

Dechao Tian

PHONE (1) 412 583-6800 dechaot@andrew.cmu.edu

An enthusiast of statistics and data science, hold a doctor's degree in statistics, have rich experience of applying various statistical models and machine learning algorithms.

PROFESSIONAL EXPERIENCE

CARNEGIE MELLON UNIVERSITY, USA

Postdoctoral Research Associate, 2015 - Present

- Computational Biology Department, Ma Laboratory - Computational Genomics: research on regulatory network, systems biology, and 3D chromatin organization
- Yes

NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE

Research Assistant, 2014 - 2015

- Develop model to identify essential genes by network motifs in regulatory networks

SINGAPORE EYE RESEARCH INSTITUTE (SERI), SINGAPORE

Part-Time Statistician, 2011 - 2015

- Provide statistical analysis and consultation for Proteomics & Microanalysis Laboratory
- Collaborate with other members from SERI

EDUCATION

NATIONAL UNIVERSITY OF SINGAPORE, SINGAPORE

Ph.D. in Statistics and Applied Probability, 2010 - 2015

NORTHEAST NORMAL UNIVERSITY, CHINA

M.S. in Probability and Mathematical Statistics, 2009 - 2011

NORTHEAST NORMAL UNIVERSITY, CHINA

B.S. in Mathematics and Applied Mathematics, 2005 - 2009

PUBLICATIONS

12. MOCHI enables discovery of heterogeneous interactome modules in cell nucleus. Submitted.
11. Diffdomains: model-based identification of significantly reshaped chromatin domains from Hi-C contact matrices between normal and disease conditions. In Preparation.
10. Exploiting the interplay between chromatin interactome and transcriptional regulatory network. In Preparation.
9. Identifying gene regulatory network rewiring using latent differential graphical models. Nucleic Acids Research.

8. Retinal vein occlusion in a multi-ethnic asian population: the singapore epidemiology of eye disease study. Ophthalmic Epidemiology.
7. Plasma metabonomic profiling of diabetic retinopathy. Diabetes.
6. Ex vivo propagation of human corneal stromal “activated keratocytes” for tissue engineering. Cell Transplantation.
5. Global metabonomic and proteomic analysis of human conjunctival epithelial cells (IOBA-NHC) in response to hyperosmotic stress. Journal of Proteome Research.
4. Quantitation of 47 human tear proteins using high resolution multiple reaction monitoring (HR-MRM) based-mass spectrometry. Journal of Proteomics.
3. Profiling human cell-type specific transcription factor regulatory networks. Nucleic Acids Research.
2. Involvement of GABA transporters in atropine-treated myopic retina as revealed by iTRAQ quantitative proteomics. Journal of Proteome Research.
1. Sharp bounds and normalization of wiener-type indices. PLOS ONE.

TEACHING ASSISTANT

ST1131 Introduction to Statistics
 ST1232 Statistics for Life Science
 ST2131 Probability

SKILLS

Programming (Most used first), R, Python, Unix/Linux bash script command, SAS
Bioinformatics tools & databases, MEME Suite, bedtools, jucier, UCSC Genome Browser, ENCODE, TCGA
Language, English (using it as daily and working language for 8 years), Chinese (native)

CERTIFICATE

1. Base Programmer for SAS 9