Stephanie Wang

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Education

Mar 2020 **Ph.D. in Mathematics**, *UCLA*, 3.88, Dissertation advisor: Prof. Joseph Teran.

Jan 2013 **B.S. in Mathematics**, *National Taiwan University*, 3.64 *magna cum lauda*.

Research Experience

2020-present **Postdoc – under Prof. Albert Chern**, *UCSD*, San Diego, CA.
Weird maths with applications in graphics using Houdini and python programming.

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.

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.

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.

Employment

2020 **Assistant Adjunct Professor**, *UCLA Math Dept*, Los Angeles, CA.
Teaching Math156 – Machine Learning and Math32A – Calculus of Several Variables.

2019 spring **Graduate Student Instructor**, *UCLA Math Dept*, Los Angeles, CA.
Teaching Math33A – Linear Algebra and Applications.

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

2015-2020 **Teaching Assistant**, *UCLA Math Dept*, Los Angeles, CA.
Linear algebra and intro to mathematical proofs, undergrad and grad level numerical methods, intro, intermediate, and advanced C++ programming.

Skills

Programming C++, lua, MATLAB, vim, bash, LaTeX, Houdini, git, gdb, valgrind, Eigen, tbb, CVX

Mathematics Optimization, differential equations, scientific computing, and numerical linear algebra.

Languages English and Mandarin Chinese - bilingual proficiency.

Selected Publications

Jul 2021 **Stephanie Wang** and Albert Chern, Computing Minimal Surfaces with Differential Forms, ACM Transactions on Graphics (SIGGRAPH 2021)

Nov 2019 M. Ding, X. Han, **S. Wang**, T. Gast, J. Teran, A thermomechanical material point method for baking and cooking, ACM Transactions on Graphics (SIGGRAPH Asia 2019)

Jul 2019 X. Han, T. Gast, Q. Guo, **S. Wang**, C. Jiang, J. Teran, A Hybrid Material Point Method for Frictional Contact with Diverse Materials, ACM SIGGRAPH/Eurographics Symposium on Computer Animation

Jul 2019 **S. Wang**, M. Ding, T. Gast, L. Zhu, S. Gagniere, C. Jiang, J. Teran, Simulation and Visualization of Ductile Fracture with the Material Point Method, ACM SIGGRAPH/Eurographics Symposium on Computer Animation **(Best Paper)**