Stephanie Wang

✉ *evast@g.ucla.edu*
🖺 *https://stephaniewang.page/*

Education

Mar 2020	**Ph.D. in Mathematics**, *UCLA*, 3.88/4, Dissertation advisor: Prof. Joseph Teran.
Jan 2013	**B.S. in Mathematics**, *National Taiwan University*, 3.64/4 *magna cum laude*.

Positions

Research experience

2020-present	**Postdoc – under Prof. Albert Chern**, *UCSD*, San Diego, CA.
	Geometry processing, physical simulation, inverse rendering, and geometry learning. Mentored students: Mohammad Sina Nabizadeh, Shiyang Jia, Chad McKell.
2019-2020	**Ph.D. Study – under Prof. Wilfrid Gangbo**, *UCLA*, Los Angeles, CA.
	Regularity theory for minimizers of polyconvex functionals related to Navier-Stokes equation.
2019 summer	**Summer Exchange – under Prof. Johan Gaume**, *EPFL*, Lausanne, Switzerland.
	Physics-based simulations, post-processing, and data analysis of snow and tire interaction and consulting at the Snow and Avalanche Simulation Laboratory.
2016-2019	**Ph.D Study – under Prof. Joseph Teran**, *UCLA*, Los Angeles, CA.
	Physics-based simulations for animation purposes using C++ programming, convex and nonconvex optimization, numerical PDEs, numerical linear algebra, parallel computing.
2013-2014	**Research Assistant – under Prof. Wen-Wei Lin**, *NCTU*, Hsinchu, Taiwan.
	Generalized eigenvalue problems using MATLAB programming.

Industry Experience

2018 summer	**Technology Intern**, *Walt Disney Animation Studio*, Burbank, CA.
	R&D for pioneering simulation technology in animated feature film, teaming with FX artists, numerical analysis, continuum mechanics, C++, HDK.

Teaching Experience

2019-2020	**Assistant Adjunct Professor / Instructor**, *UCLA Math Dept*, Los Angeles, CA.
	Taught courses: linear algebra, machine learning (remote) and multivariable calculus (remote).
2015-2020	**Teaching Assistant**, *UCLA Math Dept*, Los Angeles, CA.
	Taught course: linear algebra and intro to mathematical proofs, undergrad and grad level numerical methods, intro, intermediate, and advanced C++ programming.

Skills

Programming	C++ (Eigen, tbb, gdb, valgrind), lua, MATLAB (CVX), zsh, LaTeX, Houdini, Vim, git
Mathematics	Optimization, differential geometry, numerical and theoretical PDEs, scientific computing.
Languages	English and Mandarin Chinese - bilingual proficiency.
Hobbies	Rock climbing, hiking, and cooking

Selected Publications

○ Mohammad Sina Nabizadeh, Stephanie Wang, Ravi Ramamoorthi, and Albert Chern. Covector fluids. *ACM Trans. Graph.*, 41(4), July 2022 (project page)

○ David Palmer, Dmitriy Smirnov, Stephanie Wang, Albert Chern, and Justin Solomon. DeepCurrents: Learning implicit representations of shapes with boundaries. *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022 (CVF Open Access)

○ Stephanie Wang and Albert Chern. Computing minimal surfaces with differential forms. *ACM Trans. Graph.*, 40(4), July 2021 (ACM Digital Library)

○ Mengyuan Ding, Xuchen Han, Stephanie Wang, Theodore F. Gast, and Joseph M. Teran. A thermomechanical material point method for baking and cooking. *ACM Trans. Graph.*, 38(6), November 2019 (ACM Digital Library)

○ Stephanie Wang, Mengyuan Ding, Theodore F. Gast, Leyi Zhu, Steven Gagniere, Chenfanfu Jiang, and Joseph M. Teran. Simulation and visualization of ductile fracture with the material point method. *Proc. ACM Comput. Graph. Interact. Tech.*, 2(2), July 2019 (ACM Digital Library)