

## Ergonomic Navigation: User-Friendly Methods for Computer-Assisted Surgery

# Prof. Randy Ellis

Professor, Queen's University

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### 要旨

For the past fifteen years, our interdisciplinary research group has developed systems for image-guided surgery that have been used to treat more than 500 patients. One recurring difficulty is the ergonomics of such systems, which can be time consuming and difficult to use. This talk will describe two methods to improve the usability of surgical systems. The first method is to use patient-specific instruments that replace an expensive navigation system with a single-use surgical guide. The second method, where navigation is still necessary, is to use a new kind of operating room that integrates real-time imaging and tracking, which improves the way in which surgeons plan and perform complex surgical procedures. Each of these methods can be extended to incorporate other technologies, such as robots, in future surgical solutions.

