Theory of Computation
Syllabus

Arjun Chandrasekhar

About Me

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- At the end of class you can learn more about me through a 10 minute AMA

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- I want this to make you (re)consider the merits of pursuing a career in theory

Course Website and syllabus

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- Contains all course info, lecture slides, lecture notes, assignments
- Please read the syllabus thoroughly
  - There is a syllabus quiz for you to complete on Canvas

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- Extra Credit: TBD

Getting Help

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  - **Or by appointment**

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  - Yes you are!

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I kindly ask you to avoid saying...

- "I'm just not smart enough to do theory"
  - Yes you are!
- "This may be a stupid question, but..."
  - There are NO supid questions!

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  - If my teaching style is not working for you, I welcome respectful, constructive criticism!

Miscel

- any
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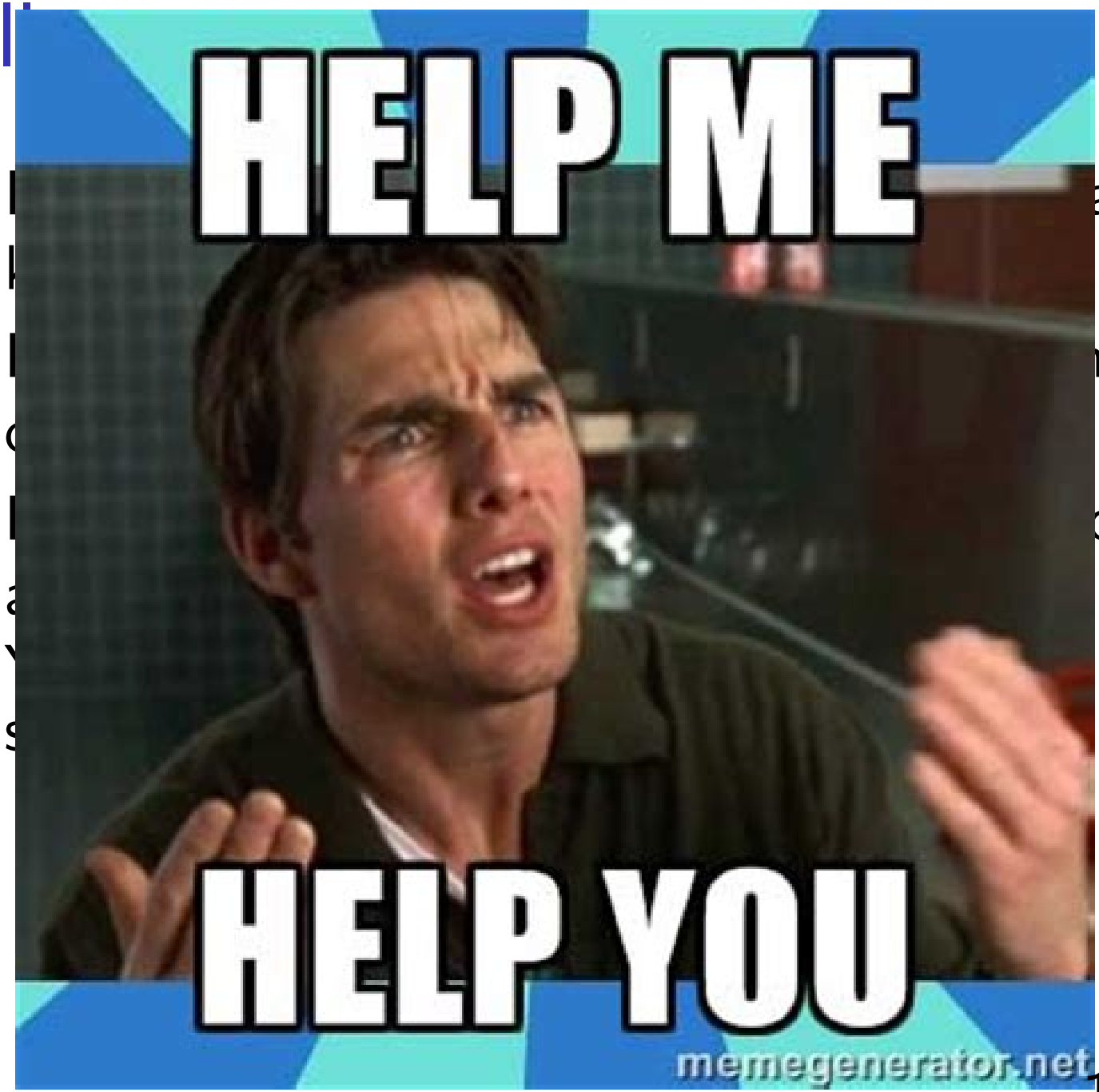
- to



Course overview

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  - What can't be done with *any* computers?
- Are certain problems strictly harder than others?

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- For each, we will ask "how powerful is this model?"
  - Put another way: "what can and can't we compute with this model?"

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- **All of the models of computation that we will study have applications**

Applications of Deterministic Finite Automata (DFAs)

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[2] Campbell and Stiles 2007.

[3] Adamski et al. 2005.

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- This class is about applying techniques to solve problems and prove results. When you learn how to solve a problem, do not focus on the verbatim solution; focus on the technique.