

FLORIDA STATE UNIVERSITY  
COLLEGE OF ARTS AND SCIENCE

MASS CONSERVING HAMILTONIAN-STRUCTURE-PRESERVING REDUCED ORDER  
MODELING FOR THE ROTATING SHALLOW WATER EQUATIONS DISCRETIZED BY A  
MIMETIC SPATIAL SCHEME

By

K. CHAD SOCKWELL

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

2019

K. Chad Sockwell defended this dissertation on May 16, 2019.  
The members of the supervisory committee were:

Max Gunzburger  
Professor Directing Dissertation

Horst Wahl  
University Representative

Janet Peterson  
Committee Member

Bryan Quaife  
Committee Member

Chen Huang  
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.