



## The Next Generation of Robots in the Operating Room—Surgical Robotics 4.0

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**Abstract:** Robotics in healthcare applications has a stunning 40-yearlong history already, and it is believed that the best is still to come, given the recent, unprecedented rise in applications and systems. Surgical robotics is entering new domains, requiring highly sophisticated manipulation skills and decision making. The newest generation of surgical robots does not only function as an agile extension of the human eyes and hands, but also becoming a skillful and smart partner of their human counterpart. Legislation and standardization activities are gradually following the technical development, striving to establish a safe and reliable environment for Surgical Robots 4.0. This talk overviews the most important recent trends in the field, identifying some of the key enabling technologies and economic considerations. A critical analysis to the state of the art is also provided.