

システム情報工学研究科修士論文概要

年 度	平成 24 年度	学位名	修士(工学)
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論文題目 ロボットスーツ HAL 福祉用と人との接触部位における相互作用の評価			
論文概要 <p>This paper presents a novel, distributed approach to monitor physical interaction between a user and a wearable robot. With many connections and degrees of freedom, the component of human and robot usually has complex interaction during dynamic movement. In order to measure this complex interaction, a measurement method that is able to measure it at the contact site directly. It is also required to maintain the design of contact site in order to acquire reliable data. In this study we propose a measurement method that is based on strain gauge. A basic experiment result in single joint motion task shown that distributed approach allows to monitor the interaction force. The proposed method is also used to evaluate the interaction between a user and "Robot Suit HAL" for Well-being during several kinds of gait task. This information is fundamental to assess the comfort and safety of the users which determine the final acceptability of the robot-mediated rehabilitation. Experimental results prove the relevance of this approach for the detection of the user motion intention through a measurement of the interaction force.</p>			
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