

Dynamic, Reusable and Reliable Smart Contracts for Cross-Organizational Business Processes

Doktorandenkolloquium

am Mittwoch, 29.5.2024 ab 14:25 Uhr

im HS 13, IM der Universität Passau, Innstr. 33

von Susanne Stahnke

oder

auch per Zoom (die Zoomdaten werden nur intern gemailt)

Betreuung: Prof. Dr. Harald Kosch

Abstract: Over the years business processes exceeded organizational boundaries. This requires a certain trust between the participating organizations. This trust is traditionally guaranteed solely through legal contracts. With emergence of Blockchain, Smart Contracts – serving as a formal, verifiable and transparent protocol for inter-organizational workflows – assure that involved organizations cannot break their agreements. This establishes trust between the participating parties without requiring a trusted third party. Since the implementation of Smart Contracts is not trivial, especially for domain experts, supporting methods and tools are implemented in order to allow a usable and efficient implementation of Smart Contracts. Those methods and tools comprise the entire lifecycle, from modelling and formally verifying cross-organizational workflows to automatically generating dynamic, reusable and reliable Smart Contracts and accountability mechanisms to ensure finger-pointing and the detection of a misbehaving party or the origin of a violation. These methods and tools are domain-independent, and therefore, applicable to any workflow or legal agreement between multiple mutually untrusted parties.