

Jianbin Chen

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JonbinChen@163.com

RESEARCH INTERESTS:

- Renewable Energy, Wireless Power Transmission, Building Energy Efficiency, HVAC

EDUCATION:

Donghua University, China

Sept 2021 - Jun 2023

- *GPA:* 87.32/100
- *Major:* Master of Architecture and Civil Engineering (HVAC direction)
- *Core Modules:* Advanced Fluid Mechanics, Advanced Heat Transfer, Computational Fluid Dynamics, Numerical Heat Transfer, etc.
- *Thesis:* Research on Dynamic Characterization of Laser Power Beaming

Nanjing Tech University, China

Sept 2017 - Jun 2021

- *GPA:* 85/100
- *Major:* Bachelor of Building Environment and Energy Application Engineering
- *Core Modules:* Engineering Thermodynamics, Heat Transfer, Fluid Mechanics, Ventilation and Air Conditioning Engineering, etc.
- *Graduation Design:* HVAC Engineering Design for Office Building of China Construction Eighth Engineering Division

RESEARCH PROJECTS:

Master Thesis: Research on Dynamic Characterization of Laser Power Beaming

Jun 2022 - Present

Supervisor: Dr Yong Li

- *Aim:* To investigate the operating characteristics of laser power beaming systems in the presence of dynamic errors
- *Content:* Laser energy transfer systems are often subject to tracking errors when tracking dynamic objects. The focus of this study is to investigate the output profile of a photovoltaic receiver in the presence of tracking errors and to improve the system efficiency by optimizing the photovoltaic receiver circuit structure.

Graduation Design: Office Building HVAC Engineering Design

Dec 2020 - Jun 2021

***National First Prize for the 2021 CAR-ASHRAE Student Design Competition**

Supervisor: Dr Yanfeng Gong, Dr Jianjie Cheng, Dr Guangli Zhang, Dr Huifang Liu

- *Aim:* Based on the two-star green building design target, this project aims to create a functionally rich, safe, reliable, healthy and comfortable indoor environment.
- *Content:* A set of year-round operation control strategy with multiple modes is designed for this cold and heat source system, and an anti-freeze mode is designed for the solar module considering the winter climate in the cold region. Software such as TRNSYS is used to simulate the effective heat storage of the system in the transition season and verify the reliability of the system's year-round operation.

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Thermal analysis modeling based on Fluent to optimize heat dissipation in campus data centers

Supervisor: Dr Liping Chen

Dec 2018 - Sept 2019

- Aim: Used Fluent to conduct numerical simulation of the campus data center and proposed the corresponding optimization plan based on the numerical simulation results
- Method: Physical modeling and numerical simulation are adopted.
- Conclusion: The results of the study show that among the two forms of airflow organization applied to the data room, the under-floor air supply solution is better than the column air conditioning solution, and the under-floor air supply solution achieves hot and cold aisle separation, which has better cooling and energy saving effects..

OTHER EXPERIENCE:

Jiangsu Province Overseas Study Governmental Scholarship Project

Jul 2019 - Aug 2019

National Taiwan University (Summer School Programme)

- Under the auspices of the governmental scholarship, I went to Taiwan for a summer school programme in civil engineering and graduated with A. I received an award for the best presentation design.
- I grasped the building system and green building management of Taiwan and had an in-depth understanding of the application of BIM technology in engineering.

SKILLS:

Software: MATLAB, TRNSYS, Fluent, Revit, AutoCAD, etc.

Languages: English (proficient), Mandarin (native), Cantonese (native)

SELECTED HONORS:

AWARDS:

- National First Prize for the CAR-ASHRAE Student Design Competition *Nov 2021*
- National Excellent Design Award for the 19th MDV Central Air Conditioning Design and Application Competition *Dec 2021*
- School Excellent Graduate Student Award *Jun 2021*
- National Excellent Design for the 4th University Green Building Design Skills Competition *Mar 2020*

SCHOLARSHIPS:

- Jiangsu Province Overseas Study Governmental Scholarship for University and College Students *Sept 2019*
- School First-class Scholarship for Comprehensive Academic Performance *Jun 2018*