# Computational approaches to the topological and dynamical features of biochemical networks

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#### Abstract

This is the abstract.

#### Introduction

systems biology.

### **Objectives**

The objectives of this thesis are:

- Open a new research line within the group.
- $\bullet\,$  Own a computational framework for the analysis of the dynamics of gene regulatory networks.
- Further knowledge on the quantitative features of biochemical networks.

#### Results

- 3.1 Developmental Biology and Mathematics  $_{\mbox{\footnotesize Book chapter.}}$
- 3.2 Topology of Cellular Networks
- 3.3 Computational Tools: ByoDyn
- 3.4 Applications of ByoDyn
- 3.5 Global Optimal Experimental Design

#### Discussion

This is the discussion.

#### Conclusions

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