

Method of personalized walking analysis

CSIC has developed an improved method to analyze people's motion that achieves an accurate and personalized detection of the particularities of each person's walking and its phases. This information is especially useful for the detection of specific motion disorders, rehabilitation processes, detection of falling risks in elders, or for the optimization and improvement of movement in high-performance sports.

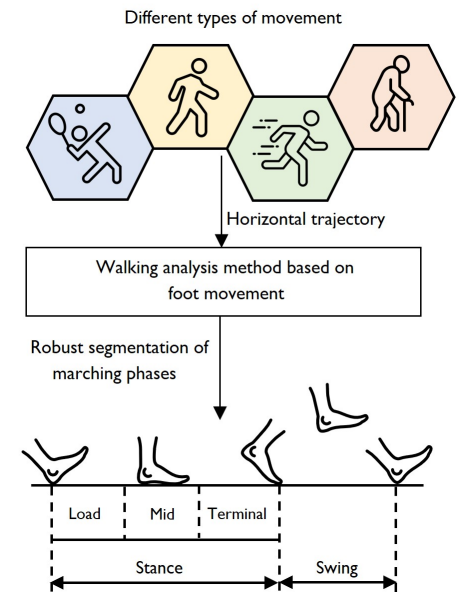
Industrial partners are being sought to collaborate through a patent licence agreement for the implementation of the method and its commercialization.

An offer for Patent Licensing

An accurate and personalized motion tracking

Current common-use electronic systems often incorporate movement sensors to keep track of walking, such as the rudimentary systems in phones or smartwatches, or other sophisticated ones in sports or medical venues. Accuracy of those systems therefore varies widely, however, there is a general problem linked with personalized analysis due to the generic methods that are use, which generally fail to adapt to the specific particularities of each person's motion style, or motion pathologies.

This new method allows to accurately identify specific key movements and phases at walking, therefore generates a totally personalized output that catches the particularities of each person's motion and allows for a representative monitoring of footsteps and its phases. This information can be especially useful for healthcare or high-performance sports monitoring and improvement, and for the early detection and prevention of possible risks or motion disorders.



Personalized analysis of walking and its phases

Main innovations and advantages

- Allows for a fully personalized and adapted tracking of each person's walking.
- Collects accurate information of footstep's subphases to generate a complete footstep analysis.
- Can be integrated into any device that incorporates a foot positioning system.
- Does not require to be adapted or modified to each user's particularities, nor requires any training as it is not based on AI.
- It is easy to implement and does not require of complex and costly operations to work.
- It is of special interest in high performance sports (personalized monitoring of athletes), healthcare (rehabilitation, risk detection, prevention, diagnosis of motion disorders), physiotherapy, research, etc.

Patent Status

Priority patent application filed suitable for international extension

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