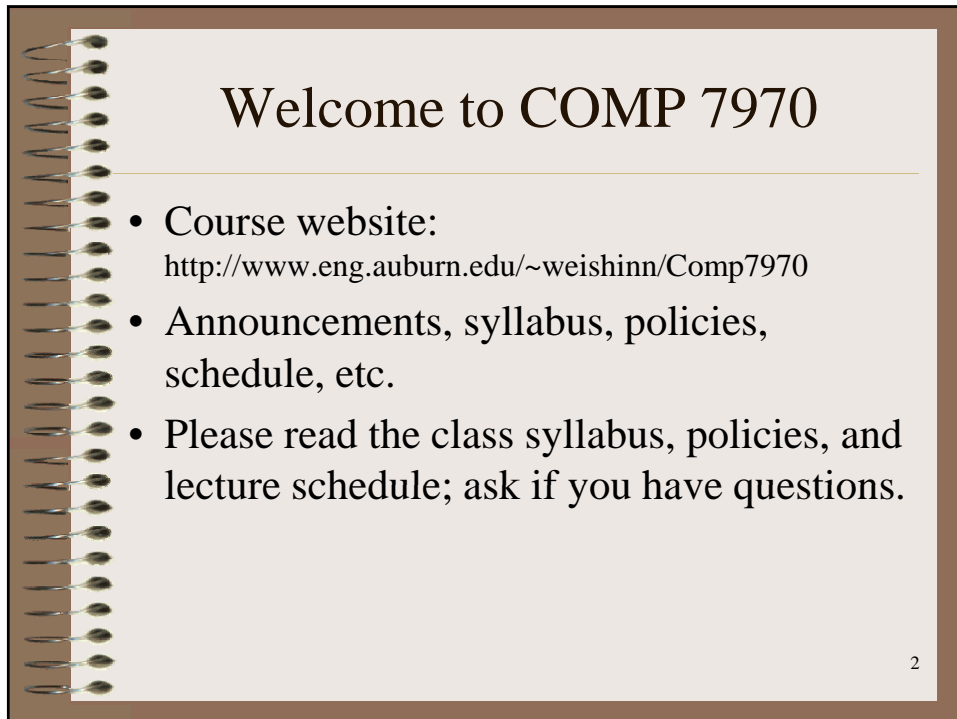


A spiral-bound notebook with a light beige, textured cover. The text is centered on the cover. The title is in a large, bold, serif font. The subtitle is in a smaller, bold, serif font. The author's name is in a regular serif font. The date and page number are in the bottom corners.

COMP 7970
Trends in Spatial Databases

Introduction
Wei-Shinn Ku

8/18/2011 1

A spiral-bound notebook with a light beige, textured cover. The title is centered at the top. A horizontal line separates the title from the list below. The list items are in a regular serif font. The date and page number are in the bottom corners.

Welcome to COMP 7970

- Course website:
<http://www.eng.auburn.edu/~weishinn/Comp7970>
- Announcements, syllabus, policies, schedule, etc.
- Please read the class syllabus, policies, and lecture schedule; ask if you have questions.

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The Instructor

- Wei-Shinn (Jeff) Ku
 - Email: weishinn@auburn.edu
- Research Interests
 - Spatial data management
 - Location-based services
 - Geographic Information Systems

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Introduce Yourself

- Name
- M.S. or Ph.D. student (advisor?)
- Research interests
- Current research projects
- Why do you take this course?

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Course Goals

- This *research intensive* course is organized as a series of seminars presented by the instructor and students. Each student has to present two papers on the paper list. Other students are expected to read the papers and *write summaries* before the class. In addition, every student needs to finish a term report with *publishable quality*.

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Textbook (as a reference)

- Shashi Shekhar and Sanjay Chawla, Spatial Databases – A Tour, Prentice Hall

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Course Format

- Two 75 min classes/week
- Two paper presentations
- Paper summaries
- One research proposal
- One midterm report
- One final report

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Lectures and Presentations

- Lecture and presentation slides will be posted shortly before or after the class
- Lectures and presentations are important for understanding course materials and conducting your research.
 - So please attend classes regularly

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Term Report

- Generally, find a topic which is related to spatial databases.
- Where to find topics?
- Email your topic to me before you start.
- The report quality should be equal to publishable conference papers.
- 8 ~ 10 pages

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Term Report Proposal

- Email me a one page proposal describing your proposed research. (Due Sep. 30 at 5:00 pm)
- If the proposal is approved, start to work on your proposed project.

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Midterm Progress Report

- Write a technical report describing the progress and discoveries of your research. (Due Oct. 25 at 5:00 pm)
- The report must be formatted in the two-column IEEE proceedings format.

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Final Term Report

- Write a technical report describing the discoveries and experimental results of your research. (Due Dec. 6 at 5:00 pm)
- The report must be formatted in the two-column IEEE proceedings format.
- I will help you publish your report at conferences if you like.

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Research Topics

- Location-based Services
- Location Privacy, Data Sharing and Security
- Spatial Analysis and Integration
- Spatial and Spatio-temporal Information Acquisition
- Spatial Data Structures and Algorithms
- Spatial Query Processing and Optimization
- Storage and Indexing

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Research Topics (Cont.)

- Systems, Architectures and Middleware for GIS
- Continuous Monitoring of Spatial Queries
- Management of Moving Objects
- Aspects of Mobile Computing and Sensor Networks
- Spatial Data Security and Integrity

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Related Journals and Conferences

- Leading database conferences – ACM SIGMOD, IEEE ICDE, VLDB, EDBT
- Spatial data management conferences – ACM-GIS, SSTD
- Leading database journals – IEEE Transactions on Knowledge & Data Engineering, ACM Transactions on Database Systems, VLDB Journal, Geoinformatica

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Paper Presentation

- Pick two papers (from the paper list for your presentation).
- Email your preferred slots to me.

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Tentative Grading Breakdown

- Class participation: 10%
- Term report proposal: 10%
- Midterm presentation and report: 20%
- Term report: 30%
- Paper presentations: 20%
- Paper summaries: 10%

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Office Hours

- The instructor
 - Monday 4pm - 5pm, others by appointment
- If you have a question
 1. talk to people in the class
 2. email the instructor
 3. go to office hours to talk to the instructor

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How to Get the Most out of this class?

- Study and discuss with your peers
 - Discuss papers to enhance understanding.
- Use lectures/presentations to guide your study
 - Use them as a roadmap for what's important.
 - Ask questions in class.