CAS776: Computational Complexity
Fall 2002

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Lectures: Thursdays 2:30–5:30 in ITB222

Web Page: `www.cas.mcmaster.ca/~soltys/cas776-f02/index.html`

Text Book: "Computational Complexity"
by Christos H. Papadimitriou

Course Outline: We are going to follow the book fairly closely. The main topics are: Turing Machines and decidability, complexity classes, in particular the complexity classes P and NP, NP-completeness, some propositional logic, and complexity classes define in terms of circuits. We will motivate the subject with an informal analysis of three simple algorithms: graph reachability, Maximum Flow, and the Traveling Salesman Problem. We will emphasize the close identification of complexity-theoretic concepts with computational problems. Some mathematical background will be assumed, but not much beyond simple discreet mathematics.

Marking Scheme: Two midterms (one hour long), written in class, worth 30% each, and a final exam, worth 40%.