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Sensor-Based Motion Analysis in Medicine, Rehabilitation and Sport

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Message from the Guest Editors

There have been great advances in the capture and analysis of human motion in the past two decades: On the one hand, we have seen a rapid development in sensor technology, where smaller sensors are able to capture motion data in high levels of detail at high frame rates. These sensors allow for the capturing of motion parameters over long time periods, collecting data in so-called “out of the lab” scenarios, with high comfort for the user and professional.

On the other hand, new techniques for the analysis of large amounts of data have emerged in the last years. Based on machine learning, deep learning, and artificial intelligence approaches, we are now able to gain insights from the recorded data, at much higher levels, leading to a deeper understanding of the underlying motion patterns.

In this Special Issue we want to focus on developments and applications of the abovementioned sensor and software technologies in the field of medicine, rehabilitation, and sport.

Keywords: wearable technology; motion analysis; machine learning; Rehabilitation; medical devices; digital health



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Special Issue



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Message from the Editor-in-Chief

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