JIANGCE CHEN

(+1) 860-569-9841 ⋄ jiangcechen@gmail.com

EDUCATION

University of Connecticut, Storrs
Ph.D. in Mechanical Engineering Overall GPA: 4.156/4.00 *August 2017 - May 2023*
Master of Science in Computer Science and Engineering *August 2019 - December 2021*

Beihang University, Beijing *September 2010 - July 2014*
Bachelor of Engineering, Aircraft Design and Engineering. Overall GPA: 3.70/4.00
Bachelor of Science, Applied Mathematics.

EXPERIENCE

Postdoctoral Fellow *January 2023 - Present*
Carnegie Mellon University Supervised by Dr. Chris McComb and Dr. Sneha Prabha Narra

- Develop Fast Thermal Simulation Tools for Additive Manufacturing Temperature Control with Machine Learning Methods

Research Assistant *August 2017 - January 2022*
University of Connecticut Supervised by Dr. Horea Ilies

- CAD Model Structure Features Recognition Based on Deep Learning
- Dynamic Hand Gesture Recognition
- Automatic Shape Modification for Additive Manufacturing
- Geometry Interchangeability Check Among CAX Systems
- Quasi-conformal Triangle Mesh Morphing
- Packing And Routing Optimization

Research Intern *May 2021 - September 2021*
Palo Alto Research Center Supervised by Dr. Morad Behandish

- Initiated and developed a method that modifies the shape of parts to satisfy the constraints of Additive Manufacturing;
- Optimized the computation efficiency of the method so that it could deal with a realistic model on a normal laptop within a couple of minutes;
- Documented the work that leads to the draft of research paper and patent.

Research Assistant *September 2015 - September 2016*
Peking University, School of Life Science Supervised by Dr. Yao Meng

- Designed a Portable Environment DNA(e-DNA) Collection Filter;
- Investigated the Variety of Amphibian Around Beijing.

Research Assistant *September 2014 - September 2015*
Chinese Academy of Sciences, Institute of Mechanics Supervised by Dr. Zhao Ya-Pu

- Conducted a research on Microscale Mechanism of Fracture-Network Connectivity and Desorption Transportation of Shale Gas

Work as Reviewer
Journal of Computing and Information Science in Engineering
Journal of Computer-Aided Design
Journal of Computer in Industry
IDETC/CIE Conference

PATENTS

Invention Disclosure

Method and System to Automatically Generate Self-Supporting Net-Part-Boundary, or Intra-Part, Modifications for Hybrid. **Jiangce Chen**, Morad Behandish, Matt Patterson

Method of Electrowetting for Drop-on-demand Metal Additive Manufacturing. **Jiangce Chen**, Horea T. Ilies

PAPERS AND CONFERENCES

Journal Articles

Chen, J., Ilies, H. T., Ding, C. (2022). Graph-Based Shape Analysis for Heterogeneous Geometric Datasets: Similarity, Retrieval and Substructure Matching. Computer-Aided Design, 143, 103125.

Chen, J., Ilie, H. T. (2020). Maximal disjoint ball decompositions for shape modeling and analysis. Computer-Aided Design, 126, 102850.

Zhao, Y. P., **Chen, J.**, Yuan, Q., Cheng, C. (2016). Microcrack connectivity in rocks: a real-space renormalization group approach for 3D anisotropic bond percolation. Journal of Statistical Mechanics: Theory and Experiment, 2016(1), 013205.

Conferences

Chen, J., Patterson, M, Mirzendehdel A. M., Behandish, M. (2022) Automatic Shape Modification for Self-Supporting Structures in Additive Manufacturing, IDETC/CIE 2022

Chen, J., Ilies, H. T. (2019) Maximal Disjoint Ball Decompositions for Shape Modeling and Analysis, The Symposium on Solid and Physical Modeling (SPM).

Chen, J., Ilies, H. T. (2018) Mathematical Abstractions for Engineering Design and Manufacturing. SIAM/GD 19 PROGRAM.

Articles under Review

Chen, J., Ilie, H. T. (2022) Packing Spheres on Surfaces: Constructing Quasi-Conformal Maps between Triangulated Riemann Surfaces

Chen, J., Patterson, M, Mirzendehdel A. M., Behandish, M. (2022) Mechanical Part Shape Optimization for 3D Printing

Articles in Preparation

Chen, J., Ilie, H. T. (2022) Packing and Routing Simultaneously with Maximal Disjoint Ball Decomposition

HONORS & FELLOWSHIPS

Second Place in Graduate Research Competition, UConn ME Department *May 2020*

CT IN4SPIRE Project *April 2019*
$2,000 summer scholarship, and up to $8,000 for materials supplies

Honorable Mention, Mathematical Contest In Modeling *2013,2014*
2nd Prize in the 23th Fengru Idea competition *2013*
Zhang Zixiong Fluid Mechanics Scholarship *2013*

TECHNICAL STRENGTHS

Programming Languages	C++, Python, Matlab, JavaScript, Latex
Libraries & Packages	Tensorflow, Pytorch, CUDA, OpenGL