Contents

Summary 10

Chapter 1: A general introduction. 20

Chapter 2: Seasonal and eddy imprints on planktonic foraminifera in the Mozambique Channel. 38

Chapter 3: Anti-cyclonic eddy imprint on calcite geochemistry of several planktonic foraminiferal species in the Mozambique Channel. 70

Chapter 4: Reconciling single chamber Mg/Ca with whole shell δ¹⁸O in surface to deep dwelling planktonic foraminifera from the Mozambique Channel. 98

Chapter 5: Profiling planktonic foraminiferal crust formation. 132

Chapter 6: Synthesis. 166

References 180

Acknowledgements 216

CV 220

Appendix 224