Lecture 1: Introduction

- Course organization:
  - 4 lectures on cache coherence and consistency
  - 2 lectures on transactional memory
  - 2 lectures on interconnection networks
  - 4 lectures on caches
  - 4 lectures on memory systems
  - 4 lectures on core design
  - 2 lectures on parallel algorithms
  - 5 lectures: student paper presentations
  - 2 lectures: student project presentations

- CS 7960-002 for those that want to sign up for 1 credit

Logistics

- Texts: Parallel Computer Architecture, Culler, Singh, Gupta
  (a more recent reference is Fundamentals of Parallel Computer Architecture, Yan Solihin)
  Principles and Practices of Interconnection Networks, Dally & Towles
  Introduction to Parallel Algorithms and Architectures, Leighton
  Transactional Memory, Larus & Rajwar
  Memory Systems: Cache, DRAM, Disk, Jacob et al.
  Multi-Core Cache Hierarchies, Balasubramonian et al.

More Logistics

- Projects: simulation-based, creative, teams of up to 4 students, be prepared to spend time towards middle and end of semester – more details on simulators in a few weeks

- Final project report due in late April (will undergo conference-style peer reviewing); also watch out for workshop deadlines for ISCA

- Grading:
  - 70% project
  - 10% paper presentation
  - 20% take-home final