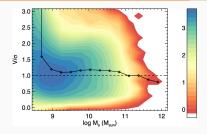
# From initial conditions to galaxies

Corentin Cadiou March 29, 2018 Introduction

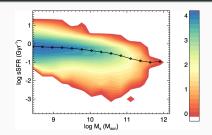
Theory

# Introduction

# Classifying galaxies

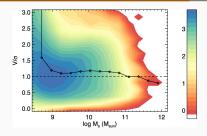


**Figure 1:**  $M \text{ vs } v/\sigma$ 

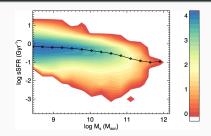


**Figure 2:**  $M \text{ vs } v/\sigma$ 

# Classifying galaxies



**Figure 1:** M vs  $v/\sigma$ 



**Figure 2:** M vs  $v/\sigma$ 

### A few parameters

- 1.  $M_{200}$
- 2. color / SFR
- 3. elliptical / spiral ?
- 4. . . .

### Dependance of the parameters

■ On space — image of H-AGN

### Dependance of the parameters

- On space image of H-AGN
- lacktriangle On z show redshift evolution / ref

#### What to do?

#### **Theory**

- (too?) simplistic
- hard to write, quick to run
- enlightening

#### **Simulation**

- "easy" to write, costly to run
- "full" physics
- not much statistics

galaxies live in an environment. . .

galaxies live in an environment. . .

... and evolve with time!

# **Theory**

## **Modeling galaxies**

