Unveiling the planet formation and evolution with dynamics

Proefschrift

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus *prof.dr. xx xx*,
volgens besluit van het college voor promoties
te verdedigen op *xxday xx juni 2026*
klokke *time* uur

door

Shuo Huang
geboren te *Hefei, China*
in *1998*

Promotor:	Prof. dr. Simon Portegies Zwart	
Co-promotor:	Prof. dr. Chris Ormel	(Tsinghua University)
Promotiecommissie:	Dr. M. Ember	
	Dr. E.X. Ternal	(University of Furniture, Narnia)

Funding note.

Backcover: *cover attribution*

Contents

Contents

Chapter 1

Introduction

1.1 Background

1.2 Research Questions

RQ1 Where do we come from?

Dust.

RQ2 Where are we going?

Dust.

1.3 Contributions of this Thesis

Good works included here.

1.4 Other Work by the Author

Other good works.

Chapter 2

Preliminaries

Definition 2.1 (42)**.** The answer to Life, the Universe and Everything

Definition 2.2 (PhD Thesis)**.** This document is one

Chapter 3

When, where, and how many exoplanets end up in orbital resonances?

3.1 Resonance trapping

3.2 Some statistics

Chapter 4

The dynamics of the special resonance chain systems and their formation: TRAPPIST-1

Something good.

Chapter 5

The dynamics of the broken resonance chain systems and their formation: the Solar System

Something good.

Chapter 6

Birth stellar cluster dynamics matters: planet population synthesis with external photo-evaporation

Something good with cluster

Chapter 7

ALMA signature of closing-spaced pebble-accreting protoplanets in Transition disks

Something good with protoplanet disks

Chapter 8

Conclusions

8.1 Summary

Chapter 1 gave a high level introduction to the topic of study in this thesis.

Chapter 2 then provided a starting point to this study by introducing key concepts used throughout the thesis. Specifically, it covered ... Finally, it covered the main application domain of this work: ...

Chapter 3 introduced ... in response to the first research question:

> *RQ1 How can ...*

Chapter 4 ...

Samenvatting

In dit proefschrift (getiteld: *titel*) is onderzocht hoe ...

Curriculum Vitae

1 paragraph CV

Glossary

PhD thesis

The collection of scientific work of an individual after completing their Master's degree to apply for a doctorate

real space / the space of real numbers / continuous space / $\mathbb{R}^n$

The space of real vectors of dimension n

Acronyms

ACRONYM

Acronyms Cleverly Reveal One's Nimble Youthful Mastery

LIACS

Leiden Institute of Advanced Computer Science

RTFM

Read The Family-friendly Manual

Symbols

$f(\cdot)$ function

π half of τ