

UNIVERSITY COLLEGE CORK

DEPARTMENT OF COMPUTER SCIENCE

FINAL-YEAR PROJECT  
BSc IN COMPUTER SCIENCE

# Implementing and Augmenting New Distributed and Parallel Algorithms

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Completed in collaboration with MIT

April 2017

# Abstract

Large scale distributed storage systems can emulate fault-tolerant atomic storage in a variety of ways. The ABD algorithm uses a replication-based approach to this problem, incurring high storage costs to ensure resiliency, while the SODA<sub>w</sub> algorithm implements erasure codes to drastically lower this storage cost. This paper will present these two algorithms and will use new experimental data to compare their performances and subsequent costs.

# Acknowledgements

I would like to thank Prof. Michel Schellekens, UCC, and Prof. Muriel Médard, MIT, for their support during the course of this project. I would also like to thank Kishori M. Konwar, MIT, and Prakash N., MIT, for answering my questions and supporting this research. Thank you to Prof. Cormac Sreenan, UCC, for facilitating the collaboration between UCC and MIT. Thanks also to my family for supporting me during my studies, allowing me to complete this project.

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# Chapter 1

## Introduction

Testing123. Attiya et al. (1995).

# Bibliography

Attiya, H., Bar-Noy, A. and Dolev, D., 1995. Sharing memory robustly in message-passing systems. *Journal of the ACM (JACM)*, 42(1), 124–142.