

# CHENG LYU

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## EDUCATION

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### Emory University

Aug. 2018 - present

- Ph.D. student in Biostatistics, Dept. of Biostatistics and Bioinformatics
- Advisor: Prof. Yijian (Eugene) Huang

### Washington University in St. Louis

June 2016 - Dec. 2017

- Master of Science in Biostatistics, Division of Biostatistics

### Nanjing University

Sept. 2012 - June 2016

- Bachelor of Science in Computational and Applied Mathematics
- Minor in Statistics, Department of Math

## PROFESSIONAL EXPERIENCE

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### Washington University, Dept. of Developmental Biology

Jan. 2018 - July 2018

Bioinformatician

St. Louis, MO

- Designed and constructed a quality control and analysis pipeline of ATAC-seq and RNA-seq data for TaRGET II consortium funded by NIEHS, taking charge of R scripts, python scripts and Dockerfile.

## PUBLICATIONS AND PREPRINTS

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### Statistical Methodology

1. Cai Q<sup>\$</sup>, Lyu C<sup>\$</sup>, Bai Y, Alvarez JA, Kang J, Yu T. *A New Framework for Selecting Network Mediators from Omics Data*. In preparation.
2. Liu S<sup>\$</sup>, Li D<sup>\$</sup>, Lyu C<sup>\$</sup>, Gontarz P, Miao B, Madden P, Wang T, Zhang B. *Improving ATAC-seq Data Analysis with AIAP, a Quality Control and Integrative Analysis Package*. Revision submitted.
3. Liu J, **Lyu C**, James AS, Colditz GA. *Sample size calculation using generalized estimating equation models in stepped wedge designs*. Under review.
4. Liu J, **Lyu C**, Hagan JE, Lawrence SJ. *Outlier detection of length of hospital stay*. Under review.

<sup>\$</sup> These authors contributed equally to this work.

### Collaorative

1. Miao B, Fu S, **Lyu C**, Gontarz P, Wang T, Zhang B (2020) *Tissue-specific usage of transposable element-derived promoters in mouse development*. **Genome Biology** 21, 255.
2. Surface L, Burrow D, Li J, Park J, Kumar S, **Lyu C**, Song N, Yu Z, Rajagopal A, Bae Y, Lee B, Mumm S, Gu C, Baker J, Mohseni M, Sum M, Huskey M, Duan S, Bijanki V, Civitelli R, Gardner M, McAndrew C, Ricci W, Gurnett C, Diemer K, Wan F, Costantino C, Shannon K, Raje N, Dodson T, Haber D, Carette J, Varadarajan M, Brummelkamp T, Birsoy K, Sabatini D, Haller G, Peterson T (2020) *ATRAID, a genetic factor that regulates the action of nitrogen-containing bisphosphonates on bone*. **Science Translational Medicine** Volume 12, Issue 554.
3. Davis JL, Cox L, Shao C, **Lyu C**, Liu S, Aurora R, Veis DJ (2019) *Conditional Activation of NF- $\kappa$ B Inducing Kinase (NIK) in the Osteolineage Enhances Both Basal and Loading-Induced Bone Formation*. **Journal of Bone and Mineral Research** Volume 34, Issue 11.

## TEACHING EXPERIENCE

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### Teaching Assistant

- BIOS 508: Introduction to Categorical Data Analysis, by Prof. Michael Haber, Fall 2019.
- BIOS 509: Applied Linear Models, by Prof. Bob Lyles, Spring 2020.
- BIOS 580: Statistical Practice I, by Prof. Renée H. Moore and Christina Mehta, Fall 2020.

## AWARDS

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**WU Scholarship and Grants**, Washington University *2016 - 2017*  
*This award is for top incoming master students.*

**People's Scholarship**, Nanjing University *2013 - 2015*

## COMPUTATIONAL SKILLS

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<b>Programming Languages</b>	R, Python, SAS, C++, bash
<b>Protocols &amp; APIs</b>	XML, JSON
<b>Databases</b>	MySQL, Microsoft SQL