

JAYATI CHHABRA

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Professional Summary

Cross-functional building performance research engineer and product designer with almost three years of experience in tool development. Demonstrated in-depth knowledge of energy codes, energy modeling, daylighting, building materials, assemblies and building integrated carbon capture techniques.

Education

- Georgia Institute of Technology | Atlanta, GA
Master of Science in High-performance Buildings | GPA: 4.0 Aug 2019 - Dec 2020
Dissertation titled "Building-integrated carbon sequestration techniques."
- Visvesvaraya National Institute of Technology | Nagpur, India
Bachelor of Architecture (5-year degree) | GPA: 8.89 July 2013 -May 2018
Dissertation titled "Gendering of Spaces."

Work Experience

Pacific Northwest National Lab (PNNL) | Atlanta, GA

Building Energy Research Engineer

Jun 2021 – Present

- Overseeing stakeholder engagement for OpenStudio Standards measure for ASHRAE 90.1 Appendix G Performance Rating Method.
- Supporting the development and enhancing functionality of Audit Template and Asset Score tool by reviewing standards, new regulations and designing prototypes to add new features related to decarbonization audits.
- Providing technical assistance for COMcheck and REScheck software and assisting the development of new features like Energy credits for ASHRAE 90.1 2022.
- Participating in technical advisory groups for the development of state level green codes.

Cove Tool Inc. | Atlanta, GA

Building Performance Researcher

Dec 2021 – Jun 2023

- Strategized and coordinated the research, design, development, maintenance, and marketing of two major features - Building Product Database and Assembly Builder as the product lead.
- Spearheaded compilation and calculation of three different metrics – cost, embodied carbon, and thermal performance for more than 400+ materials and 1000+ code-minimum building assemblies.
- Published 40+ articles and ebooks focused on energy codes, material classification using MasterFormat and UniFormat, building assemblies, BIM modeling, optimizing renovation projects, and meeting 2030 targets.
- Conducted 250+ demos, webinars, and workshops as training for architectural and engineering firms.
- Closely collaborated with in-house mechanical engineers to automate 26+ energy codes adopted in the USA and outside, in the platform. Studied and reviewed various codes including California Title 24, ASHRAE 90.1, Japanese energy code, and NCC amongst others.
- Spoke with manufacturers to collect, review, and integrate their material information into the platform's product database.
- Optimized workflows for product handoffs between the design and software teams.

Architectural Researcher

Feb 2020 – Nov 2021

- Provided customer support with guidance and technical information on daylight analysis, early-stage energy analysis, water consumption, and cost optimization.
- Assisted in certifying buildings for LEED certification including Reston Gateway, 301 Hillsborough.
- Created educational content for architects and engineers on 20+ building science topics including BEM.

Volunteer Experience

International Building Performance and Simulation Association USA (IBPSA – USA)

Director

Jan 2021 - Present

- Organized activities, discussion groups, and events for emerging professionals in the building performance industry as the chair of the Emerging Professionals and Students of IBPSA-USA (EPSI) Committee
- Participated in the organization of IBPSA-USA events and conferences like Simbuild, and semi-annual events as the vice-chair of the Conference Committee.

Student and Emerging Professionals Director

Jan 2020 – Dec 2020

- Represented the challenges of students and emerging professionals of the building performance industry in the monthly board meetings. Planned and executed outreach efforts to increase the participation and involvement of students in the organization.

Publications

J. **Chhabra**, P. Pease, Z. Zolfaghari, A. Padwal, "Energy Conservation and Load Reduction Strategies for Arctic Buildings: A Comparative Study", *ASHRAE and SCANVAC HVAC Cold Climate Conference (in press), 2023*.

P. Pease, J. **Chhabra**, Z. Zolfaghari, A. Padwal, "Passive or Active, Mapping the Highest-Impact HVAC Design Interventions Across the USA", *ASHRAE Winter Conference (in press), 2023*.

P. Pease, J. **Chhabra**, Z. Zolfaghari, "Planning for net zero by 2050, what HVAC system interventions will today's code-minimum commercial buildings require?", *ASHRAE Winter Conference (in press), 2021*.

J. **Chhabra** and T. Rakha, "A modeling framework for building-integrated biotic carbon sequestration (CS) techniques: Towards mitigating climate change," *Building Simulation Conference Proceedings, 2021*.

J. **Chhabra** and T. Rakha, "Building-integrated carbon sequestration techniques: Towards mitigating climate change," 2020 AIA/ACSA Intersections Research Conference: CARBON, 2020.

J. **Chhabra** and S. Bahadure, "Gendering of spaces", *ACE (Scopus indexed), 2019*.

Awards and Certifications

- Honorable mention - Dagmar Epsten Environmental Vision Prize (Studio project, Georgia Institute of Technology), 2020
- Top High-performance Buildings Student Award (Georgia Institute of Technology), 2020
- LEED Green Associate (USGBC), 2020
- Best Student Paper Award (Gendering of Spaces, ACE), 2019
- Architect's Licensure (Council of Architecture, India), 2018

Key Skills

Cross-functional Collaboration, Leadership, Product Management, Energy Analysis, Building Energy Modeling (BEM), Communication, Writing, UI/UX Designer, Figma, Research, Public Speaking, Quality Assurance, Sustainability, Organizational, and Database Management.