

CDA 6122 Evaluation of Parallel and Distributed Systems

Credits: 3 credits

Textbook, title, author, and year: No text is required. Instructor's notes will be posted on Canvas under Course Content

Reference materials: Research articles will be posted on Canvas under course Content.

Specific course information

Catalog description:

Analytical modeling techniques for evaluating performance, reliability, and performability of parallel and distributed systems. Case studies.

Prerequisites:

Basic knowledge of computer architecture and probability theory

Corequisites: N/A

Specific goals for the course:

To offer detailed discussion of analytical modeling techniques of various aspects of computer systems. Emphasis will be placed on the evaluation of parallel and distributed systems.

Brief list of topics to be covered:

1. Preliminaries
2. Performance models of multiprocessor systems: Probabilistic, queueing, and petri net models
3. Reliability models
4. Models for the combined evaluation of performance and reliability
5. Performance evaluation of parallel and distributed systems
6. Case studies