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Review article

# A survey of advances in vision-based human motion capture and analysis

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### Abstract

This survey reviews advances in human motion capture and analysis from 2000 to 2006, following a previous survey of papers up to 2000 [T.B. Moeslund, E. Granum, A survey of computer vision-based human motion capture, *Computer Vision and Image Understanding*, 81(3) (2001) 231–268.]. Human motion capture continues to be an increasingly active research area in computer vision with over 350 publications over this period. A number of significant research advances are identified together with novel methodologies for automatic initialization, tracking, pose estimation, and movement recognition. Recent research has addressed reliable tracking and pose estimation in natural scenes. Progress has also been made towards automatic understanding of human actions and behavior. This survey reviews recent trends in video-based human capture and analysis, as well as discussing open problems for future research to achieve



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## Keywords

Review; Human motion; Initialization; Tracking; Pose estimation; Recognition

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