CS 578 Privacy in a Networked World Syllabus

The syllabus below describes a recent offering of the course, but it may not be completely up to date. For current details about this course, please contact the course coordinator. Course coordinators are listed on the course listing for undergraduate courses and graduate courses.

Text Books

Required

S. Garfinkel, *Database Nation: The Death of Privacy in the 21st Century*, O'Reilly, 2001.
R. O'Harrow, *No Place to Hide*, Free Press, 2006.

Week-by-Week Schedule

Week	Topics Covered	Reading	Assignments
1	Introduction: Privacy, and why it matters.	Database Nation: Chapter 1.	Initial Project Idea.
2	Definition and value of privacy. Conceptual frameworks for reasoning about privacy: W.Prosser's Privacy Torts, D.Solove's Taxonomy of Privacy.	Database Nation: Chapter 2.	Initial Project Proposal.
3	More on conceptual frameworks for reasoning about privacy: H. Nissenbaum's Contextual Integrity.		
4	Identity, anonymity, and pseudonymity.	Anonymity, Unlinkability, Undetectability, Unobservability, Pseudonymity, and Identity Management - A Consolidated Proposal for Terminology by Pfitzmann and Hansen.	Final Project proposal
5	Crypto basics: keyless, symmetric-key, and asymmetric-key techniques. Basic protocols.		
6	Private data analysis and database sanitization: Utility vs.privacy. Secure multiparty computation.	No Place to Hide: Chapters 1-3, Database Nation: Chapters 3-5, 10.	
7	Midterm Exam		
8	Private data analysis and database sanitization: Randomization. Differential Privacy. k-anonymity. l-diversity. t-closeness.	t-Closeness: Privacy Beyond k-Anonymity and l-Diversity by N. Li, T. Li, and S. Venkatasubramanian.	

Week	Topics Covered	Reading	Assignments
9	Location privacy.	No Place to Hide: Chapters 7-10. You Are Where You've Been Location Technologies' Deep Privacy Impact by Roger Clarke.	Project Status Report.
10	RFID and privacy.	RFID Security and Privacy: A Research Survey by A. Juels.	
11	Web privacy: User tracking. Cookies. Third-party cookies and informed consent. Cache cookies.	No Place to Hide: Chapters 5+6.	
12	More web privacy: Anonymous network connectivity. Mix-nets. Onion-routing and TOR.	Hiding Routing Information by Syverson, Goldschlag, and Reed.	
13	Regulatory approach to protecting privacy (HEW Fair Information Principles, OECD Guidelines).	Database Nation: Chapters 6-9.	
14	Student project presentations.		Project Report. Poster.