design practices and includes tracking performance-based goals from project inception through operation. As part of her commitment to furthering knowledge in the arena of high-performance buildings, she leads the development of professional education curricula including AIA Materials Matter, Integrated Design Tools and Methods, and technical programs related to WA State Energy Code. Heather earned her Master of Architecture degree from the University of Washington College of Built Environments and her undergraduate degree in biology from Whitman College.

EDUCATION AND MEMBERSHIPS

2008	UNIVERSITY OF WASHINGTON, Architecture, Master of Architecture
1999	WHITMAN COLLEGE, Biology, Art History, Bachelor of Arts.

EMPLOYMENT

2017-Present	Research Associate Professor & Co-Director of UW IDL
2011-2017	Research Assistant Professor at UW IDL
2008-2011	Research Associate at UW IDL

PROFESSIONAL MEMBERSHIPS

2014 – present	ASHRAE Member, Member Technical Committee 9.6.06 (Healthcare Energy).
2010 – present	American Society for Healthcare Engineering (ASHE) Member
2022 – present	American Institute of Architects (AIA) Associate Member
2012-Present	Evidence Based Design Accreditation and Certification (EDAC)

SELECTED RESEARCH AND PROJECT EXAMPLES

2022	Guidebook Towards Zero Energy Hospital Buildings: A co-authored design guide for extremely energy efficient hospitals that will be reviewed and published by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) and Federation of European Heating, Ventilation, and Air Conditioning Associations (REHVA). The guide is currently undergoing review and further development and is slated for publication in 2023.
2017-2022	Center for Integrated Design Partnership Initiative & Rosetta Stone: A Translational Tool for Research-Informed Practice, a formal consortium of top Pacific Northwest architecture firms convened by the UW IDL, and a shared research project that has established a web-tool that translates empirical evidence supporting the human experience of high-performance design. Web tool has registered 298 individual users, has logged 4,000 page views, and over 200 individual report downloads since October 2020. Co-PIs: Burpee, H. and Meek, C. (UW Architecture)
2006-Present	Direct Project Consultation, 2006-Present Consult with regional, national, and international firms on best practices for high performance, low energy hospitals including benchmarking operational facilities. High impact projects include Energy Assessments with Providence Health and Services, Energy goal setting and energy modeling for University of Washington Medical Center, Energy efficiency design support for Valley Medical Center MOB, Peace Island Medical Center, and Swedish Issaquah Medical Center. Additional examples below

- 2007-2013 Targeting 100!
Project Manager for US Department of Energy and Northwest Energy Efficiency Alliance funded research project, Targeting 100!, investigating the cost and energy implications of designing hospitals that meet the 2030 Challenge in six regions across the U.S. Wrote project proposal, develop and maintain close relationships with subcontractors and co-collaborators (Solarc Architecture and Engineering, NBBJ, and TBD Consultants), manage student and colleagues work, and evolve national relationships with peer groups for review and continued research partnerships. US DOE and NEEA Funded Research: 2007-2013.
- 2010-2011 Legacy Salmon Creek Medical Center, 2010-2011
Led a hospital energy benchmarking study at Legacy Salmon Creek Medical Center collecting detailed end-use measurements. US DOE/ARRA Funded Research: October 2010 – May 2011.
- 2011 Energy Benchmarking, Led an effort to collect, document, and analyze numerous building energy profiles as part of a combined effort of the Integrated Design Lab Network. Collection of data resulted in a database for project's energy use profiles both as designed and as operated to be used for research and educational purposes. Northwest Energy Efficiency Alliance (NEEA) Funded Research: Summer 2011.

SELECTED TECHNICAL ASSISTANCE

- 2022 Mt. Edgumbe Medical Center Campus, for South East Alaska Regional Health Consortium (SEARHC) and the Indian Health Services (HIS), Sitka, AK. Contracted by NBBJ for Sustainability Design Services and Comprehensive Energy Efficiency Analysis Services.
PI: Burpee, H., with Hatten, M. (Solarc Energy Group)
- 2022 University of Washington Behavioral Health Teaching Facility. 180,000 SF Behavioral Health Hospital located on the Northwest Hospital Campus. Contracted by University of Washington's Facilities Department for Sustainability Design Services and Comprehensive Energy Efficiency Analysis Services.
PI: Burpee, H., with Hatten, M. (Solarc Energy Group)
- 2021 Virginia Mason Medical Center Northgate Clinic. Contracted by SABA Architects and Virginia Mason Medical Center for Sustainability Design Services, Energy Analysis, Daylight and Glare Analysis, and FitWel Analysis.
PI: Burpee, H., with Hatten, M. (Solarc Energy Group), and Meek, C. (UW Architecture).

SELECTED PUBLICATIONS & PRESENTATIONS OF RESEARCH

- 2021 GoGreen Conference Seattle, Decarbonizing Buildings, Reducing the Operating Carbon Footprint of Buildings: Best Practices; Moderated Discussion with Liljequist, B. (McKinstry), Philips, B. (Unico), Jonlin, D. (City of Seattle), Heslam, D. (Earth Advantage), Burpee, H., moderator. Remote Format [100 attendees]
- 2021 AIA Conference on Architecture 2021 (A'21), "Building a Case for High-Performance Design." Panel presentation with Chris Meek (UW Architecture), Amy Leedham (Atelier 10), and Anica Landreneau (HOK). Virtual Presentation, July 8, 2021. Accepted Future Commitment
- 2020 American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Annual Conference. "Zero-Net Energy Hospitals: Is this a Myth? Toward Net-Zero Energy Hospital Buildings: Can the "Impossible" Become Possible" Panel presentation chaired by Frank Shadpour (SC Engineers, Inc.) with co-panelist Travis English (Kaiser Permanente). Virtual Conference. July 1, 2020. [50 attendees]
- 2019 Environmental Design and Research Association (EDRA), EDRA51. "Rosetta Stone for Research Informed Practice." April 5, 2020. Virtual Conference (rescheduled from in-person in Tempe, AZ). April 5, 2020. [30 attendees]
- 2018 Haymaker, J., Meek, C., Kleiner, D., Pena, R., Burpee, H., Norwood, W., "Constructing Performance-Based Tools and Practitioners for Exploring Living, Mixed-Use, High-Rise Building Design Spaces," Perkins+Will Research Journal. December 2018
- 2016 Burpee, H., Meek, C. (UW Architecture), Douglas, K. (UW Landscape Architecture Student), "Health in the Built Environment: Testing Health Impacts of Green Buildings," *Proceedings of the Passive and Low Energy Architecture (PLEA) Conference*. Los Angeles, CA. August 2016.
- 2014 Burpee, H., Loveland, J., Hatten, M., and Helmers, A. "Targeting 100! A Roadmap for Meeting the 2030 Challenge in Healthcare Across the United States." American Council for an Energy Efficient Economy (ACEEE) Summer Study on Energy Efficiency in Buildings, Asilomar, CA. August 2014.
- 2013 Burpee, H., Loveland, J. "Targeting 100!" In: Guenther, R., and Vittori, G. eds. Sustainable Healthcare Architecture 2nd ed. John Wiley & Sons, Inc. June 2013. Invited Book Chapter.