

# Lizhong Chen

## Contact Information

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## Research interests

Bioinformatics: limma, edgeR; Model selection; Model averaging; Dimension reduction; High dimensional data.

## Employment

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

## Education

02/2017 - **The University of Melbourne**  
02/2022 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 - **Peking University**  
07/2016 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 - **Peking University**  
06/2013 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.

## Teaching experience

07/2017 - 02/2022	<b>Tutor, The University of Melbourne</b> Linear Algebra, Accelerated Mathematics I/II, Complex Analysis, Multivariate Statistical Techniques
07/2018 - 07/2021	<b>Assignment and Exam Marker, The University of Melbourne</b> Statistical Modelling, Mathematical statistics,
09/2013 - 07/2016	<b>Teaching assistant, Peking University</b> Mathematical analysis I/II, Calculus I, Advanced algebra I.

## Technical skills

### **Programming languages**

Proficient in: R language

Familiar with: Python

**R Package:** IBGS(Iterated Blockwise Gibbs Sampler)

<https://github.com/Kaukol/IBGS>