

Lijing Wang

CONTACT INFORMATION	367 Panama St Stanford, CA 94305	(650) 644-5089 lijing52@stanford.edu
RESEARCH INTERESTS	Bayesian Inversion, Uncertainty Quantification, Computer Vision in Geosciences	
EDUCATION	Stanford University , Stanford, CA	
	Ph.D. in Geological Sciences, advised by Prof. Jef Caers.	Sep 2017 - present
	Peking University , Beijing, China	
	B.S. in Space Physics	Jul 2017
	B.S. in Applied Mathematics	Jul 2017
	Hong Kong University of Science and Technology , Hong Kong, China	
	Exchange program in Physics with full-tuition scholarship	Dec 2014
RESEARCH EXPERIENCE	Ph.D. Candidate, Stanford University (Stanford, CA)	Sep 2017 - present
	<ul style="list-style-type: none">Stanford Data Science Scholar at Stanford Data Science Institute, 2020 - 2022 cohortPh.D. candidate at Stanford Center for Earth Resources Forecasting	
	Main projects: <ul style="list-style-type: none">3D geomodeling using computer vision methods (unsupervised, semi-supervised)Bayesian inference in uncertainty quantification of subsurface	
	Other projects: <ul style="list-style-type: none">Covid-19 Serology Study Design and ExplorationSemantic segmentation of crop type in AfricaLandslides susceptibility assessment and auto landslides detection in CaliforniaExplainable Bayesian multi-modal meta learning: quantify uncertainty of subsurface structures	
	Data Science Intern, Total E&P Research and Technology (Sunnyvale, CA)	Jun 2020 - Sep 2020
	<ul style="list-style-type: none">AI & Geosciences Program: based in Google Cloud Advanced Solutions LabDeveloped a semi-supervised learning framework to optimize geophysical data interpretation with limit labelsActive Learning to aid experts' geophysical interpretation	
	Guest Ph.D., Hydrogeophysics Group, Aarhus University (Aarhus, Denmark)	Jun 2019 - Aug 2019
	<ul style="list-style-type: none">3D modeling of geological structures given towed electromagnetic (tTEM) surveys: uncertainty assessment and quantification.	
	Research Assistant, Peking University (Beijing, China)	Jun 2016 - Apr 2017
	<ul style="list-style-type: none">Detecting the air pollution level (PM2.5) in Beijing using crowd-sourcing photosPrecision Medicine: Drug Sensitivity Prediction	

Research Intern, Stanford University (Stanford, CA) Jun 2016 - Sep 2016

- Functional Data Analysis with incomplete production data in unconventional reservoirs.

Research Intern, University of California, Berkeley (Berkeley, CA) Jun 2015 - Sep 2015

- Urban foraging's contribution to nutrition: correlation between urban foraging knowledge and demographic variables

JOURNAL
PUBLICATIONS

Wang, L., Peeters, L., MacKie, E.J., Caers, J., Quantifying Uncertainty of Non-Stationary Geological Interfaces: Metropolis-Hasting Sampling of Implicit Level Sets, 2021 (in preparation)

Wang, L., Scheidt, C., Pra, A., Pontiggia, M., Caers, J., A joint Bayesian approach to volume average linear inverse problem for global and spatial variables, 2021 (in preparation)

Wang, L., Joncour, F., Barrallon, P., Harribey, T., Chatterjee, C., Castanie L., Yousfi S., Guillon S., Semi-supervised semantic segmentation for seismic interpretation, 2021 (in preparation,)

Johnston, E., Davenport, F., **Wang, L.**, Caers, J., Muthukrishnan, S., Burke, M., Dikkenbaugh, N., Quantifying the influence of precipitation intensity on landslide hazard in urbanized and non-urbanized areas, 2021 (in submission)

Li, Q., **Wang, L.**, Perzan, Z., Caers, J., Brown G., Bargar, J., Maher K., Global sensitivity analysis of a reactive transport model for mineral scale formation during hydraulic fracturing, *Environmental Engineering Science*, 2021

CONFERENCE
PUBLICATIONS

M Rustowicz, R., Cheong, R., **Wang, L.**, Ermon, S., Burke, M., Lobell, D. , Semantic segmentation of crop type in Africa: A novel dataset and analysis of deep learning methods, *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops*, 2019

PRESENTATION AND
POSTER

Wang, L., Vilhelmsen, T. N., Caers, J., Local decision making through understanding of multi-scale uncertainty: Application to well catchment protections in Denmark, oral presentation, *Computational Methods in Water Resources* (CMWR 2020)

Wang, L., Peeters, L., Caers, J.,, Uncertainty assessment of hydrogeological structures combining geophysical survey and geological knowledge: A stochastic level set optimization framework, *American Geophysical Union*, oral presentation, Fall Meeting 2020

Wang, L., Vilhelmsen, T. N., Caers, J., Direct forecasting of local hydraulic conductivity using combined geophysical and hydrological data: Application to well catchment predictions in Danish aquifer system, *American Geophysical Union*, Fall Meeting 2019

Wang, L., Vilhelmsen, T. N., Caers, J., Joint Uncertainty Quantification on Spatial and Global Hydrogeological Models: An Application to Danish Groundwater Management, *American Geophysical Union*, Fall Meeting 2018

Johnston, E. C., Caers, J., **Wang, L.**, Davenport, F. V., Muthukrishnan, S., Dikkenbaugh, N. S., Multi-scale signatures of climate change on landslide susceptibility: a

case study for the Pacific Coast of the United States, *American Geophysical Union*, Fall Meeting 2018

Wang, L., Grujic, O., Caers, J., Reconstruction and Forecasting Oil Rates Using Functional Data Analysis and Universal Co-Kriging, *NGI Industrial Affiliates Meeting*, oral presentation, Stanford University, 2017

Wang, L., Yao, Y., Tang, Y., A Statistical Learning Approach for Drug Sensitivity Prediction with Cancer Cell Line Data, *Data Science and Computational Precision Health*, 2017

Wang, L., Grujic, O., Caers, J., Statistical Learning on Incomplete Production Profiles of Unconventional Reservoirs, *NGI Industrial Affiliates Meeting*, Stanford University, 2016

TEACHING AND MENTORING	• Data Science for Social Good Program	Spring 2021 - now
	Technical mentor	Stanford Data Science Institute
	• GEOLSCI 6: Data Science for Geoscience	Winter 2021
	Co-designer/Teaching Assistant	Stanford University
SERVICE	• GEOLSCI 240: Data Science for Geoscience	Winter 2019
	Teaching Assistant	Stanford University
	• Data Analysis and Business Value	Spring 2017
	Teaching Assistant	Peking University
HONORS AND AWARDS	Co-president in Association of Chinese Students and Scholars at Stanford	2019-2020
	Student Organizing Committee, Women in Data Science @ Stanford Earth	2019
	Stanford Data Science Scholars Program Fellowship	2020-2022
	GS Travel Fund 2021	2020
	Harriet Benson Fellowship Award	2020
	2nd Prize in Stanford Big Earth Hackathon	2018
	Meritorious in COMAP's Mathematical Contest in Modeling	2016
	Houston BAA Scholarship	2016
TECHNICAL SKILLS	Guanghua Scholarship	2014, 2015
	Dean's list in School of Science, HKUST	2014
	Languages: Python, R, MATLAB, C/C++	
	Deep Learning Framework: TensorFlow, Keras	
	Other Software: L ^A T _E X, Jupyter, Google Cloud Platform	