

## Contact

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www.linkedin.com/in/juzeng

(LinkedIn)

www.hpl.hp.com/people/jun\_zeng/

(Personal)

## Top Skills

Deep Learning

Simulations

Algorithms

## Languages

English (Full Professional)

Chinese (Native or Bilingual)

## Certifications

Convolutional Neural Networks

Structuring Machine Learning Projects

Neural Networks and Deep Learning

Deep Learning Specialization

## Publications

Non-isothermal crystallization behaviour of polyamide 12 analogous to multi-jet fusion additive manufacturing process

Design Automation Methods and Tools for Microfluidics-Based Biochips

Modeling and Simulation of Electrified Droplets and Its Application to Computer-Aided Design of Digital Microfluidics

Long-term ageing effect on mechanical properties of polyamide 12 printed by Multi-Jet-Fusion

A Digital Material Design Framework for 3D-Printed Heterogeneous Objects

## Patents

Generating a shape profile for a 3D object

# Jun Zeng

Distinguished Technologist leading Physical AI initiative in HP

Additive Manufacturing R&D Lab

Palo Alto, California, United States

## Summary

Direct experiences in:

- software architecture & algorithm research. deep expertise in complex systems blended with working knowledge across software/hardware engineering. cyber-physical systems. 3D printing. microfluidics. distributed systems. machine learning. optimization. stochastic discrete event modeling. Java. Python. C++. industrial research. IP creation.
- project ideation/value proposition, creation, execution, evangelization. team creation, recruit/hire/mentor. develop & manage partner relationship.

<https://orcid.org/0000-0001-5711-4891>

## Experience

HP

18 years 6 months

Physical AI group lead in HP Additive Manufacturing R&D Lab

February 2025 - Present (4 months)

Distinguished Technologist

October 2020 - Present (4 years 8 months)

Palo Alto, California, United States

- Digital Twin ideation, planning & execution
- Digital Twin software strategy for 3D Software Global Business Unit
- technology open source (partnering with world's leading AI institution), drive & deliver multiple company level board reviews
- external collaboration (academia, research lab, start-up, etc.).
- drive & deliver grant proposals (U.S., EU, Asia) with successful award.
- 70 granted U.S. patents to date

Digital Twin group lead in HP Personalization and 3D Printing Software

November 2022 - February 2025 (2 years 4 months)

Print production scheduling  
Monitoring additive manufacturing  
Printing production quality prediction  
Propagation of a material through  
an interior volume of a three-  
dimensional object

Palo Alto, California, United States

- lead digital twin initiatives
- commercialize digital twin software anchored on predictive material sciences (polymer & metal) with successful product delivery & paid customers.
- external outreach (academia, research lab, start-up, etc.)

Manager, 3D & Digital Manufacturing Software, HP Labs

2016 - October 2022 (6 years)

Palo Alto, California, United States

- built team from scratch: recruit, hire, mentor, promote, set path for success. start-up within a big company, geographically distributed with unified OKR. expertise covering computational geometry, computational physics, deep learning (physics informed neural networks), high performance computing.
- set quarterly & annual deliverables and drive execution. drive & deliver commercialization.
- named by senior executive for "wonderful vision" and "world class execution"

Principal Research Staff Member (Master Technologist), HP Labs

February 2013 - October 2020 (7 years 9 months)

Palo Alto, California, United States

3-D printing, digital manufacturing workflow/automation

Senior Member Research Staff (Expert Technologist), HP Labs

December 2008 - February 2013 (4 years 3 months)

Palo Alto, California, United States

digital manufacturing workflow simulation & optimization. distributed system.

Research And Development Specialist, Print Business

December 2006 - December 2008 (2 years 1 month)

Corvallis, Oregon, United States

- Established multi-disciplinary engineering design, modeling, simulation, and analysis methodology.
- For piezoelectric printing, electro-kinetic driven display applications and other new product R&D initiatives.
- Won Design Effectiveness award from corporate senior vice president.

Coventor, Inc., a Lam Research Company

8 years

Technical Product Manager

January 2004 - December 2006 (3 years)

Cambridge, Massachusetts, United States

Technical leadership in

- corporate research on biochip design and simulation methods.
- industrial-grade simulation automation software requirements management, feature definition, development, and support for marketing & sales, post-sales support.

### Senior Software Engineer

January 1999 - January 2004 (5 years 1 month)

Cambridge, Massachusetts, United States

1. Developed and supported commercialization (pre-sales & post-sales technical support) of 3D simulation software to aid design and verification of MEMS products. Created a new module within the first year and landed sales success with a strategic account.
2. Executed research grants funded by DARPA on new design automation technologies, for example, model reduction techniques for fluid handling problems to accelerate designs of microfluidic devices.
3. Publications include premier conference such as MicroTAS and The Royal Society of Chemistry's Lab on a Chip journal.

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## Education

The Johns Hopkins University

Ph.D. in Mechanical Engineering, M.S. in Computer Science

University of Science and Technology of China