Teleoperated Robotic System with Application in Laparoscopic Training: Peg Transfer Test

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Guy Matthias Bilgerig ; Jose Rafael Martinez ; Sergio Alexander Salinas ; Vera Zasulich Perez ; Jhon Jairo Padilla ; Manuel Jose Betancur View All Authors

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Abstract:
This paper presents a teleoperated robotic system that can be used for tele-surgery training wherein surgeons could make basic laparoscopic training exercises from a remote location. The system has visual feedback and a master interface which is manipulated by the surgeon to command a remote robotic arm. Experiments about data transmission and peg transfer were made using an Internet connection between two separated cities by 288 km. Data obtained from video transmission times and control rates demonstrated system reliability for training tasks. Furthermore, a potential application in laparoscopic surgery training is shown with a training basic test called peg transfer.

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Authors

Guy Matthias Bilgerig

Jose Rafael Martinez

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