MATH 471: Probability

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Group Advising

How do we know Probability?

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- Gambling/Lottery.
- Chance of being caught cheating in exams.
- Whenever you are not sure of something, probability is there waiting for you (for good or bad reasons)...

What is Probability (about)?

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Chance of occurrence of events.

What is the language of Probability?

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Axioms,

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Axioms, sample space,

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Axioms, sample space, events, probability measures, probability distribution functions,...

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A good number of examples with real-world motivations will be introduced throughout the course.

How Probability is used?

- **Modelling** (MATH 305) arguably *any* science phenomena when noise is taken into account.
- **Optimization** (MATH 414), e.g., featured work on Optimal Transportation by Fields medalists: Cédric Villani, Alessio Figalli.

Expectations on you

Show your interest in Probability and determination to learn it well in the HWs and exams...

Textbook: Grimmett&Welsh. **Probability: An Introduction**. 2nd ed., 2014.

Questions?