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| Course Name [科目名] | Parallel Processing and Computer Network |
| Instructor Name [教員] | Hironori Nakajo |
| Office Hours and Contact Information  [オフィスアワー、連絡先] | 13:00 – 17:00  [nakajo@cc.tuat.ac.jp](mailto:nakajo@cc.tuat.ac.jp) |
| Course Structure [授業形態] | Lecture |
| Course Credits [単位数] | 3 |
| Course Overview [概要] | Currently, high performance computers consist of multiple computers connected via network and perform parallel processing efficiently. In this class, we discuss about network technologies of local and wide area network as well as system area network called SAN. Cache technology for parallel processing is discussed, too. Based on these technologies, we survey parallel computer systems with various multi-cache technologies for a data center. |
| Course Key Words [キーワード] | Computer architecture, parallel processing, interconnection network |
| Academic Goal [目標] | Understand how huge computers are built |
| Course Schedule [授業内容] | Lectures in the class are given as follows.  1. What is parallel processing?  2. Network technologies for parallel processing  3. Large scale parallel processing systems  4. Cache technology for parallel processing  5. Keynote speech on future parallel processing  6. Cache coherence protocol for multi-processing systems  7. Students presentation and discussion  8. Warehouse scale computer  9. Students presentation and discussion |
| Textbooks, References,  and Supplementary Materials  [テキスト、参考書、その他] | PPT files given in every lecture  Computer Architecture Quantitative Approach 5th Edition |
| Grading Philosophy  (Percentage / Criteria / Methodology)  [成績評価の方法] | Small report in each lecture  Final report on dedicated topics in parallel processing |
| Other  (i.e. Expectations on Classroom  Conduct and Decorum etc.)  [その他] |  |