DOCTORAL SCHOOL OF INFORMATICS
COMPLEX EXAM SUBJECT

Parallel and distributed systems (main subject)

- distributed and parallel programming, distributed data structures, distributed objects
- distributed tracing,
- support for concurrent, parallel and distributed programming in programming languages,
- distributed system, distributed file system, middleware,
- persistence, types of distribution transparency (access, location, relocation, replication, concurrency, failure)
- scalability,
- grid systems,
- distributed databases,
- transaction atomicity,
- authentication and authorisation,
- client-server model,
- open systems
- communication: definition of protocol, ways to formally describe protocols, message, channel, message passing, RPC, parameter passing, reference parameters, distributed object model
- processes, threads, multithreaded clients and servers
- design, synthesis and verification of distributed systems

Literature

https://www.distributed-systems.net/index.php/books/distributed-systems-3rd-edition-2017/
http://kitlei.web.elte.hu/segedanyagok/foliak/osztott_rendszerek_uj/ds-van-Steen-screencasts.7z