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Smart Clothes for Rehabilitation Context: Technical and Technological Issues

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Abstract

Smart clothes have the potential to improve rehabilitation processes by allowing clinicians to gather measures on patients' functional capacity, activity level, exercise compliance, the effectiveness of treatment, and the ability of patients to perform efficiently specific motor tasks at rehabilitation centers, at home or in community settings. The chapter provides an overview of smart clothing for health monitoring and healthcare, mainly for rehabilitation context. We present recent advances in the field of researches related smart clothes with capability of human body vital functions (i.e. heart beats, respiration) and activity monitoring, as well as several commercial smart clothes for rehabilitation context. Technical and technological issues related smart clothes design and development, and several directions for future research are also presented. Manufacturability, connectivity, integrations of things for smart clothing, durability, testing, wearability, maintainability and affordability of smart clothes are discussed.

Keywords

E-textiles Smart clothing Health monitoring Rehabilitation context

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Notes

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