

## CLAYTON MILLER (Dr)

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*Doctorate of Science (Dr. sc. ETH Zürich) ETH Zürich; MSc. (Building) NUS; MAE (Architectural Engineering) and BSc (Architectural Engineering), University of Nebraska*



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### ACADEMIC QUALIFICATIONS:

- BSc. (Architectural Engineering) (2006), University of Nebraska, USA
- MAE (Architectural Engineering) (2007), University of Nebraska, USA
- MSc (Building) (2011), National University of Singapore, Singapore
- Dr. sc. ETH Zürich (2016), ETH Zürich, Switzerland

### EMPLOYMENT RECORD:

- Mechanical Engineer, Leo A Daly Co., Omaha, USA (2007 – 2008)
- Researcher Engineer, Ezenics, Omaha, USA (2008 - 2009)
- Chief Technology Officer (CTO), Optiras Pte. Ltd., Singapore (2010 - 2012)
- Research Fellow at the Institute of Technology in Architecture (ITA), Zurich, Switzerland (2012-2016)
- Assistant Professor, National University of Singapore (NUS) (2017 - Present)

### PROFESSIONAL/CONSULTING ACTIVITIES:

- American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Student Member, 2004 - 2007, 2012 – Present
- ASHRAE Singapore Chapter Board of Governors Member and Student Activities Chair, 2011 - 2013  
Associate Member, 2007 – 2012
- International Building Performance Simulation Association (IBPSA) Member, 2007 – Present
- IBPSA Co-founder of Singapore Chapter, 2012 – 2014
- Fulbright Executive Committee Member, 2012 – 2013; ) Webmaster, 2013 – Present
- U.S. Green Building Council (USGBC) Nebraska Flatwater Chapter Board of Directors, 2008 – 2009
- Society of American Military Engineers (SAME) Member, May 2007 – 2010; Student Member, 2005 – 2007; Student Chapter President, 2005 – 2006
- Architectural Engineering Institute (AEI); Student Member, 2005 – 2007; National Student Conference Planning Committee Member, 2007

#### UNDERGRADUATE TEACHING:

- PF1103 Digital Construction
- PF3211 AI Applications for the Built Environment

#### GRADUATE TEACHING:

- BPS5223 Building Energy Performance - Passive Systems
- BPS5222 Indoor Environmental Quality
- BPS5229 Data Science for the Built Environment

#### RESEARCH INTERESTS:

- Data science for building performance (<https://www.edx.org/course/Data-Science-for-Construction-Architecture-and-Engineering>)
- Wearables for Wellness in Buildings (<https://cozie.app/>)
- Crowdsourcing Machine Learning and Internet-of-Things (IoT) analytics (<https://www.kaggle.com/c/ashrae-energy-prediction>)

#### PUBLICATIONS (MAXIMUM OF 5):

- Jayathissa P, Quintana M, Abdelrahman M, Miller C. Humans-as-a-Sensor for Buildings— Intensive Longitudinal Indoor Comfort Models. *Buildings*. 2020;10: 174. <https://doi.org/10.3390/buildings10100174>
- Miller C, Kathirgamanathan A, Picchetti B, Arjunan P, Park JY, Nagy Z, et al. The Building Data Genome Project 2, energy meter data from the ASHRAE Great Energy Predictor III competition. *Scientific Data*. 2020;7: 368. <https://doi.org/10.1038/s41597-020-00712-x>
- Miller C, Arjunan P, Kathirgamanathan A, Fu C, Roth J, Park JY, et al. The ASHRAE Great Energy Predictor III competition: Overview and results. *Science and Technology for the Built Environment*. 2020; 1–21. <https://doi.org/10.1080/23744731.2020.1795514>
- Arjunan P, Poolla K, Miller C. EnergyStar++: Towards more accurate and explanatory building energy benchmarking. *Appl Energy*. 2020;276: 115413. <https://doi.org/10.1016/j.apenergy.2020.115413>
- Jayathissa P, Quintana M, Sood T, Nazarian N, Miller C. Is your clock-face cozie? A smartwatch methodology for the in-situ collection of occupant comfort data. *J Phys Conf Ser*. 2019;1343: 012145. <https://doi.org/10.1088/1742-6596/1343/1/012145>

#### AWARDS:

- ETH Zürich Architecture and Technology Fellowship, 2012-2016
- ASHRAE/IBPSA Conference Student Travel Grant, 2014
- National University of Singapore (NUS) Research Scholarship, 2010
- U.S. Fulbright Student Fellowship to the Republic of Singapore, 2009-2010
- Univ. of Nebraska Architectural Engineering Outstanding MAE Student Award, 2007
- ASHRAE Nebraska Chapter Scholarship, 2005-2006
- Walter Scott Jr. Scholarship, 2002-2006
- University of Nebraska Regents Scholarship, 2002-2006