

# Zhenning Li

## Introduction

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Dr. Zhenning Li is a researcher from Oak Ridge National Laboratory in USA. He got his bachelor degree from Shanghai Jiao Tong University. He got his PhD from University of Maryland. His expertise is on thermal system modeling and optimization.

## Education

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- 08/2014-12/2019      **University of Maryland, College Park, USA**  
Ph.D. in Mechanical Engineering (December'2019)
- Specialization in HVAC System Simulation and Optimization
  - Awarded Research Assistantship at Center for Environmental Energy Engineering (CEEE)
- 09/2010-07/2014      **Shanghai Jiao Tong University, Shanghai, China**  
Bachelor of Mechanical Engineering. (July'2014)  
Major: Thermal Energy and Power Engineering

## Experience

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- 08/2014-Current      **Graduate Research Assistant, Center for Environmental Energy Engineering, University of Maryland, College Park, USA**  
Advisor: Prof. Reinhard Radermacher; Co-advisor: Dr. Vikrant Aute
- ✧ Development of an integer permutation based Genetic Algorithm for heat exchanger flow path optimization
  - ✧ Development of a unified variable geometry heat exchanger model to simulate next generation heat exchanger
  - ✧ Day-to-day task with CoilDesigner® (enhancement, experiment validation, technical support to CEEE sponsors)
- 10/2013-05/2014      **Experiment on Confined Jet Array Impingement Cooling, Bachelor Dissertation, Shanghai Jiao Tong University, Shanghai, China**  
Advisor: Prof. Fangjun Hong
- ✧ Build close-loop jet array impingement cooling experiment setup
  - ✧ Visualize nucleate bubble dynamics in confined jet array impingement boiling

## Journal Publications

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- Li, Z.,** Shen, B., and Gluesenkamp, K. R., 2021. Multi-objective Optimization of Low-GWP Mixture Composition and Heat Exchanger Circuitry Configuration for Improved System Performance and Reduced Refrigerant Flammability. *International Journal of Refrigeration*.
- Li, Z.,** Gluesenkamp, K. R., and Nawaz, K., 2020. Analysis of Basic Airflow Configurations for Separate Sensible and Latent Cooling Systems with Indoor Air Recirculation. *International Journal of Refrigeration*.
- Li, Z.,** Aute, V. and Ling, J., 2019. Robust Heat Exchanger Circuitry Optimization under Uncertainty of Air and Refrigerant Operating Conditions. Submitted to *Applied Thermal Engineering*.
- Lee, M. S., **Li, Z.,** Ling, J. and Aute, V., 2018. A CFD Assisted Segmented Control Volume Based Heat Exchanger Model for Simulation of Air-to-refrigerant Heat Exchanger with Air Flow Mal-Distribution. *Applied Thermal Engineering* 131: 230-243.
- Huang, Z., **Li, Z.,** Hwang, Y. and Radermacher, R., 2016. Application of Entropy Dissipation Based Thermal Resistance to Design Optimization of a Novel Finless Evaporator. *Science China Technological Sciences* 59(10): 1486-1493.
- Li, W., **Li, Z.,** Hong, F, Chen, G., 2015. Visualization Study on Nucleate Bubble Dynamics in Confined Jet Array Impingement Boiling, *Cryogenic Engineering* 02: 44-50