

Parallel and Distributed Processing Systems

2 units (selection)

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Target This class introduces the knowledge and design skills necessary for developing parallel and distributed processing systems, and parallel and distributed algorithms.

Outline Architectures of parallel and distributed processing systems, fault tolerance of distributed control systems and the development techniques of distributed systems for Web applications.(Portfolio style).

Style Lecture in combination with Portfolio

Keyword WWW, fault tolerance, parallel and distributed processing architecture

Fundamental Lecture “Web Programming”(1.0)

Goal 1. To understand the architecture of parallel and distributed processing systems, decentralized adaptive control systems and their fault tolerance, and the design of distributed WWW systems.

Schedule

1. Parallel and distributed processing architectures
2. Memory and communication architectures
3. Parallel and distributed operating systems
4. Client server model
5. Cluster computing
6. linear space and normed space
7. small gain theorem and its applications
8. decentralized systems composed of interconnected subsystems
9. stability of decentralized control systems
10. fault tolerance of decentralized control systems
11. Servlets and JavaServer Pages
12. Web application servers
13. Web application systems
14. Web programming frameworks
15. Web programming design patterns
16. Assignment

Evaluation Criteria Assignment count 100%.

Textbook To be introduced in the class.

Reference To be introduced in the class.

Contents <http://cms.db.tokushima-u.ac.jp/cgi-bin/toURL?EID=216884>

Student Able to be taken by only specified class(es)

Contact

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