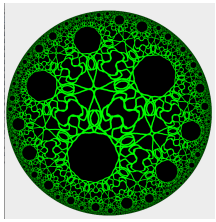
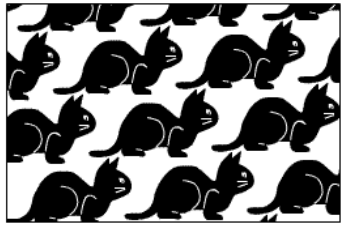
# MAT 511
# Fall 2014
# Introduction

## About me, your instructor

- Moira Chas
- Assistant Professor at the Math Department.
- PhD. in Mathematics 1998, Universitat Autonoma de Barcelona.
- MAT 132 coordinator
- Math interests: Low dimensional geometry and topology.



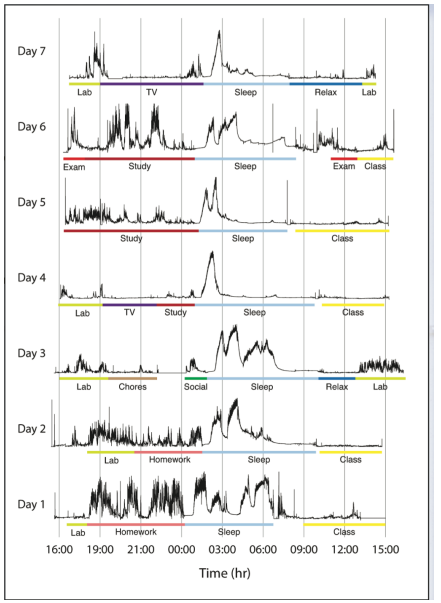


## A quotation (sometimes attributed to Mark Twain)

*"Lecturing is that mysterious process by means of which the contents of the note-book of the professor are transferred to the note-book of the student without passing through the mind of either."*

Table by Eric Mazur

Let's make brain waves in this lecture.



# Online Resources

- Course Website:
  - http://www.math.sunysb.edu/~moira/mat511-fall14/
    - Syllabus, homework schedule, exams dates, announcements, handout slides (including the one you are reading).
- Blackboard:
  - Written Homework grades

# Space, cyberspace and time coordinates

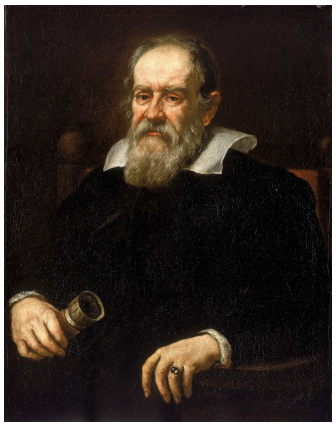
- Moira Chas
- Best way to contact me:
  - moira.chas at stonybrook.edu
- Website:
  - http://www.math.sunysb.edu/~moira/
- Office: 3-119 Math Tower
- Office hours:
  - Tu 3:30 - 5:30PM 3-119 Math Tower
  - Th : 11:45-12:45PM P-143 Math Tower.

# Course Description (from the graduate Bulletin)

Brief history of mathematics; sets, functions and logic; constructions of number systems; mathematical induction. The main focus of the course will be on the construction and writing of mathematical proofs.


Proofs
Operations with sets
Relations, partitions and functions
Cardinality

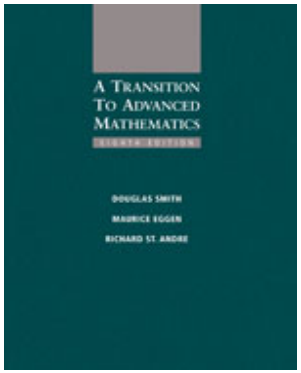
Philosophy is written in that great book which ever lies before our eyes – I mean the universe – but we cannot understand it if we do not first learn the language and grasp the symbols, in which it is written.



This book is written in the mathematical language, and the symbols are triangles, circles and other geometrical figures, without whose help it is impossible to comprehend a single word of it; without which one wanders in vain through a dark labyrinth.

Galileo Galilei

# The textbook




# Grades


- Midterm : 20 %
- Final : 40 %
- Weekly Written Homework 20 %
- Class participation:20%

Effort will always contribute but it is not the basis of the grade.

Written homework assignments are due in the second meeting of the following week

# How can you succeed in this course?

- Dedicate around 6-8 hours/wk to this course (outside the classroom). During these hours, your goal should be to **understand** the material. To do so,
  - Read the assigned sections of the textbook beforehand (with paper and pencil handy). Work on written homework
- Do not leave the homework for the last minutes before the deadline.
- Attend to lectures when you do, be *completely* in the class. (This implies no use of electronics (cell-phone, MP3 player, etc.)
- Get help if you need it, as soon as you need it.

# Homework and Exams policies

- No late homework will be accepted (unless exceptional circumstances)
- There will be no make-up exams.
- If you have a serious documented reason communicate it to me as soon as possible and the semester grade will be determined based on the balance of the work in the course.
- Any issue interfering with your course work should be communicated as early as possible.

# Homework Assignments

- You cannot learn math without working on problems.
- Expect to spend a few hours a week (between 4 and 8) working on homework.
- Start submitting homework from the beginning of the course (and don't stop until the end!).
- You should submit these problem the second meeting of this class, the following week.
- Each graded problem is worth 10 points.

# Written Homework must contain

- The statement of the problem
- An answer that is emphasized.
- In most problems if there is no work shown, there is no credit. In other words, an answer with no justification is not admissible (even if it is the correct answer!)

**Homework should by legible and written in complete English sentences.**



# Is it allowed to work in teams?

- You may discuss the assignments in this course with classmates, before working in the write-up.
- Each student's submission must be his or her own work.
- It is not allowed to browse the Internet for solutions.

# Email communications

- During the semester, I will send a few emails. Please make sure that you check the Stony Brook email account regularly.
- Messages should be appropriated written in complete English sentences.

# ACADEMIC DISHONESTY

- All work you submit for homework, final, or exams MUST be your own work.
- If you cheat or aid someone in cheating, you will automatically fail this course and be brought up on charges of academic dishonesty without warning.
- Cheat includes: presenting work of other as your own, copying other student work, facilitate that other student copies your work, use of notes, calculators and/or electronic devices during examinations.