INTER-UNIVERSTITY CENTRE OF ASTRONOMY AND ASTROPHYSICS



Interplay of galaxy formation and the evolution of dark matter haloes in the cosmic web

A thesis submitted in partial fulfillment for the degree of Doctor of Philosophy

by

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supervised by

Prof. Aseem Paranjape

in the

April 2024

Declaration of Authorship

I, Premvijay Velmani, declare that this thesis titled, 'Interplay of galaxy formation and the evolution of dark matter haloes in the cosmic web' and the work presented in it are my own. I confirm that:

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- Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated.
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- I have acknowledged all main sources of help.
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Abstract

Inter-University Centre of Astronomy and Astrophysics

Doctor of Philosophy

by Premvijay Velmani

The Thesis Abstract is written here (and usually kept to just this page). The page is kept centered vertically so can expand into the blank space above the title too...

Acknowledgements

The acknowledgements and the people to thank go here, don't forget to include your project advisor...

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Abbreviations

LAH List Abbreviations Here

Physical Constants

Speed of Light $c = 2.997 924 58 \times 10^8 \text{ ms}^{-8} \text{ (exact)}$

Symbols

a distance m

P power W (Js⁻¹)

 ω angular frequency rads⁻¹

For/Dedicated to/To my...

Chapter 1

Introduction

- 1.1 Quasi-adiabatic relaxation
- 1.2 Self-similar relaxation

Appendix A

An Appendix

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Symbols 3

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Bibliography