

David Fannon AIA | MEMBER ASHRAE | LEED-AP BD+C

Associate Professor Jointly Appointed
School of Architecture *College of Arts Media and Design*
Department of Civil & Environmental Engineering *College of Engineering*
Northeastern University

BACKGROUND

EDUCATION

Master of Science, Architecture **University of California, Berkeley**, 2015
Thesis: *Developing Low-Energy Personal Thermal Comfort Systems: Design, Performance Testing, and Research Methods*

Bachelor of Architecture, **Rensselaer Polytechnic Institute**, 2005
Summa Cum Laude

PROFESSIONAL REGISTRATION

New York State **Registered Architect** License 033927-1 since 2009

USGBC **LEED Accredited Professional** Building Design + Construction since 2013

ACADEMIC POSITIONS

Northeastern University

Associate Professor 2020-present

Assistant Professor 2013-2020

Jointly appointed: Architecture (75%),
Civil & Environmental Engineering (25%)
Affiliated faculty in Public Policy & Urban Affairs

University of California, Berkeley

Graduate Student Instructor, 2011 spring

Staff Researcher, 2011 fall

Graduate Student Researcher, 2009-2011

Rensselaer Polytechnic Institute

Visiting Adjunct Professor 2008 spring

PROFESSIONAL MEMBERSHIPS

American Institute of Architects (AIA)

Boston Society of Architects (Board Member 2015-2018)

ASHRAE

Society of Building Science Educators (SBSE) (Education chair 2020-present)

Building Technology Educators Society (BETES)

HONORS & AWARDS

2019 CAMD Excellence in Teaching Award

2017-2019 Latrobe Prize: *Future-Use Architecture: Design for Persistent Change*
College of Fellows of the American Institute of Architects

2016 Upjohn Research Award: *Building Resilience*
American Institute of Architects

2005 Alpha Rho Chi Medal

PROFESSIONAL PRACTICE

- 2021-2022 **FiELD Workshop** Boston, MA
Consulting Building Scientist for Worcester Art Museum renovation
- 2015-2018 **Fickett + Walker-Fickett** Sharon, MA
Consulting Building Scientist
- 2012-2013 **Syska Hennessy Group** New York, NY
Senior High-Performance Specialist & Senior Associate
- 2005-2009 **Burt Hill (now Stantec)** Washington, DC
BIM Leader, Intern Architect
- 2004-2005 **Atelier Ten** New York, NY
Environmental Designer
- 2004 **Resolution 4: Architecture** New York, NY
Intern Architect
- 2000-2003 **Gemmola McWilliams Architects** Hawthorne, NY
Intern Architect

SCHOLARSHIP

* Designates a student co-author

PEER-REVIEWED PUBLICATIONS

- 2021 Phillips, Robert*; David Fannon; and Matthew J. Eckelman. Dynamic modeling of future climatic and technological trends on life cycle global warming impacts and occupant satisfaction in US office buildings. *Energy and Buildings*. Vol 256. November 25, 2021.
<https://doi.org/10.1016/j.enbuild.2021.111705>
- 2020 Phillips, Robert*; Luke Troup*; David Fannon; and Matthew J. Eckelman. Triple Bottom Line Sustainability Assessment of Window-to-Wall Ratio in US Office Buildings. *Building and Environment*. Vol. 182. September, 2020.
<https://doi.org/10.1016/j.buildenv.2020.107057>
- Troup, Luke*; Fannon, David; Eckelman, Matthew. Spatio-temporal Changes among Site-to-Source Conversion Factors for Building Energy Modeling. *Energy and Buildings*. Vol 213. April 15, 2020.
<https://doi.org/10.1016/j.enbuild.2020.109832>
- 2019 Troup, Luke*; Eckelman, Matthew; Fannon, David. Simulating Future Energy Consumption in Office Buildings Using an Ensemble of Morphed Climate Data. *Applied Energy*. Vol. 255. December 1, 2019.
<https://doi.org/10.1016/j.apenergy.2019.113821>
- Mirzaee, Sahar*; Fannon, David; Ruth, Matthias. A Comparison of Preference Elicitation Methods for Multi-Criteria Design Decisions About Resilient and Sustainable Buildings. *Environment Systems & Decisions*. 39(4), 439-453. November 22, 2019. <https://doi.org/10.1007/s10669-019-09726-2>
- Troup, Luke*; Phillips, Robert*; Eckelman, Matthew; Fannon, David. Effect of Window-to-Wall Ratio on Measured Energy Consumption in US Office Buildings. *Energy and Buildings*. Vol. 203. November 15, 2019.
<https://doi.org/10.1016/j.enbuild.2019.109434>

- 2018 Fannon, David; Laboy, Michelle; Wiederspahn, Peter. Dimensions of Use: From Determinism to a New Humanism. *ENQUIRY: The ARCC Journal*. Vol 15, No 1. November 2018. Pages 25-45. <https://doi.org/10.17831/enq:arcc.v15i1.447>
- Deng, Hengfang*; Fannon, David; Eckelman, Matthew. Predictive modeling for US commercial building energy use: A comparison of existing statistical and machine learning algorithms using CBECS microdata. *Energy and Buildings*. Vol. 163. March 15, 2018. Pages 34-43. <https://doi.org/10.1016/j.enbuild.2017.12.031>
- 2017 Phillips, Robert*; Troup, Luke*; Fannon, David; Eckelman, Matthew. Do Resilient and Sustainable Design Strategies Conflict in Commercial Buildings? A Critical Analysis of Existing Resilient Building Frameworks and Their Sustainability Implications. *Energy and Buildings*. Vol. 146, July 1, 2017. Pages 295-311. <https://doi.org/10.1016/j.enbuild.2017.04.009>
- 2016 Laboy, Michelle and Fannon, David. Resilience Theory and Praxis: A Critical Framework for Architecture. *ENQUIRY: The ARCC Journal*. Vol. 13, No 1. December 2016. Pages 39-53. <https://doi.org/10.17831/enq:arcc.v13i2.405>
- Fannon, David and Laboy, Michelle. Teaching Building Science in Design Studio. *Journal of the National Institute of Building Science*. Vol. 4, No. 6. 2016. Pages 22-25.
- 2015 Zhang, H.; Arens, Taub, M.*; E.; Dickerhoff, D.; Bauman, F.; Fountain, M.; Pasut, W.; Fannon, D.*; Zhai, Y.; Pigman, M. The use of footwarmers in offices for thermal comfort and energy savings in winter. *Building and Environments*. Vol. 104, October 2015. Pages 233-243. <https://doi.org/10.1016/j.enbuild.2015.06.086>

CONFERENCE PAPERS (PEER REVIEWED)

- 2021 Fannon, D. and Laboy, M. "Carbon Denominators." *Proceedings of the 2020 AIA/ACSA Intersections Research Conference: CARBON*. In press.
- 2020 Lehrer, D, E. Arens, H. Zhang, and D. Fannon, 2020. "Prototyping solutions to improve comfort and enable HVAC energy savings." *Proceedings ACEEE 2020 Summer Study on Energy Efficiency in Buildings*, August.
- 2019 Laboy, M. and Fannon, D. "Creativity, Calculation, & Curation: Research as a framework for cross-disciplinary collaboration." *Reynolds Symposium: Education by Design*. Portland, OR. Oct 23, 2019. <https://doi.org/10.21428/f7d9ca02.872508cb>
- Fannon, D. and Laboy, "M. Methods of Knowing: Grounded Theory in the study of future-use architecture." *Future Praxis: Applied Research as a Bridge Between Theory and Practice*. ARCC International Conference. Toronto. May 29-June 1, 2019.
- Reed, A.* and Fannon, D. "Microclimates at the Sixth Façade." *Integration and Innovation*. Building Technology Educators' Society Conference. Amherst, MA. June 19-22, 2019. <https://doi.org/10.7275/jv9a-7z52>
- 2018 Reese-Julian, J.* and Fannon, D. "Conserving Energy, Conserving Buildings: Airtightness Testing in Historic New England Homes." *International Building Physics Conference*. Syracuse, NY. September 25, 2018. <https://doi.org/10.14305/ibpc.2018.hf-2.01>
- Aduralere, T.*; Isaacs, J.A.; Fannon, D. "Passive Survivability in Residential Buildings during Heat Waves under Dynamic External Conditions."

International Building Physics Conference. Syracuse, NY. September 24, 2018.
<https://doi.org/10.14305/ibpc.2018.ms-1.06>

Laboy, M. and Fannon, D. "Resilient Homes Online Design Aid: Connecting Research and Practice for Socially Resilient Communities." *Intersections: Design and Resilience*. Association of Collegiate Schools of Architecture & American Institute of Architects. New York, NY. June 22, 2018.

<https://doi.org/10.35483/ACSA.AIA.Inter.18.2>

Troup, L.*; Phillips, R.*; Eckelman, M.; Fannon, D. "Assessing the Triple Bottom Line of Alternative Window to Wall Ratios as Resilient Adaptations in Office Buildings." *Building Enclosure Science & Technology Conference*. National Institute of Building Sciences. Philadelphia, PA. April 15-18, 2018.

2016 Troup, L.* and Fannon, D. "Morphing Climate Data to Simulate Building Lifecycle Energy Consumption." *SimBuild 2016*, ASHRAE/IBPSA-USA, Salt Lake City, UT. August 8-12 2016.

2015 Laboy, M. and Fannon, D. "Learning Comprehensive Building Design through a Resilience Framework." *Architecture and Resilience on the Human Scale*, University of Sheffield, Sheffield, UK. September 11, 2015.

BOOK

2022 Fannon, D.; Laboy, M.; Wiederspahn, P. *The Architecture of Persistence: Designing for Future Use*. New York, Routledge. 2022.

<https://doi.org/10.4324/9781003042013>

INVITED BOOK CHAPTERS

2021 Laboy, Michelle and David Fannon. "RHOnDA: An Online Tool to Help Homeowners and Tenants Increase Resilience." In *Adapting Buildings for a Changing Climate*, edited by N. Rajkovich and S. Holmes. New York, Routledge. 2021.

2019 Mirzaee, Sahar*; Matthias Ruth; and David Fannon. "Reconciling Diverse Perspectives of Decision Makers on Resilience and Sustainability." In *Handbook on Resilience of Socio-Technical Systems*, edited by Matthias Ruth and Stefan Goessling-Reisemann. Edward Elgar. 2019. Pages 360–386.

NON-REFEREED PUBLICATIONS

2014 Eckelman, M.J. and Fannon, D. Information Barriers and Enablers for Sustainable Buildings and Construction. Proceedings of NIST-ASCE-ASME workshop on *Sustainable Construction and Manufacturing*, Reston, VA, June 12-13, 2014.

PRESENTATIONS

2021 Fannon, D. "Methods of Knowing: Interdisciplinary Research in Architecture." *ARCH 620: Research Methods in Sustainable Design*. Eugene, OR. Oct 22, 2021.

Fannon, D. "Not another group project! Team Based Learning in Architecture." *Networks*. Society of Building Science Educators. Detroit, MI. Aug 3, 2021.

Fannon, D. "Continuous Improvement Through Student Feedback Teams" *Networks*. Society of Building Science Educators. Detroit, MI. Aug 4, 2021.

2020 Fannon, D. and Laboy, M. "Carbon Denominators." *AIA/ACSA Intersections Research Conference: CARBON*. Virtual. Sept. 30, 2020.

- 2019 Laboy, M.; Fannon, D. "Creativity, Calculation, & Curation: Research as a framework for cross-disciplinary collaboration." *Reynolds Symposium: Education by Design*. Portland, OR. Oct. 17–18, 2019.
- Fannon, D. and Laboy, M. "Future-Use Architecture" *Keynote address for the Annual Building Technology Educators Society Conference*. University of Massachusetts. Amherst MA. June 21, 2019.
- Fannon, D. and Laboy, M. "Attributes of Future-Use Architecture." *A'19: The Conference on Architecture*. American Institute of Architects. Las Vegas NV. June 6-8, 2019.
- Fannon, D. and Laboy, M. "Methods of Knowing: Grounded Theory in the study of future-use architecture." *Future Praxis: Applied Research as a Bridge Between Theory and Practice*. ARCC International Conference. Toronto. May 29-June 1, 2019.
- Wiederspahn, P.; Laboy, M.; Fannon, D. "PERSISTENT: Architects and Buildings Talking about the Future." *Kansas State University*. Manhattan, KS. April 8, 2019.
- Fannon, D. (Moderator) "Experiments in Being Versus Becoming." *Black Box: Articulating Architecture's Core in the Post-Digital Era* Association of Collegiate Schools of Architecture. Pittsburgh, PA. March 30, 2019.
- 2018 Laboy, M. and Fannon, D. "RHOnDA: An Online Tool to Help Homeowners and Tenants Increase Resilience." *Adapting Buildings for a Changing Climate*. NYSERDA & University at Buffalo. Albany, NY. October 22, 2018.
- Fannon, D.; Wiederspahn, P.; Laboy, M. "The Architecture of Persistence." *Keynote address for the 2018 AIA New England Chapter Design Awards*. Boston, MA. October 12, 2018.
- Fannon, D. "Conserving Energy, Conserving Buildings: Airtightness Testing in Historic New England Homes." *International Building Physics Conference*. Syracuse, NY. September 25, 2018.
- Fannon, D. "Future-Use Architecture: Research Methods." *Collaborative Research Summit*. AIA. Minneapolis. July 25, 2018.
- Fannon, D.; LeBlanc, M.; McCoy, R.; Minnis, E. "Latrobe Prize: Future-Use Architecture." *A'18: The Conference on Architecture*. American Institute of Architects. New York, NY. June 22, 2018.
- Laboy, M. and Fannon, D. "Resilient Homes Online Design Aid Connecting Research and Practice for Socially Resilient Communities." *Intersections DESIGN and RESILIENCE*. Association of Collegiate Schools of Architecture & American Institute of Architects. New York, NY. June 22, 2018.
- Troup, L*; Phillips, R*; Eckelman, M; Fannon, D. "Assessing the Triple Bottom Line of Alternative Window to Wall Ratios as Resilient Adaptations in Office Buildings." *Building Enclosure Science & Technology Conference*. National Institute of Building Sciences. Philadelphia, PA. April 15-18, 2018.
- Fannon, D. "Vernacular Building Science at the Gropius House." *Vernacular at Mid-Century, 1930-1970*. Vernacular Architecture Forum, New England Annual Meeting. Sturbridge, MA. March 24, 2018.

- Fannon, D. "Evaluating Resilient & Sustainable Buildings" *Sustain, Strengthen, Secure*. National Institute of Building Sciences. Washington, DC. January 9, 2018.
- 2017 Flint, M.; Warn, G.; van de Lindt, J.; Fannon; D. Sasani, M. "Multi-Hazard Resilient and Sustainable Buildings." *Superior Performance in a Changing Environment*. ASCE Congress on Technical Advancement. Duluth, MN. September 13, 2017.
- Fannon, D. "Designing Uncertainty: Scenario Planning in Design Studio." *Craft*. Society of Building Science Educators. Sublimity, OR. July 25, 2017.
- Phillips, R.*; Troup, L.*; Fannon, D.; Eckelman, M. "Predictive Ability of Window to Wall Ratio for Commercial Building Energy Consumption." *Science in Support of Sustainable and Resilient Communities*. ISIE-ISSST. Chicago, IL. June 25, 2017.
- Fannon, D. "Hands-On Labs for Better Buildings." *Conference for Advancing Evidence-Based Teaching*. Center for Advancing Teaching and Learning through Research. Boston, MA. May 2, 2017.
- Fannon, D. "Data Modeling to Evaluate Resilience in Residential Buildings." *Annual Meeting*. American Association of Geographers. Boston, MA. 5 April 2017.
- 2016 Troup, L.*; Fannon, D. "Morphing Climate Data to Simulate Building Lifecycle Energy Consumption." *SimBuild 2016*, ASHRAE/IBPSA-USA, Salt Lake City, UT. August 10-12 2016
- 2015 Laboy, M. and Fannon, D. "Learning Comprehensive Building Design through a Resilience Framework." *Architecture and Resilience on the Human Scale*, University of Sheffield, Sheffield, UK. September 11, 2015.
- 2013 Fannon, D.; Bolin, R.; & Kahnkari, K. "Engineered Natural Ventilation: Beyond the well-behaved arrows." *Greenbuild*. United States Green Building Council. Philadelphia, PA. November 20, 2013.
- 2007 Fannon, D.; Gregg, T.W.; Massey, J.; Wing, A.K. "Rightsizing: Connecting Strategic Goals to Design and Utilization Patterns." *Society for College and University Planning Mid-Atlantic Regional Conference*. University of Delaware, Newark. 26 March 2007.

EXHIBITIONS

- 2020-2021 *DURABLE: Sustainable material ecologies, assemblies and cultures*. Curated by Michelle Laboy, David Fannon and Peter Wiederspahn with Chris Grimley & Matthew Eckelman. Selected in peer-reviewed international competition @ BSA Space, Boston, MA. Feb 21- March 31, 2021.
- 2018-2019 *PERSISTENT: Evolving Architecture in a Changing World*. Curated by Peter Wiederspahn, Michelle Laboy, and David Fannon. @A+D Museum, Los Angeles, CA. December 8, 2018-February 17, 2019. @Kansas State University, Manhattan, KS. April-May 2019.
- 2013 Oslo Architecture Triennale. Design and prototype personal comfort system developed at the Center for the Built Environment. Sept-Dec 2013.

EXTERNAL GRANTS (FUNDED)

- 2020-2023 Co-PI (with M. Kane and M. Pavel, NREL, Ecobee & Packetized Energy) Department of Energy EERE: Buildings Energy Efficiency Frontiers &

Innovation Technologies (BENEFIT): *A Scalable Hardware-and-Human-in-the-Loop Grid-interactive Efficient Building Equipment Performance Dataset*. DE-EE0009154. Funded: Total: \$1,752,064. 15% share: \$262,809.60.

- 2019-2020 PI (with M. Laboy, P. Wiederspahn and M. Eckelman) BSA Foundation grant for exhibition: *DURABLE*. Funded: \$50,000. 28% share: \$14,000.
- 2017-2019 PI (With M. Laboy and P. Wiederspahn) American Institute of Architects College of Fellows Latrobe Prize. *Future-Use Architecture: Design for Persistent Change*. Funded: \$100,000. 33% share: \$33,333.33.
- 2015-2019 Co-Investigator (with M. Sasani, M. Eckelman, M. Ruth, L. Baise & W. Coulbourne) National Science Foundation CMMI #1455450. *Decision Frameworks for Resilient and Sustainable Buildings*. Funded: Total: \$1,122,687. 20% share: \$280,198.57.
- 2015-2017 Co-PI (with M. Laboy & M. Eckelman) AIA Upjohn Research Grant. *Building Resilience: A Tool for Adaptability Planning and Decision-Making*. Funded: \$28,015. 33% share: \$9,245.06.
- 2014 Co-PI (with M. Laboy) Building Resilient Boston Partnership. *Resilience Metrics for Urban Building Design*. Funded: \$12,000. 50% share: \$6,000.

EXTERNAL GRANTS (NOT FUNDED)

- 2020 Co-PI (with M. Laboy and the University of Maine) National Science Foundation. *Smart Large Scale Bio-Based Additive Manufacturing for Tomorrow 2020*. Future Manufacturing. Not Funded.
- 2018 PI (with M. Laboy, C. Heartveld, M. Eckelman) National Science Foundation. *Proof-Of-Concept of Resilient Homes Online Design Aid (RHONDA) Using Gaming for Community Engagement*.
- PI (with M. Laboy, M. Eckelman, C. Heartveld) Massachusetts Technology Transfer Center ACORN Innovation Fund. *Resilient Homes Online Design Aid (RHONDA)*.
- 2017 Co-Investigator (with S. Felton, A. Myers, & P. Malo) National Science Foundation SAEM. *GOALI: Multi-Physics Models of Foam Composites and Self-Assembling Components for Building Construction*
- 2016 Co-Investigator (with S. Felton & A. Myers) National Science Foundation SAEM. *Folding Materials, Actuators, and Geometries for Self-Erecting Structures and Adaptive Livable Spaces*.

INTERNAL GRANTS (FUNDED)

- 2020-2021 Co-PI (with M. Kane & M. Laboy) Northeastern University Tier-1 Seed Grant. *Community Resilience in Extreme Temperatures: Solutions for citizens, government, and utilities through big data and community engagement*. \$50,000.
- 2020 Co-PI CAMD Research Scholarship and Creative Activity Dissemination Grant (With M. Laboy and P. Wiederspahn) *Persistent: Evolving Architecture in a changing world*. \$3,300.
- 2017-2018 Co-PI CAMD 2025 Dean's Fellowship (With M. Laboy and C. Harteveld) *Designing and Engaging Sustainable Cities and Communities*. \$15,000.
- 2016 PI Northeastern University Provost's Teaching and Learning Grant. *Capturing the Sun: Evaluating Heliiodons And Sky-Simulators as Tools for Experiential Learning in Architecture Education*. \$5,000.

- 2015-2016 Co-PI (with M. Laboy & M. Eckelman) Northeastern University Tier-1 Seed Grant. *Building Resilience: A Tool for Adaptability Planning and Decision-Making*. \$50,000.
- 2015-2016 PI Northeastern University CAMD Faculty Research and Creative Activity Incentive Grant. *Conserving Energy, Conserving Buildings*. \$3,000.
- 2015 Co-PI (with M. Laboy, P. Wiederspahn & I. Rupnik) Northeastern CAMD Faculty Research and Creative Activity Incentive Grant. *Prefabricated Housing: Industrial and International Models*. \$10,000.
- 2014-2015 Co-PI (with P. Wiederspahn, G Kowalski & S. Kamarthi) Northeastern University Tier-1 Seed Grant. *Cost-effective Thermal Envelope Retrofits in Wood-frame Residential Buildings*. \$49,500.

PEER REVIEWER

- 2021 Journal of Asian Architecture and Building Engineering
- 2020, 2021 Journal of Building Engineering
- 2015, 2019, 2020, 2021 Building and Environment
- 2017-2018 International Building Physics Conference
- 2017-2018 Journal of Housing and the Built Environment
- 2016 International Building Performance Simulation Association SimBuild
- 2016, 2018 National Science Foundation
- 2016 Puerto Rico Science and Technology Trust
- 2015 Urban Climate *ad hoc*
- 2014-present US Green Building Council *Greenbuild Conference*
- 2012-2013 Congress of Tall Buildings and Urban Habitat

TEACHING

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- 2021 spring ARCH 7140: Masters Research studio. *Invisible Architecture, design for multiple senses*. 12 students.
- ARCH 5120 Comprehensive Design Studio. Northeastern, 9 students (co-coordinator for 3 sections of architecture studio)
- 2020 fall ARCH 7130: Masters Research studio. *Invisible Architecture, design for multiple senses*. 12 students.
- SBSY 5100 Sustainable Design & Technologies in Construction. Northeastern: 32 students
- 2020 spring ARCH 3210 Environmental Systems. Northeastern. 54 students (supervised teaching assistants for 4 lab sections)
- ARCH 5120 Comprehensive Design Studio. Northeastern, 10 students (co-coordinator for 5 sections of architecture studio)
- 2019 fall ARCH 5210 Environmental Systems. Northeastern. 21 students
- SBSY 5100 Sustainable Design & Technologies in Construction. Northeastern: 19 students

- 2019 spring ARCH 3210 Environmental Systems. Northeastern. 35 students (supervised teaching assistants for 3 lab sections)
ARCH 5220 Integrated Building Systems: Northeastern. 48 students
- 2018 fall ARCH 5210 Environmental Systems. Northeastern. 32 students (substantial redesign as graduate seminar)
SBSY 5100 Sustainable Design & Technologies in Construction. Northeastern: 25 students
- 2018 spring ARCH 5210 Environmental Systems. Northeastern. 50 students (supervised teaching assistants for 4 lab sections)
ARCH 5120 Comprehensive Design Studio. Northeastern, 10 students in collaboration with CIVE 4767 Senior Design-Structural (co-coordinator for 7 sections of architecture studio)
- 2017 fall ARCH 5210 Environmental Systems. Northeastern. 45 students (supervised teaching assistants for 4 lab sections)
SBSY 5100 Sustainable Design & Technologies in Construction. Northeastern: 20 students
- 2017 spring ARCH 5120 Comprehensive Design Studio. Northeastern, 12 students in collaboration with CIVE 4767 Senior Design-Structural (co-coordinator for 7 sections of architecture studio)
- 2016 fall ARCH 5210 Environmental Systems. Northeastern. 59 students (supervised teaching assistants for 5 lab sections)
SBSY 5100 Sustainable Design & Technologies in Construction. Northeastern: 20 students
- 2016 spring ARCH 5220 Integrated Building Systems: Northeastern 86 students
ARCH 5120 Comprehensive Design Studio. Northeastern, 12 students (co-coordinator for 8 sections)
- 2015 spring ARCH 5120 Comprehensive Design Studio. Northeastern, 10 students (co-coordinator for 8 sections)
- 2014 fall ARCH 5210 Environmental Systems. Northeastern. 96 students (supervised teaching assistants for 6 lab sections)
SBSY 5100 Sustainable Design & Technologies in Construction. Northeastern: 16 students
- 2014 spring ARCH 5120 Comprehensive Design Studio. Northeastern, 12 students (co-coordinator for 6 sections)
- 2013 fall ARCH 5210 Environmental Systems. Northeastern. 44 students
SBSY 5100 Sustainable Design & Technologies in Construction. Northeastern: 19 students (+1 Auditing)
- 2008 spring ARCH 2360 Environmental and Ecological Systems. Rensselaer Polytechnic Institute: 63 students (Visiting Adjunct)

THESIS AND DISSERTATIONS SUPERVISED

- 2015-2019 **Lucas Troup**. PhD Interdisciplinary Engineering.

- 2018-2019 **Abigail Reed.** Undergraduate Honors. *May 2019.* "Microclimates of the Sixth Façade." Awarded the ARCC King Research Prize.
- 2017-2018 **Timothy Adurelere** MS. Mechanical Engineering. *December 2018.* "Passive Survivability in Residential Buildings During a Heat Wave Under Dynamic Exterior Conditions."
- 2015 **A. Htet Htet Aung** Undergraduate Honors. *May 2016.* "Building Construction Performance of Residential Wood Frames."

DOCTORAL COMMITTEES

- 2020-present **Emily Casavant.** PhD Interdisciplinary Engineering. Expected 2025.
- 2016-2020 **Krissy Govertsen.** PhD Interdisciplinary Engineering. Expected 2023.
- 2017-2019 **Robert Phillips.** PhD Civil and Environmental Engineering. 2020.
- Sahar Mirzaee.** PhD Public Policy. Aug 2019.

NEW COURSE DEVELOPMENT

- 2020-2021 **ARCH 7130-7140** Graduate Research and Graduate Synthesis Studios
- 2017 & 2018 **ARCH 5120** Comprehensive Design Studio + **CIVE 4767** Engineering Capstone integration
- 2014 **ARCH 5210** Environmental Systems (*major restructuring*)
- 2013 **SBSY 5100** Sustainable Design & Technologies in Construction.
- ARCH 2250** Introduction to Sustainable Design in Architecture
- ARCH 2260** Introduction to Building Systems

ALTERNATIVE INSTRUCTION

- 2019-2020 Directed study with Francesca Brecha (BS Civil 2020) studying the effect of window to wall ratio on measured energy use in office buildings.
- 2019-2020 Engineers Without Borders. Advising Guatemala School project team.
- 2019 CIVE 4767 Senior Design. Architectural consultant for 7 teams of capstone teams designing building and non-building structures.
- 2018-2019 Freedom by Design. Advised students in the design and construction of furniture and upgrades at Bird Street Community Center
- 2016 *Case Resilienti* Advised engineering capstone students designing off-the-grid home in Italy.
- 2015-2017 Freedom by Design. Advised students in the design and construction of accessibility upgrades at Egleston Square Peace Park
- 2014-2015, 2016-2017, 2017-2018 DOE Race to Zero Student Competition. Faculty Advisor for Northeastern Team developing net-zero home design.
- 2013-2014 NESEA Student Design Competition. Faculty Advisor for Northeastern Team designing low-energy retrofit to mill building

INVITED JUROR

- 2020 Massachusetts Institute of Technology: Pandemic Resilience Studio 12/8/2020
- 2019 Kansas State University: Comprehensive Studio 4/8/2019

- 2018 Boston Architectural College: Comprehensive Studio 4/12/2018
- 2015 Harvard Graduate School of Design: Master of Design 5/13/2015
Boston Architectural College: Comprehensive Studio 10/8/2015, 12/3/2015
- 2013 Wentworth Institute of Technology: Comprehensive Studio 10/28/2013
- 2010 University of California at Berkeley: ARCH 140 Energy and Environment, Final Review 5/5/2010
University of California at Berkeley: M-Arch Design Studio, Interim Reviews 4/19/2010
University of California at Berkeley: ARCH 160 Construction Systems, project reviews. 3/19/2010
- 2009 Catholic University of America: Master of Architecture program 5/1/2009
4/17/2009
- 2008 IESNA East-Central Region Design Awards Judge. 3/1/2008
- 2007 Rensselaer Polytechnic Institute: Master of Science: Built Ecologies Program: 8/28/2007

SERVICE

SERVICE TO THE UNIVERSITY

- 2013-present Master of Science in Sustainable Building Systems (Ms.SBS) Program Committee and Faculty Advisor
- 2013 – present Northeastern School of Architecture American Institute of Architecture Students (AIAS) & Freedom by Design Chapter Advisor
- 2015-present Northeastern University Sustainable Building Organization (NUSBO) Faculty Advisor (club's founding)
- 2020-2021 Search Committee Member: Assistant Professor of Race and Social Justice in the Built Environment.
- 2020-present School of Architecture Representative to College of Arts Media and Design Social and Racial Justice Advisory Board
- 2020 Coordinator of Ruggles Studio pandemic reopening effort
- 2016-2017 Northeastern School of Architecture Architectural Studies Program Coordinator
- 2018 Led the design, planning and execution to create the School of Architecture Maker space, including fabrication, installation, and calibration.
- 2017-2019 Northeastern School of Architecture Executive Committee
- 2016 Faculty Search Committee: Director of the Center for Advancing Teaching Learning through Research (Office of the Provost)
- 2017-2020 CATLR Faculty Liaison for the School of Architecture
- 2015-2017 Northeastern School of Architecture Curriculum Committee
- 2014 – 2016 Northeastern School of Architecture Faculty co-op liaison
- 2014, 2015, 2018-2020 Northeastern School of Architecture Merit Committee

- 2013 – 2015 Northeastern School of Architecture Online Course Committee
- 2013 – 2018 Northeastern School of Architecture Architectural Studies Committee

SERVICE TO THE PROFESSION

- 2020-present Education Committee Chair and Executive Board Member
Society for Building Science Educators (SBSE)
- 2017-present Faculty Counselor to the Association of Collegiate Schools of Architecture
 - 2017-2018 7th International Building Physics Conference Scientific Committee
 - 2017-2019 ASHRAE TC 7.1 Integrated Building Design Corresponding Member
 - 2015-2018 Boston Society of Architects (Local AIA Chapter) Board

SERVICE TO THE PUBLIC

- 2020-2022 Project Advisory Group Member for California Energy Commission project on commercialization of personal thermal comfort systems
 - 2018 Expert Contributor New York State Energy Research and Development Authority Climate Change & Buildings: Adaptation Research Planning Meeting. October 2, 2018
- 2015-2017 Massachusetts Engineers and Architects for Emergency Response (MEAER)
- 2017-Present Sacred Heart School Roslindale MA, Board of Trustees
 - 2016 Strategic Planning Task Force