Call for Papers
Special Issue on
'Telerobotics and bilateral control'

Guest Editors
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Contributions are invited for a special issue of the **International Journal of Online Engineering** (I-JOE) http://www.i-joe.org.

Telerobotics is the area of robotics concerned with the control of robots from distance and have major applications in space, underwater explorations or in other hazardous areas for humans. Recent trends in telerobotics development show interesting research details in area such as using haptic devices with telerobots or adding more and more intelligence into telerobot subsystem with goal to make telerobot more autonomous and human telerobot communication easier.

Furthermore, recent advances in haptics, robotic and communication technology caused extensive development of so called "haptic robotics". Haptic robots enable the human operater to feel remote or virtual touching sense through tactile and kinesthetic human sensoric system and by bilateral mode of robotic system operation in case when the contact with the environment is from some reason inaccessible by human. Wide field of possible applications is e.g. medical surgery. Another very challenging area which emerged recently and in some way extends haptic robotics is "telepresence" in which the human operator receives sufficient information about the remote environment or experiencing the visual environment to provide ideal sensation and consequently enable interaction with it.

This special issue is seeking to publish the latest research and practices of telerobotic and haptic robotic or telepresence and applications as well as such experimentation for engineering education and professional development.

Topics may include but are not limited to:

- Telerobotics applications.
- Design of innovative web-based interfaces, architectures and environments to support telerobotics applications.
- The unique challenges in developing and using telerobotics experimentation for engineering education.
- Using haptic devices in telerobotics experiments.
- Telerobot interfaces for interaction between virtual world and real world environment.
- Stability issues in telerobotics.
- Control schemes.
- Telerobotics applications via Internet.
- Virtual tools
- Advanced bilateral control schemes
- Applications of bilateral robotic modes
- Bilateral control mode and communication delays
- Haptic robotics in medical applications
- Telerepresence applications
- …

Submission Deadlines

May 31	**2008**	Submission of abstract
June 30	**2008**	Notification of reviewers' feedback
August 31	**2008**	Submission of draft manuscript
October 01	**2008**	Camera ready version due
November	**2008**	Journal published

Manuscripts

Submissions should be sent electronically in MS-Word or RTF format to the coordinating guest editors. Layout and format should conform to the guidelines given in the IJOE Notes for Contributors http://www.i-joe.org/ojs/submissions.php

Guest Editors

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