


Master's Student Research in the Ochoa Lab

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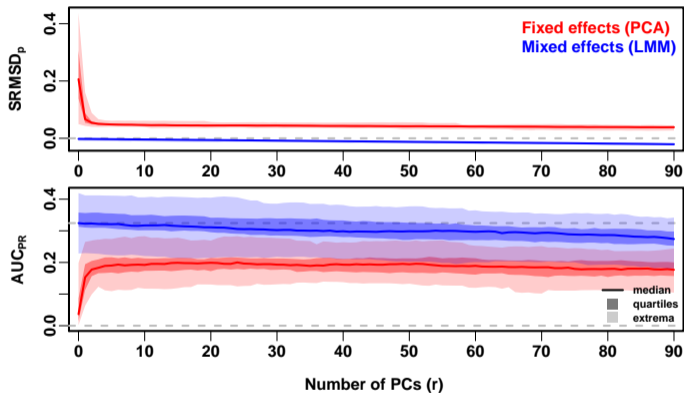
2021-02-19 — Master of Biostatistics Virtual Visit Day

Principal components vs mixed effects in genetic association



Yiqi Yao
MB 2020

Now: IQVIA in Beijing



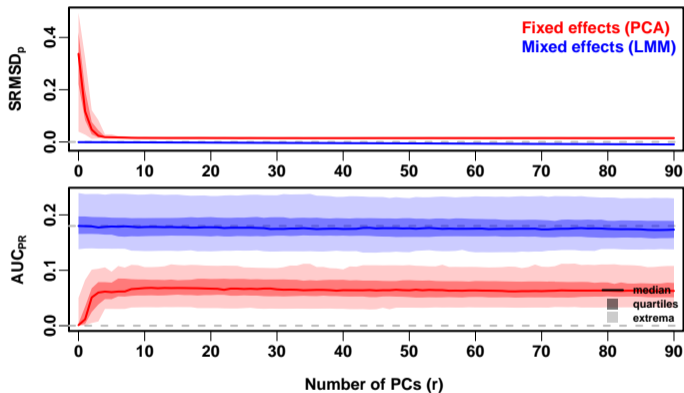
Simulated admixture + family structure

Principal components vs mixed effects in genetic association



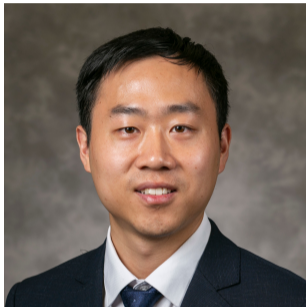
Yiqi Yao
MB 2020

Now: IQVIA in Beijing

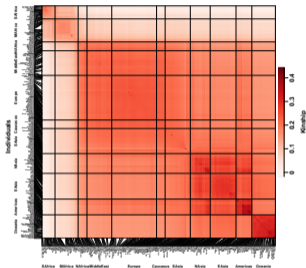


1000 Genomes Project

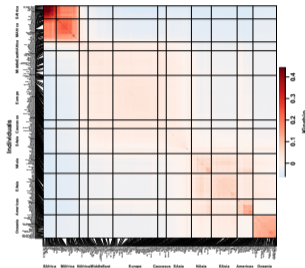
Kinship bias does not affect genetic associations



Zhuoran Hou
MB 2021
Admitted to PhD



New popkin
kinship estimator



Standard
kinship estimator

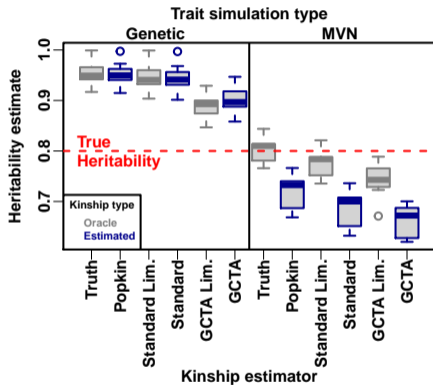
Kinship bias affects heritability estimation



Zhuoran Hou

MB 2021

Admitted to PhD



Tuning elastic nets for genetic association



Jiajie Shen
MB 2022

$$\hat{\beta} \equiv \underset{\beta}{\operatorname{argmin}}(\|y - X\beta\|^2 + \lambda_2\|\beta\|^2 + \lambda_1\|\beta\|_1).$$

- ▶ Validate existing PCA extension
- ▶ How to model higher-dimensional relatedness?

Acknowledgments

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