Surgical Skill Analysis and Modeling

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Date：　Monday, 16 Apr. 2018, 11：00-12：00
Venue：　Faculty of Engineering Bldg. 2, 3F, 31A

Abstract:

With about 250 millions of surgical procedures worldwide per year, surgical quality is a crucial societal issue. Increasing surgical quality may occur through the whole perioperative process from diagnosis, strategy decision, planning, performance and post-operative evaluation, as well as through initial and continuous learning. Computer assistance is required at each step. In the presentation, I will present how such objectives can be addressed by studying and modeling surgical skills. I will illustrate such approach by examples covering different aspects of surgical skills from technical to non-technical ones, such as the evaluation of surgical procedural skills, the development of a surgical simulation system for training procedural skills based on an interactive and collaborative virtual reality environment and the study of neurosurgical non-technical skills.