

Zhongjian Wang

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Personal Information

Sex: Male

Birth: November, 1992 @ Anshan, Liaoning, China

Language: Native Mandarin Speaker, Fluency in English

Education

Department of Mathematics, the University of Hong Kong <i>Ph.D. Candidate</i> Supervisor: Dr. Zhang Zhiwen, Expected Date of Graduation: 08/2020	Hong Kong 2016–now
Department of Mathematical Sciences, Tsinghua University <i>Bachelor of Science</i>	Beijing 2012–2016

Interested Field

Uncertainty Quantification
Numerical Methods for SDEs and SPDEs
Structure Preserving Methods

Experience

Awards.....

Department of Mathematics, HKU <i>Doris Chen Postgraduate Travel Grant</i>	Hong Kong 2019
Society for Industrial and Applied Mathematics <i>Student Travel Award for CSE19</i>	Spokane 2019
Faculty of Science, HKU <i>Pilot Scheme on International Experience</i>	Hong Kong 2018
Institute for Pure & Applied Mathematics, UCLA <i>IPAM Student Travel Support</i>	Los Angeles 2017
Research Grants Council <i>Hong Kong Ph.D. Fellowship</i>	Hong Kong 2016
China Mathematics Olympiad <i>Gold Medalist, Chinese Mathematical Society CMO Committee</i>	Xi'an 2012
Vocational.....	
Tsinghua University <i>Visiting Ph.D. Student</i> Supervised by Professor Steven Shing Tung Yau	Beijing 2018.11–19.1
California Institute of Technology <i>Visiting Ph.D. Student</i> Supervised by Professor Thomas Hou	Pasadena 2018.4–5
Ecole Normale Supérieure <i>Exchange Student</i> For Bachelor Thesis, supervised by Professor Espen Robstad Jakobsen	Paris 2016.1–6

University of Oxford **Oxford**
Visitor 2013.7
Tsinghua University Distinguished Newcomer Student Leadership Program

Conference.....

The 8th International Congress of Chinese Mathematicians (ICCM 2019) **Beijing**
Speaker 2019.6

SIAM Conference on Computational Science and Engineering (CSE19) **Spokane**
Poster 2019.2

Big Data Challenges for Predictive Modeling of Complex Systems **Hong Kong**
Poster 2018.11

The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications **Taipei**
Poster 2018.7

IPAM Workshop IV of Complex High-Dimensional Energy Landscape **Los Angeles**
Poster 2017.11

Participant: (2019) ANMSC2019, Shenzhen. (2018) SIAM UQ18, Garden Grove. (2017) ICCP10, Macau. Tsinghua workshop on SPDE and UQ, Beijing. SIAM CSE17, Atlanta.

Teaching.....

Certificate: I was awarded the Certificate of Teaching and Learning in Higher Education from HKU Center of the Enhancement of Teaching and Learning in 2016.

18/19 Spring: Tutor of MATH4602 Scientific computing.

18/19 Winter: Tutor of MATH3601 Numerical analysis.

17/18 Spring: Tutor of MATH2014 Multivariable calculus and linear algebra.

17/18 Winter: Tutor of MATH1009 Basic mathematics for business and economics.

Publications

Accepted and Submitted.....

2018: Wang, Z., Xin, J., & Zhang, Z. Computing Effective Diffusivity of Chaotic and Stochastic Flows Using Structure-Preserving Schemes. *SIAM Journal on Numerical Analysis*, 56(4), 2322-2344.

2018: Wang, Z. Luo, X., Yau, S. S. T., Zhang, Z. Proper orthogonal decomposition method to nonlinear filtering problems in medium-high dimension, *IEEE Transactions on Automatic Control*, doi:10.1109/TAC.2019.2927322.

2019: Sharp uniform in time error estimate on a stochastic structure-preserving Lagrangian method and computation of effective diffusivity in 3D chaotic flows (*Submitted, with Xin, J., Zhang, Z.*)

2019: A new meshfree method for PDE with discontinuous coefficients using the deep learning approach (*Submitted, with Zhang, Z.*)

In preparation.....

2019: Computation of effective diffusivities in time dependent ABC flow (*with Xin, J., Zhang, Z.*)

2019: Convergence of stochastic structure-preserving schemes for computing effective diffusivity in random flows (*with Lyu, J., Xin, J., Zhang, Z.*)

2019: Tensor train method for high-dimensional nonlinear filtering problems (*with Li, S., Yau, S. S. T., Zhang, Z.*)

2019: A class of robust numerical methods for solving dynamical systems with multiple time scales (*with T. Hou, Zhang, Z.*)

Miscellaneous

Service: Postgraduate student representative and member of adviosry committe of Lap-Chee College (LCC), HKU (18/19). Team leader of LCC High Table subcommittee.

Sports: Football lover, founder of CSSA football team in HKU. Kayak beginner, holder of the Kayak 3 Star Award from LCSD HK.

Future: I am seeking an industrial/researching position in 2020. Thanks to the merit from my supervisor Dr. Zhiwen Zhang and Hong Kong PhD Fellowship, I will attend ICIAM 2019 and SIAM UQ20.