

The "as a Service" paradigm reflects the fundamental idea of providing basic coherent functionality in terms of components (services) that can be utilized on demand. Furthermore, services may be flexibly interconnected in order to compose solutions for more complex tasks. This composition process can be either accomplished by hand - based on expertise and experience – or automatically. Automation of this service composition process is indeed a formidable challenge: functional as well as non-functional user requirements have to be satisfied.

In our work, we decompose the entire service composition process into sequential decision making steps. Each step is supported by a recommendation mechanism. Assuming recurring user requests as well as user feedback, a proper recommendation strategy can evolve over time - through learning from experience.

In this talk, we present our latest results as well as new insights derived from these results. In addition, we briefly discuss composition approaches that also incorporate techniques from Artificial Intelligence and compare them with our approach. Similarities and differences are outlined.