

# Information Theory

Lecture notes

## Introduction

# Organization

## Professors:

- ▶ Lectures: Nicolae Cleju
- ▶ Laboratories: Nicolae Cleju

## Grades

- ▶ Final grade =  $0.6 \text{ Exam} + 0.4 \text{ Applications during semester (Lab + Tests)}$

## Time schedule

- ▶ 14 weeks of lectures (3h each)
- ▶ 14 weeks of laboratories (2h each)
- ▶ Office hours: — (best by appointment)

# Exercises & Tests

- ▶ 3rd hour of each lecture = exercises
- ▶ There will be 2 semester tests, approximately in 5th and 10th week
  - ▶ we'll discuss the schedule during classes
- ▶ Lab: practical test in final week
- ▶ Exam: exercises & theory questions

# Course structure

1. Chapter I: Discrete Information Sources
2. Chapter II: Source Coding
3. Chapter III: Discrete Transmission Channels
4. Chapter IV: Error Control Coding

1. ***Elements of Information Theory*, Valeriu Munteanu, Daniela Tarniceriu, Ed. CERM I 2007**
2. *Elements of Information Theory*, Thomas M. Cover, Joy A. Thomas, 2nd Edition, Wiley 2006
3. *Transmisia si codarea informatiei*, lectures at ETTI (Romanian)
4. *Information and Coding Theory*, Gareth A. Jones, J. Mary Jones, Springer 2000