Lizhong Chen

Contact Information

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Research interests

Bioinformatics: limma, edgeR;   Generalized linear model;   Model selection;   Model averaging;   Dimensional reduction;   High dimensional data.

Employment

03/2022 - Present	**Walter and Eliza Hall Institute of Medical Research (WEHI)** Research Officer at the Bioinformatics Division Supervisor: Prof. Gordon K Smyth

Education

02/2017 - 02/2022	**The University of Melbourne** Doctor of Philosophy (PhD) in Statistics Supervisors: A/Prof. Guoqi Qian, Prof. Yuriy Kuleshov, Dr Tingjin Chu Thesis: Model selection and averaging by Gibbs sampler with a tropical cyclone seasonal forecasting application
09/2013 – 07/2016	**Peking University** Master of Science (M.S.) in Mathematics Mentor: Prof. Houhong Fan Thesis: A Report on Computations of Cohomology Rings and Homotopy Groups of Lie Groups
09/2009 – 06/2013	**Peking University** Bachelor of Science (B.S.) in Mathematics Mentor: Prof. Houhong Fan

Honors and scholarships

2017	Melbourne Research Scholarship (The University of Melbourne).
2016	Outstanding Graduate of Beijing
2016	Outstanding Graduate of Peking University
2015	Guanghua Scholarship (Peking University)
2014	National Scholarship (Peking University)
2009	Second-Class Freshmen Scholarship (Peking University)

Publications

Variable selection in high dimensional data using Gibbs sampler
with Guoqi Qian, in preparation.

Model averaging in high dimensional data via Gibbs sampler
with Guoqi Qian, Tingjin Chu, in preparation.

Variable selection via ridge estimate using a hybrid Gibbs sampler
with Guoqi Qian, in preparation.

Improving the seasonal tropical cyclone forecast in Australian and south Pacific ocean regions by model selection and model averaging methods based on Gibbs sampling
with Guoqi Qian, Yuriy Kuleshov, in preparation.

A sliced inverse regression approach to the tropical cyclone seasonal forecasting
with Guoqi Qian, Yuriy Kuleshov, in preparation.

Talks and Presentations

08/2022	**From goodness-of-fit test to Quasi-F test: application to edgeR** Bioinformatic division seminar, WEHI

Teaching experiences

07/2017 - 02/2022	**Tutor, The University of Melbourne** Linear Algebra, Accelerated Mathematics I/II, Complex Analysis, Multivariate Statistical Techniques
07/2018 - 07/2021	**Assignment and Exam Marker, The University of Melbourne** Statistical Modelling, Mathematical statistics,

09/2013 - 07/2016	**Teaching assistant, Peking University**
	Mathematical analysis I/II, Calculus I, Advanced algebra I.

Referee services

2022	**Applied mathematical modelling**

Technical skills

Programming languages
Proficient in: R language
Familiar with: Python, C++

R Package: IBGS (Iterated Blockwise Gibbs Sampler)
https://github.com/Kaukol/IBGS