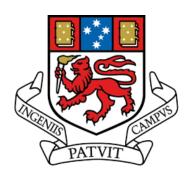
Improved monitoring of ecosystem resilience using high-resolution remote sensing

by

Laura Natali Sotomayor, MITS (Hons)

Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in Geomatic Engineering

School of Geography, Planning and Spatial Science



University of Tasmania ${\bf August,\ 2022}$

This thesis contains no material which has been accepted for the award of any other degree or diploma in any tertiary institution, and to my knowledge and belief, this thesis contains no material previously published or written by another person except where due reference is made in the text of the thesis.

Abstract

Acknowledgements

Dr. Arko Lucieer (Head of School, Geography, Planning, and Spatial Sciences, University of Tasmania), Dr. Bethany Melville (Lecturer in Spatial Sciences)

Contents

Ι	Deriving fractional cover from drone multispectral	_	
ar	nd lidar data	7	
1	Introduction	8	
	1.1 Context	8	
2	Literature Review	9	
3	Conclusion	10	
II	Structure properties derived from drone lidar data	11	
1	Introduction	12	
	1.1 Context	12	
2	Literature Review	13	
3	Conclusion	14	
Re	eferences	15	
Aj	Appendices		

Α	Supplementary Information	16
В	Project Scripts	18

Part I

Deriving fractional cover from drone multispectral and lidar data

Introduction

1.1 Context

Literature Review

Conclusion

Part II

Structure properties derived from drone lidar data

Introduction

1.1 Context

Literature Review

Conclusion

References

Appendices

A Supplementary Information

A.1 Edaphic variables

Geology structure by site

Bins

Soil classification by site

Bins

B Project Scripts

The project scripts are available online at https://github.com/LNSOTOM/forestGISML. The scripts are written in Python 3.8.