## FLORIDA STATE UNIVERSITY COLLEGE OF ARTS AND SCIENCE

## NOVEL METHODS IN TRANSCRIPTOME-WIDE ASSOCIATION STUDY

By

## ZICHEN ZHANG

A Dissertation submitted to the Department of Statistics in partial fulfillment of the requirements for the degree of Doctor of Philosophy

2023

Zichen Zhang defended this dissertation on July 17, 2023.  The members of the supervisory committee were:	
	Jonathan R. Bradley
	Professor Directing Dissertation
	Richard S. Nowakowski
	University Representative
	Hongyuan Cao
	Committee Member
	Xufeng Niu
	Committee Member
The Graduate School has verified and approved the above-named committee members, and certifies that the dissertation has been approved in accordance with university requirements.	