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# The operating room of the Future : Artificial Intelligence and Human Factors

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**Date: Thursday, 5 December. 2019, 10:00-11:00**  
**Venue: 31A, 3F, Faculty of Engineering Bldg. 2**

### Abstract:

With about 250 millions of surgical procedures worldwide per year, surgical quality is a crucial societal issue. Whereas surgery improved consequently these last 100 years, there are still many issues for further improving surgery, such as earlier detection and operation, minimally invasive surgery, aged population, medical errors, costs, ... We are at the beginning of a revolution in surgery, where Artificial Intelligence combined with robotics and medical imaging will drastically modify the operating room. Impact will be both on surgical performance, as well as on training and evaluation. In the presentation, I will present research projects introducing basic methods and technologies that would allow to reach such objectives by following a dedicated approach taking into account human factors. I will present why and how surgical skills have to be studied and modelled, including both technical and socio-cognitive skills, using surgical data science and Machine Learning. This combination of artificial intelligence and human factors is the way to ensure safe, ethical and efficient collaboration between man and machine for better patient clinical outcome.

