Module	**Advanced Module on Smart Contracts**
Lecturer	Assoc. Prof. Dr. Alex Norta
Language	English
Teaching Method	Lecture
Credit Points / Duration	0.25 ECTS / 4 Lectures of 90 minutes each
Attendance Requirements	Basics in computer science and mathematics; Some background in distributed algorithms is helpful
Goals / Skills	The students will learn about the state of the art in three specific aspects pertaining to smart contracts. First, the students will learn about problems of oligopoly formation in proof-of-stake formation and mitigation with the use of mobile smart contracts. Next, the current state of the art of smart-contract languages with their pros and cons will be explored. Finally, we move from intra-organizational smart contracts to cross-organizational smart contracts and explore how an additional multi-agent system layer on top of smart-contracts help to facilitate collaboration.
Content	● Proof of stake problems and mobile smart contracts ● Pros and cons of currently existing smart-contract languages ● Cross-organizational collaboration models for legally relevant smart contracts ● Multi-agent-systems to facilitate cross-organizational smart-contracts collaboration ● Advanced cross-organizational topics such as conflict management, e-governance, rollbacks of collaborations.
Media Used	Electronic presentation, blackboard illustrations, discussion, practical demonstrations
Suggested Reading	The students will get a list of specific research papers for each topic.