

ST 9: Keynote Session

Time: Thursday 17:15–17:45

Location: ZHG003

Invited Talk

ST 9.1 Thu 17:15 ZHG003

Making Surgery Intelligent: From Autonomous Systems to the Intelligent OR — ●JANNIS HAGENAH — Center for Digital Surgery, University Medical Center Göttingen, Göttingen, Germany

Automatization in surgery holds the potential to significantly increase patient outcomes, minimize risks, and provide a sufficient answer to demographic change and staff shortage. However, surgery remains one of the most challenging medical disciplines to automatize. This is due to

a combination of high risks, a vast inter-patient variability, the amount of different sensing modalities, the necessity to physically interact with tissue as well as the collaborative nature of the field. Recent advances in robotics and Artificial Intelligence hold the potential to overcome these challenges and step forward towards intelligent operating rooms that optimally support the human team. This talk will present modern approaches to digital surgery, the possibilities of merging cognitive systems and collaborative robots into surgical procedures and highlight the interdisciplinary nature of the path towards fully intelligent ORs.