

Module	<b>Authentication and Digital Identities on the Blockchain</b>
Lecturer	M. Sc. Benjamin Leiding
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; Blockchain basics
Goals / Skills:	<p>This lecture focuses on digital identities and blockchain-based authentication solutions. The students will learn and understand the challenges of digital identities and issues of existing (de)centralized authentication and identity solutions.</p> <p>As a result of this course, the students will obtain an understanding of the basic concepts of digital identities, issues of different conceptual approaches to digital identities as well as the advantages of blockchain-based solutions.</p>
Content	<ul style="list-style-type: none"> <li>• Digital Identities</li> <li>• Challenges and limitations of digital identities</li> <li>• Existing (de)centralized authentication systems and their limitations</li> <li>• (Self-Sovereign) blockchain-based Identity solutions</li> </ul>
Media Used	Electronic presentation, blackboard illustrations, discussion, practical demonstrations
Suggested Reading	<ul style="list-style-type: none"> <li>• Satoshi Nakamoto: Bitcoin: A Peer-to-Peer Electronic Cash System</li> <li>• Christian Lundkvist: uPort: A Platform for Self-Sovereign Identity</li> <li>• Guy Zyskind: Decentralizing Privacy: Using Blockchain to Protect Personal Data</li> <li>• Guy Zyskind: Enigma: Decentralized Computation Platform with Guaranteed Privacy</li> <li>• Authcoin</li> </ul>