Intelligent Information Systems

2 units (selection)

Hiroaki Ogata · Associate Professor / Intelligent Systems, Information Science and Intelligent Systems, Systems Innovation Engineering

Hiroyuki Mitsuhara · Associate Professor / Intelligent Systems, Information Science and Intelligent Systems, Systems Innovation Engineering

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Teruaki Ito · Associate Professor / Mechanical Science, Mechanical Engineering, Intelligent Structures and Mechanics Systems Engineering

Target〉 Learning the design methods of intelligent information systems such as educational software and interactive systems.

Outline〉 Intelligent systems and their mechanics. Intelligent CAI. Intelligent interface. Micro-worlds in intelligent CAI. Learner-teacher modelling. Knowledge acquisition models. Empirical and analytical machine learning, e. g., ID3, similarity-, explanation-, and case-based learning. Genetics-based machine learning, e. g., genetic evolution and co-evolution of production systems, finite state machines, recurrent neural networks, and strategic knowledge. Concepts of collaborative interface systems based on intelligent interactions, and their implementation for design support systems.

Style〉 Lecture and excercise

Keyword〉 *intelligent interface, intelligent educational systems, intelligent agents, CSCW, CSCL, interactive interface*

Fundamental Lecture〉 "**Human Factors**"(1.0)

Relational Lecture〉 "**Applied Knowledge Systems**"(0.5), "**Autonomous Adaptive Systems Engineering**"(0.5)

Goal〉 Acuisition of the design methods of educational systems and interactive systems

Schedule〉
1. Overview of Intelligent CAI, History and theories of CAI
2. Intelligent CAI
3. ITS
4. Learner model, Tutoring model, Theories of CAI
5. Web Based Learning Environment
6. Adaptive Hypermedia, Personalization
7. Game-based Learning
8. CSCL(Theories)
9. CSCL(Systems)
10. Knowledge Management, SNS and Education Support System
11. Mobile Learning Environment(Theories)
12. Mobile Learning Environment(Systems)
13. Ubiquitous Learning Environment(Theories)
14. Ubiquitous Learning Environment(Systems)
15. Summery of Educational Technologies
16. examination

Evaluation Criteria〉 We will grade based on reports and interactive presentation among students.

Contents〉 http://cms.db.tokushima-u.ac.jp/cgi-bin/toURL?EID=216764

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

Contact〉
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Note〉
◇ 授業を受ける際には，2 時間の授業時間毎に 2 時間の予習と 2 時間の復習をしたうえで授業を受けることが，授業の理解と単位取得のために必要である．
◇ 授業計画 1~ 15 は，各講義のレポートおよび最終試験により達成度評価を行なう．