Stephanie Wang

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Education

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

Jun 2016 **M.S. in Mathematics**, *UCLA*.

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

Research Experience

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.

2016-2019 **Ph.D. Study – under Prof. Joseph Teran**, *UCLA*, Los Angeles, CA.
Physics-based simulations for animation purposes. C++, convex and nonconvex optimization, numerical PDEs, numerical linear algebra, multithreading.

2013-2014 **Research Assistantship – under Prof. Wen-Wei Lin**, *NCTU*, Hsinchu, Taiwan.

Employment

2020-present **Assistant Adjunct Professor**, *UCLA Math Dept*, Los Angeles, CA.
Teaching Math156 – Machine Learning.

2019 spring **Principal Instructor**, *UCLA Math Dept*, Los Angeles, CA.
Teaching Math 33A – 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.

2014 summer **Course Organizer**, *2014 Formosan Summer School on Logic, Language, and Computation*.

Awards and Prizes

Jul 2019 **Best Paper Award**, *ACM SIGGRAPH/Eurographics Symposium on Computer Animation (SCA) 2019*.

Sep 2014 **Eugene V. Cota-Robles Fellowship**, *UCLA*.

Jun 2013 **Dean's Award of College of Science**, *National Taiwan University*.

Aug 2012 **Bronze Medal**, *S.T. Yau College Student Mathematics Contest*.
3rd place in Applied and Computational Mathematics.

Publications

Mar 2020 **Stephanie Wang**, A Material Point Method for Elastoplasticity with Ductile Fracture and Frictional Contact, Doctoral Dissertation, UCLA.

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 (PACM-CGIT) **(Best Paper Awardee)**

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 (PACM-CGIT)

Aug 2019 J. Carlen, J. Pont, C. Mentus, S. Chang, **S. Wang**, M. Porter, Role Detection in Bicycle-Sharing Networks Using Multilayer Stochastic Block Models, arXiv:1908.09440

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)

Services

2018-2020 **President**, *Mathematics Graduate Student Organization, UCLA*.
Coordinate social and academic events and liaise with math faculty and administration representing the math graduate students.

2017-2020 **Creator**, *Women in Math Mentorship Program, UCLA*.
Secure fundings, coordinate regular mixers for undergraduate and graduate fellows to increase connection, awareness and mentorship.

2017-2020 **Math Dept Representative**, *Mathematical and Physical Sciences Student Council, UCLA*.
Student rights advocacy and cross-departmental social events planning.

2016-2018 **Cheif Organizer**, *Women in Math, UCLA*.
Organize social and volunteering events and advocate for women in math dept.

2016-2018 **Fellow Mentor**, *California Teach, UCLA*.

2012-2013 **Vice President**, *Lambda Club, National Taiwan University*.

2015-2020 **Volunteer**, *AWiSE STEM Day*.

2017-2020 **Volunteer**, *Explore Your Universe, UCLA*.

Skills

Languages English – full proficiency; Mandarin Chinese – native

Programming C++, lua, MATLAB, vim, bash, zsh, LaTeX

Tools Houdini, HDK, git, gdb, valgrind, Eigen, tbb, CVX

Mathematics Extensive coursework in differential equations, optimization theory, numerical methods, and numerical linear algebra.