

Mathematical Foundations of Computer Science

Shanghai Jiaotong University, CS 499

Dominik Scheder
dominik.scheder@gmail.com
3-526

This is an
Inverted Classroom Course

At home, you will:



****Exercise 2.3.** Does it have an infinite antichain?

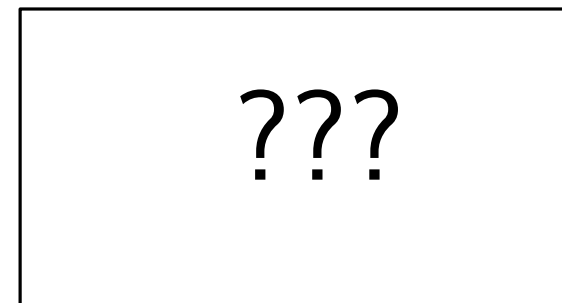
****Exercise 2.4.** Does every infinite subset $S \subseteq \mathbb{N}$ contain an infinite chain?

Consider the induced ordering on $[0, 1]^{\mathbb{N}}$.

Exercise 2.5. Determine the maximum, minimum, maximal, and minimal elements of $[0, 1]^{\mathbb{N}}$.

Exercise 2.6. What is the longest chain of $[0, 1]^{\mathbb{N}}$?

****Exercise 2.7.** What is the largest antichain of $[0, 1]^{\mathbb{N}}$?



Watch the lectures solve homework problems formulate questions

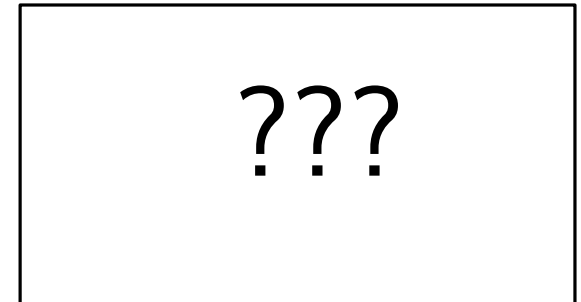
At home, you will:



Watch the lectures

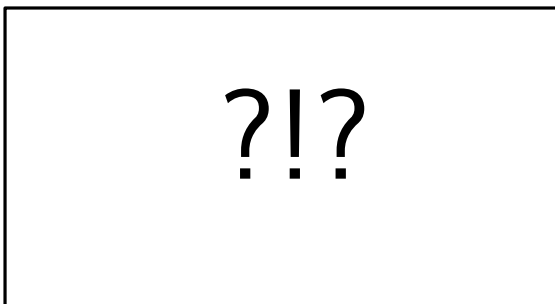
****Exercise 2.3.** Does it have an infinite antichain?
****Exercise 2.4.** Does every infinite subset $S \subseteq \mathbb{N}$ contain an infinite chain?
Consider the induced ordering on $[0, 1]^*$.
Exercise 2.5. Determine the maximum, minimum, maximal, and minimal elements of $[0, 1]^*$.
Exercise 2.6. What is the longest chain of $[0, 1]^*$?
****Exercise 2.7.** What is the largest antichain of $[0, 1]^*$?

solve homework problems



formulate questions

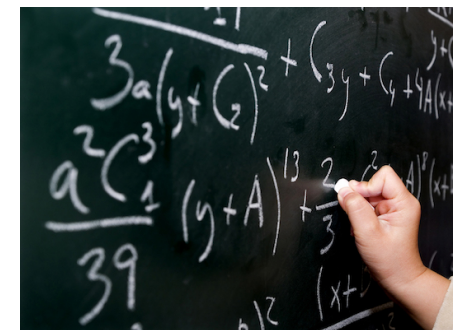
In class, we will:



discuss questions

****Exercise 2.3.** Does it have an infinite antichain?
****Exercise 2.4.** Does every infinite subset $S \subseteq \mathbb{N}$ contain an infinite chain?
Consider the induced ordering on $[0, 1]^*$.
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****Exercise 2.7.** What is the largest antichain of $[0, 1]^*$?

work on problems



discuss additional material

Video Lectures

cnmooc.org

coursera.org

OXFORD

Invitation to Discrete Mathematics

Second Edition

Jiří Matoušek and Jaroslav Nešetřil



You Will Work In Groups!

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Form groups of 4-5 students until Wednesday, February 28

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Until Wednesday, February 28, send email to me containing:

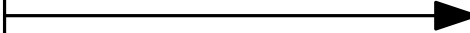
group name

name of every member (Chinese character and pinyin)

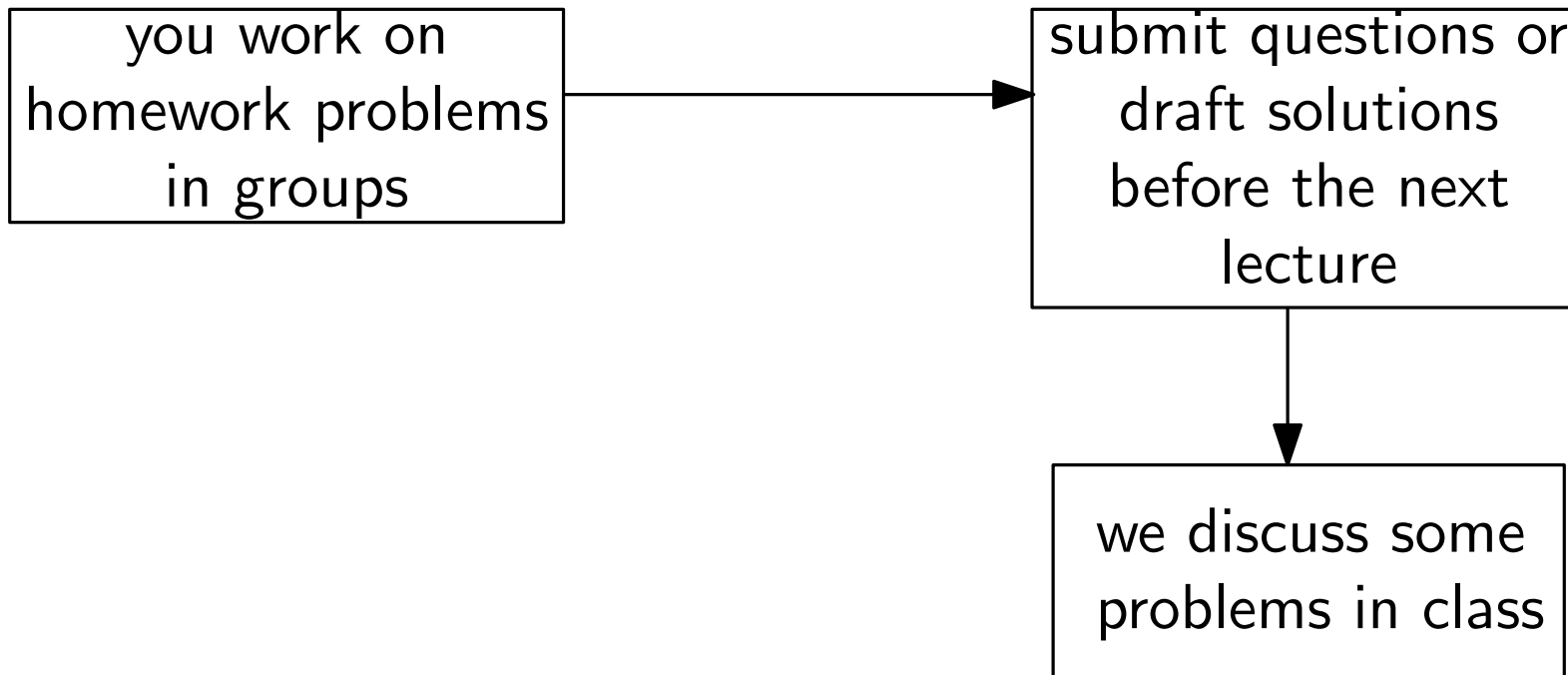
student IDs

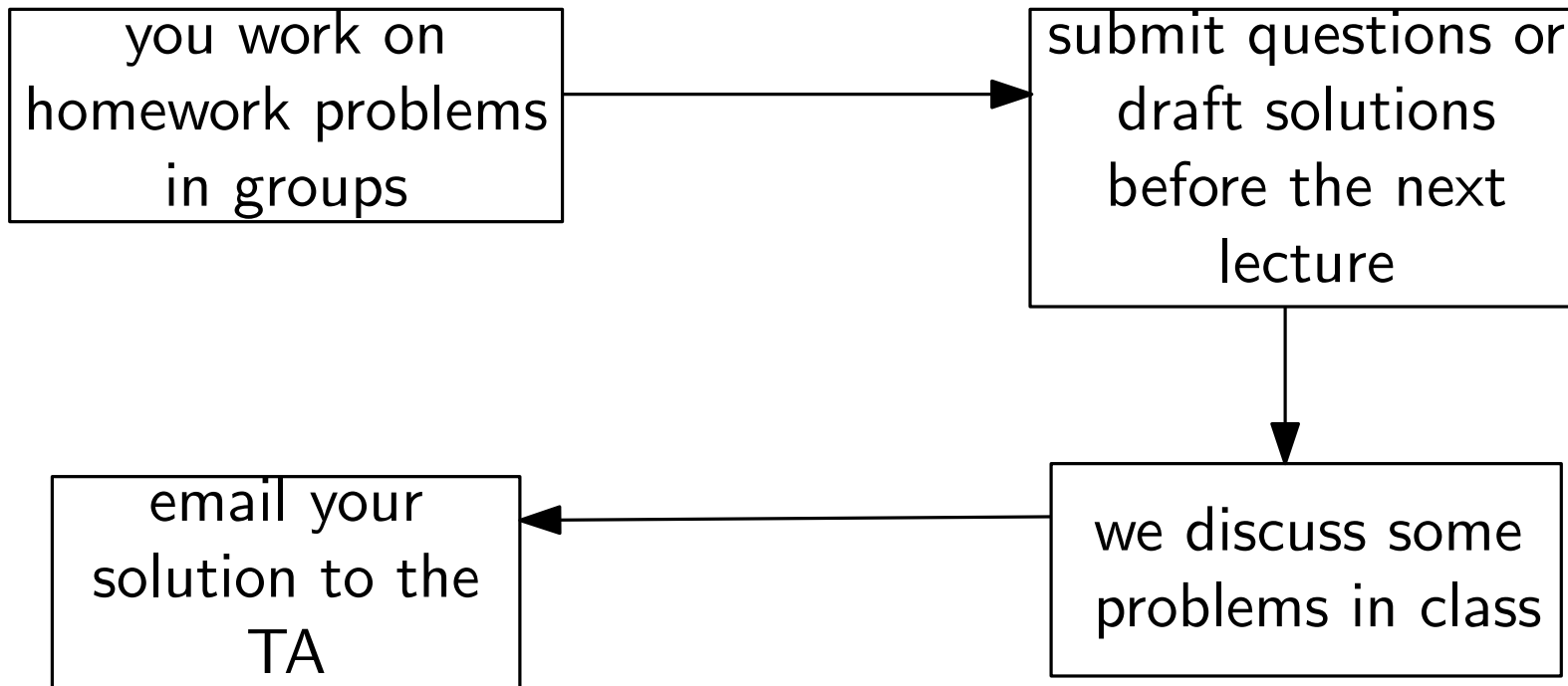
you work on
homework problems
in groups

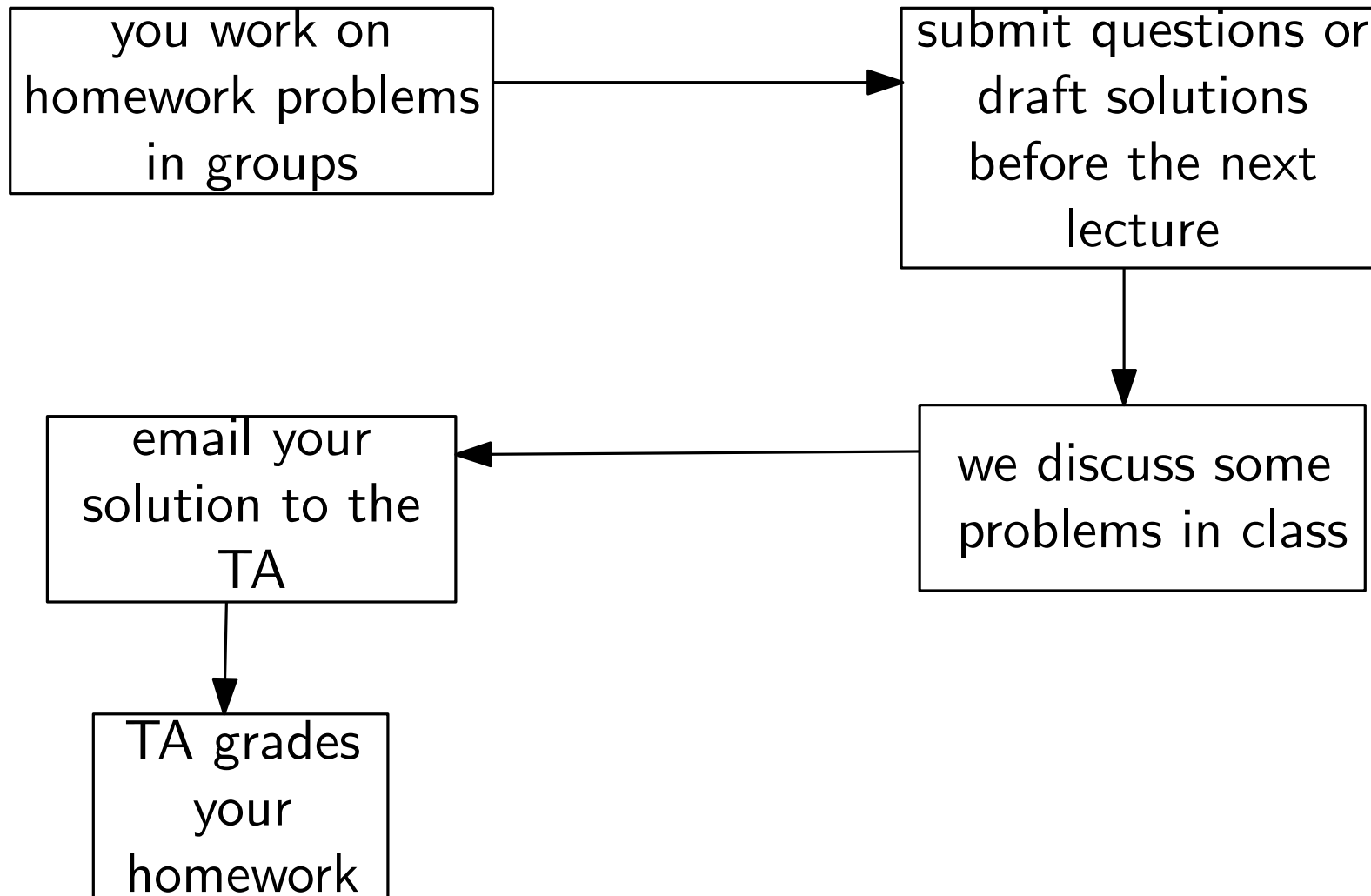
you work on
homework problems
in groups



submit questions or
draft solutions
before the next
lecture







There are 80 students in this class. Thus, please stick to some rules to make things work more smoothly.

Submit to dominik.scheder@gmail.com!!!

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dominik@cs.sjtu.edu.cn has crappy search
functionality.

Michael De	the Amazon de Shopping von 2017	Amazon Amazon Shopping App 100
Michael de (2)	teaching/cs499 my report for homework-01 -	Twitter de 2017 Feb 22, 2017 at 11
Google Play Support	Using Public Wi-Fi You May Be at Risk	This message contains graphics. If you
Course 499 Teaching a	February Pattern and Pedagogy 2017 ed.	in Course Schedule: 2017-2018
Michael De (2)	(2017) ed. Workshop on Springs of Parallel Computing, Optimization and	
the website	(2017) is the first Chair Professor in Computer Science - 10th, The 10th	
Mike Douglas	(2017) 2017 Conference Conference	2017 Conference Conference on the

Michael De	the Amazon de Shopping van 2017	Amazon Amazon Shopping van 2017
Michael de (2)	teaching/cs499 my report for homework-01 -	Michael de (2) Feb 22, 2017 at 11:00
Golden Frog Support	Using Public Wi-Fi? You May Be at Risk	This message contains graphics. If you
Course 499 Teaching a	February Platform and Pedagogy 2017 call	in the course schedule. More details here
Michael (2017)	(2017) call: Workshop on Springs of Parallel Computing, Optimization and	
Chris Roberts	(2017) is the Sam Sam Chair Professor in Computer Science	1980s. The course
Mark Dingemanse	(2017) 2017 Conference	2017 Conference


good: says which homework
it is!

teaching/cs499	my report for homework-01 -
Golden Frog Support	Using Public Wi-Fi - You May Be at Risk
Course 499 Teaching a	February Problem Set Pathways 2017-18
Michael W. Dumas	2016-17 Fall Workshop on Springs of Parallel Computing, Optimization an
Jim Heule	2016-17 Fall Fall Chair Professor in Computer Science - 1616, The Univ
Mark Whalen	2016-17 Fall Conference on Foundations of Computer Science - 2016 Conference on the

who is "my?"

good: says which homework it is!

our solution homework-01.pdf	1:36 pm
group solution for homework 01	1:35 pm
better solution to hw 1	1:35 pm
our solution	1:35 pm
solution to homework 1	1:34 pm
cs 499 homework 1	1:34 pm
Homework 1	1:34 pm

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cs 499 homework 1		1:34 pm
Homework 1		1:34 pm

CS 499 Group "The Awesomites", Homework 1, final submission

Course number

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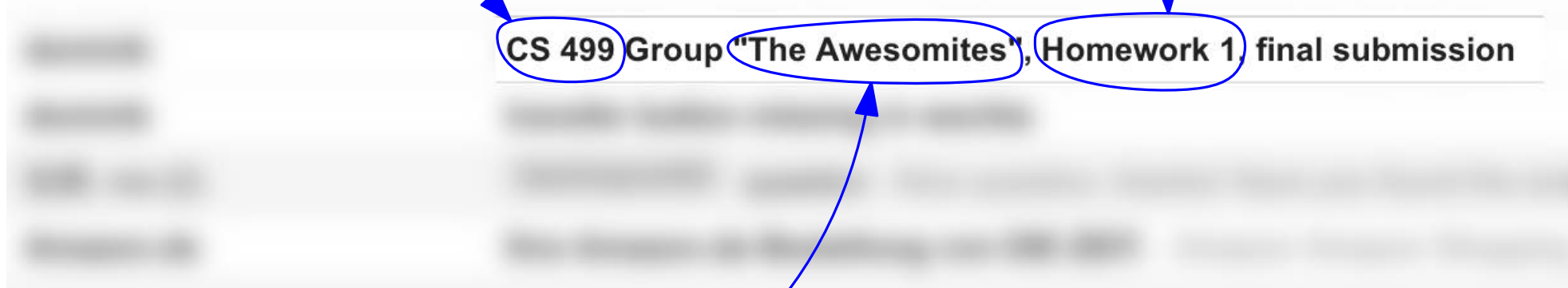
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questions or solution submission?

Same holds for the submitted file!

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CS 499 Group "The Awesomites", Homework 1, final submission



Inbox x

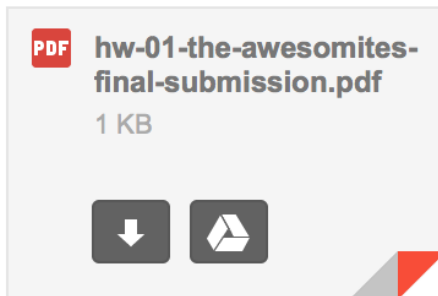


Dominik Scheder <dominik.scheder@gmail.com>

📧 1:46 PM (0 minutes ago) ☆



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Click here to [Reply](#) or [Forward](#)

Same holds for the submitted file!

CS 499 Group "The Awesomites", Homework 1, final submission



Inbox x

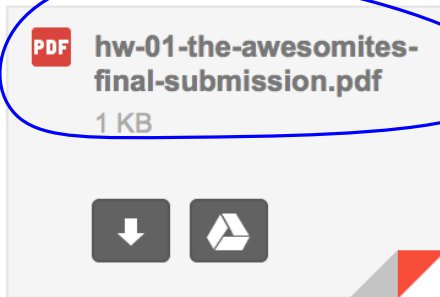


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📧 1:46 PM (0 minutes ago) ☆



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Click here to [Reply](#) or [Forward](#)

Summary

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- include group and homework info in email header and in filename.

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- submit a pdf! I encourage latex. If you use word etc., please convert to pdf before submitting.

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Submitting Questions

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- Submitting questions is part of the homework!
- This means: to achieve full score on a homework, you *must* submit questions!

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- This means: to achieve full score on a homework, you *must* submit questions!
- If you do not have any questions, i.e., understand everything perfectly, then come up with new related questions / problems!