Course title: Distributed Algorithms	**Neptun code:** **GEIAL402-a**
Course coordinator: Dr. Gábor Kecskeméti, PhD, dr. habil., senior research fellow	
type of lesson and number of lessons: **lecture (2)**	
method of evaluation: colloquium	
curriculum location of the subject: (autumn/spring semester): autumn and spring	
pre-study conditions *(if any)*: -	
The task and purpose of the subject:	
The objective of this course is to provide foundational knowledge of distributed algorithms by exploring both synchronous and asynchronous network algorithms their application areas features.	
Course description:	
Synchronous network algorithms, models, consensus techniques, leader electrion approaches, failure handling. Asynchronous algorithms, generic and shared memory model, mutual exclusion problems, resource allocation and consensus techniques. Asynchronous network algorithms, synchronizers, logical time, global snapshots, process failures and data link protocols. Partial synchronous algorithms insights.	
Required literature:	
1. Lynch, N. A. (1996). Distributed algorithms. Elsevier.	
Recommended literature:	
1. Raynal, M. (2013). Distributed algorithms for message-passing systems (Vol. 500). Heidelberg: Springer. 2. Bertsekas, D., & Tsitsiklis, J. (2015). Parallel and distributed computation: numerical methods. Athena Scientific.	