

# CURRICULUM VITAE: YUE SUN

Harvard University  
School of Engineering and Applied Sciences  
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## EDUCATION

Harvard University Ph.D. Student in Applied Mathematics Advisor: Professor Chris H. Rycroft	2020 – present
Harvard University M.E. in Computational Science and Engineering Advisor: Professor Chris H. Rycroft Thesis: <i>A lattice Boltzmann implementation of the reference map technique</i>	2018 – 2020
New York University Shanghai B.S. in Mathematics, <i>Magna Cum Laude</i> Minors in Interactive Media Arts, Urban Design and Architecture Studies	2014 – 2018

## RESEARCH INTERESTS

Broadly: computational fluid dynamics, scientific computing, computer graphics, physics-based animation

Specifically: reference map technique, lattice Boltzmann method, aesthetic visualization of fluid simulation;  
numerical methods for material mechanics: fluid–structure interaction;  
high performance computing in physical system simulation: soft sedimentation, large-scale parallelization;  
mechanical modeling of biological systems: single microswimmer locomotion

## PROFESSIONAL EXPERIENCE

Activision / Raven Software <i>Technical Animation Intern, game credit: “Call of Duty: Black Ops Cold War”</i>	Middleton, WI Summer 2020
<i>Technical Animation Intern, game credit: “Call of Duty: Modern Warfare”</i>	Summer 2019
Pearl Studio (formerly Oriental DreamWorks) <i>Production Education Intern</i>	Shanghai, China Summer 2016

## PRESENTATIONS

SIAM Annual Meeting, Virtual CP5 Applied Mathematics session chair Contributed talk: <i>A lattice Boltzmann implementation of the reference map technique for fluid–structure interaction</i>	July 19-23, 2021
APS March Meeting, Virtual Oral presentation: <i>A lattice Boltzmann based reference map technique for fluid–structure interaction</i>	March 15-19, 2021
Harvard IACS ComputeFest, Cambridge, MA Workshop co-organizer: <i>From Notebook to the Cloud Workshops</i>	January 21-24, 2020

## TEACHING EXPERIENCE

Harvard University	Teaching Fellow
AM 205: Advanced Scientific Computing: Numerical Methods I (graduate)	Fall 2021
ES 123 <sup>†</sup> : Introduction to Fluid Mechanics and Transport Processes	Spring 2020
AM 205: Advanced Scientific Computing: Numerical Methods I (graduate)	Fall 2019
New York University Shanghai	Teaching Fellow
SOCS-SHU 100: Public Speaking in a Leadership Context	Fall 2017

## AWARDS AND SCHOLARSHIPS

David B. Heller Innovation Fund Fellowship <i>Harvard John A. Paulson School of Engineering and Applied Sciences</i>	2020 – 2021
Special Commendation Extraordinary Teaching in Extraordinary Times <sup>†</sup> <i>Harvard College Office of Undergraduate Education</i>	2020
Certificate of Special Distinction in Teaching <sup>†</sup> <i>Harvard Institute for Applied Computational Science</i>	2020
IACS Student Scholarship <i>Harvard Institute for Applied Computational Science</i>	2019 – 2020
Phi Beta Kappa Society <i>Beta Chapter of New York (New York University)</i>	2018
HiTime Global Scholar <i>New York University Shanghai</i>	2016 – 2017
Deans' Undergraduate Research Fund <i>New York University Shanghai</i>	2016

## SKILLS

*Languages:* C++, Python, L<sup>A</sup>T<sub>E</sub>X, MATLAB, JavaScript, C#, Processing

*Applications:* Maya, Unity3D, Arduino, Adobe After Effects / Premiere / Photoshop

*Technologies:* OpenMP, Maya API, OpenGL, p5.js, Git, Perforce, gnuplot, PySide, PS4 Dev Tools