

Syllabus for CMSC 722, AI Planning

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Instructor and TAs

- Instructor: Dana S. Nau, nau@cs
 - ◆ Office: Room 3241 AVW
 - ◆ Office hours: after class until about 5:30pm; other times by appointment
 - ◆ Telephone: 301-405-2684
- The department allocated $\frac{1}{2}$ of a TA position for this class
- There will be two TAs, each working $\frac{1}{4}$ time:
 - ◆ Ron Alford
 - ◆ Vikas Shivashankar

Communication

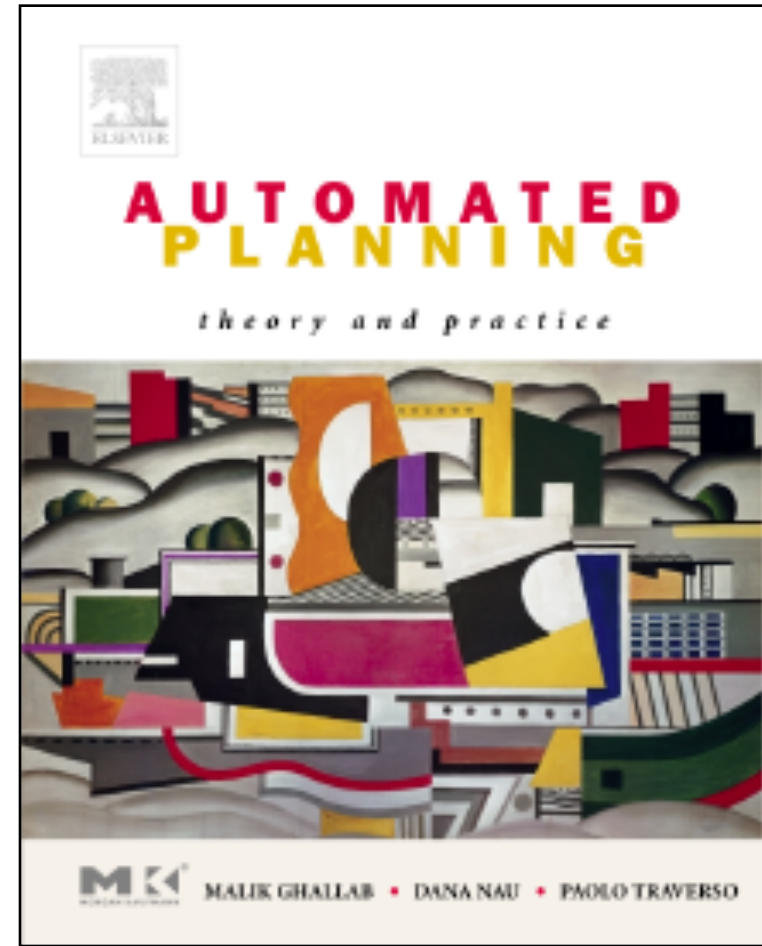
- Web page:
 - ◆ <http://www.cs.umd.edu/class/spring2012/cmsc722/>
 - ◆ Syllabus, lecture notes, homework assignments, etc.
- Piazza page:
 - ◆ <http://piazza.com/umd/spring2012/cmsc722>
- When you have questions, please post them to Piazza
 - ◆ You'll get answers faster that way
 - ◆ Someone else may have an answer, others may like to see it
- Piazza will also let you
 - ◆ post questions anonymously
 - ◆ post private questions to just the TAs and me

Prerequisites

- CMSC 421 (Intro to AI) or equivalent, or permission of instructor
- Things I'll assume you know:
 - ◆ state-space search, backtracking, the A* algorithm
 - ◆ propositional logic, first-order logic, unification, resolution, Horn clauses
 - ◆ basic complexity theory
 - » big O , Θ
 - » P, NP, NP-hardness, NP-completeness
 - ◆ some experience reading/writing mathematical proofs
 - » proof by contradiction, mathematical induction, quantifiers

Textbook

- M. Ghallab, D. Nau, and P. Traverso.
Automated Planning: Theory and Practice
May 2004
ISBN 1-55860-856-7
- An errata sheet is at
<http://www.laas.fr/planning>
- Lecture notes for each chapter are on the class web page
 - ◆ They're from Spring 2008
 - ◆ I'll post updated copies as we go along



Exams and Homeworks

- Midterm exam: Wednesday, March 28
- Final exam: Tuesday, May 15, 1:30–3:30 PM
 - ◆ <http://www.testudo.umd.edu/soc/exam201201.html>
- During the last class session before each exam, I'll review what we've covered, to help you prepare
- On the class web page is a homework assignment for each chapter
 - ◆ Please start each assignment as soon as I finish the chapter
 - ◆ You'll usually have about a week to complete it
- We won't grade the homeworks
 - ◆ Please discuss the questions and answers on Piazza
 - ◆ You will need to present your answers in class
 - » You each will need to do this about 2 times during the semester

Term Projects

- To be done by teams of 3 people each
 - ◆ Like a miniature version of the research projects you'll probably do repeatedly during your career
- Schedule:
 - ◆ mid-February: your teams should be formed by this time
 - ◆ March 4: term-project proposals due by noon
 - ◆ March 7, 12, 14: present your proposals in class
 - ◆ April 29: term-project reports due by noon
 - ◆ May 2, 7, 9: present your reports in class
- Start thinking about whom you'd like to team with
 - ◆ Do you feel comfortable with them?
 - ◆ Do their interests and abilities complement yours?
 - ◆ Do you think you can depend on them?
 - ◆ Do you think you can work well together?

Grading

- Term project: 30%
- Exams: 70%

- On the final exam, I'll ask you how much you want me to allocate to each of your exams. You may choose any of the following
 - ◆ 20% for the midterm and 50% for the final
 - ◆ 30% for the midterm and 40% for the final
 - » This is roughly proportional to the length of each exam
 - ◆ 40% for the midterm and 30% for the final

- If you'd prefer, I can make the choice for you
 - ◆ Whatever will give you the higher score

Password-Protected Web Page

- Name: ...
- Password: ...
- What will be on the page
 - ◆ To help you prepare for the exams
 - » Some copies of old exams and answers
 - » Don't look at the answers until you've written your own
 - ◆ To help you prepare your term projects
 - » Some copies of old term-project reports
 - ◆ After we've finished discussing the homework assignments, I'll post answers

First Homework Assignment

- Login to the Piazza page for CMSC 722
- Go to the message that's titled
 - ◆ **Homework 1 - post your messages here**
- Post a message telling us the following
 - ◆ Who you are
 - ◆ Why you're interested in taking this course
 - ◆ What you hope to get out of it