# Zhizhang Hu

LEED Green Associate
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## EDUCATION

**CARNRGIE MELLON UNIVERSITY** *Present*

Master of Science in Building Performance and Diagnostics

Cumulative GPA: 3.78, Core Courses: Building Performance Modeling; Building Control and Diagnostics

**SOUTHWEST JIAO TONG UNIVERSITY** 2018

Bachelor of Engineering in Building Environment and Energy Engineering

The Grand Prize (2017) & the 3rd prize (2016, 2015) for Comprehensive Scholarship

## INTERNSHIP

**Research Assistant, Carnegie Mellon University, PA** 08/2018-*Present*

- Analyzed energy saving potential of firehouses in City of Pittsburgh with LEAN regression analysis
- Performed Post Occupancy Evaluations and Measurements (POE+M) for two different building cases
- Extracted, cleaned and analyzed data with machine learning from embedded sensor networks with python
- Assisted in establishing new database for POE+M data storage and processing with SQL

**Performance Analyst Intern, Sichuan Institute of Building Research, China** 09/2017-01/2018

- Simulated the outdoor wind environment and indoor ventilation of the typical floor of an architectural complex in transition season for the green building assessment with PHOENICS and Revit
- Refined the location of windows of one energy-saving renovation project with wind environment simulations
- Assisted in the commission of mechanical system operation process of new projects for energy-saving optimization

**Design Engineer Intern, China Construction Third Engineering Bureau Co., Ltd., China** 01/2017-03/2017

- Designed and optimized the layout of machines and pipes of 63rd floor(Equipment Floor) to 72nd floor
- Refined the air-conditioning duct system in office area of #1 building into a higher efficiency with the result of fluid dynamic and thermal dynamic calculation
- Assisted in the commission of ventilation system of #3 building to ensure the performance concurred with design

## PROJECTS

**Building Performance Optimization Study (Case: Center for Sustainable Landscapes)** 08/2018-*Present*

- Built up a website of the building for building data visualization with HTML and CSS
- Established the benchmark building performance model with Revit and EnergyPlus
- Analyzed 50 design alternatives for design optimization with One-factor-a-time (OFAT) Evaluation method

**Experimental Study on Stress – Seepage Coupling of Rock** 07/2017-09/2017

- Experimented with MTS 816 Test System, independently responsible for the preparation of the experiment
- Utilized Excel and MATLAB to visualize experimental data
- Implemented computational fluid dynamic simulation with ANSYS Fluent

**Active Evasion of Guidance-based UVA among Obstacles** 04/2016-04/2017

- Organized weekly meetings focusing on the refinement and innovation of computer vision algorithms
- Completed the binary-vision based 3D reconstruction of outdoor environments with OpenCV

## TECHNICAL SKILLS

Familiar with: EnergyPlus, eQUEST, Revit, Auto CAD, HTML, Python, MATLAB, PHOENICS

Experienced in: ANSYS, SQL, OpenCV, CSS, MS Visual Studio(C/C++), Simulink