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| Course | Introduction to Human Functions Harmonization |
| Course No. | 02RB013 |
| Credits | 1.0Credits |
| Grade | 1 - 3Year |
| Timetable | SprAB Wed3 |
| Instructor | Makoto Itoh |
| Course Overview | Function allocation is the design decisions to determine which functions are to be performed by human and which by machines to achieve the required system goals, and is closely related to the issues of automation. Some of the traditional strategies of function allocation include (1) assigning each function to the most capable agent (either human or machine), (2) allocating to machine every function that can be automated, and (3) finding an allocation scheme that ensures economic efficiency. However, such “ who does what ” decisions are not always appropriate from human factors viewpoints. This lecture will clarify why “ who does what and when ” considerations are necessary, and will discuss how human and machine can cooperate and collaborate, in which the authority for decision and control may shift between human and machines dynamically depending on environmental factors, operator workload and performance. |
| Remarks | Only students of the PhD program in Empowerment Informatics are allowed to register. |
| Course Type | lectures |
| Course Remarks | Some lectures will be given in Japanese with English slides, but others will be given in English. |
| Relationship to EMP Educational Objectives | Interdisciplinary ability:Broad specialist knowledge and experience |
| Course Objectives | Students understand basic knowledge on human-machine collaboration and recent topics in this area. |
| Course Schedule | This course provides basic knowledge on human-machine collaboration and recent topics in this area. 1)Basic knowledge on human-machine collaboration 2)Topics in human-machine collaboration |
| Graduating Methods and Criteria | Assignments. A+: 90-100, A: 80-89, B: 70-79, C: 60-69, D: 0-59 |
| Homework | |
| Textbook | Handout of the slides will be provided. |
| References | |
| Office Hour | To schedule an appointment, please send me an email. SB0808 5502 itoh at risk.tsukuba.ac.jp http://www.risk.tsukuba.ac.jp/~itoh/ |
| Messages for Students | |
| Teaching Fellow / Teaching Assistant | |
| Keywords | human-machine, systems, human-centered, automation, authority, and, responsibility |