# 2ⁿᵈ Biomedical Engineering Conference and Expo

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## Gait analysis for prosthetic designing based on digital image processing

**Heena Patel** and **Saurabh Dave**
Ganpat University, India

Gait cycle is a walking pattern, beginning when foot contacts the ground and ending when the same foot contacts the ground again. The conventional methods for gait analysis are visual gait analysis, timing the gait cycle, electrogoniometers, electromyography and kinetic/kinematic systems. Human gait recognition is currently one of the most active research topics in computer vision. This gait representation is based on simple features such as moments extracted from orthogonal view video silhouettes of human walking motion. We demonstrate the accuracy of recognition using gait video sequences collected over different days and times and under varying lighting environments. Using video camera based system we can derive the spatial temporal Features of gait kinematics. Changes in gait cycle are an indicator of the gait abnormalities. So after getting the videos from the video camera based gait analysis system, we can have the data from which we can extract features which would be useful to detect the problems related with the lower extremity. After doing the analysis like calculation of the load distribution, kinetic /kinematic analysis we can design the prosthetics and orthotics better according to the abnormalities and also we can increase the comfort of the disable person. So my approach is to improve the designing of the prosthetics and also after designing we can cross check the efficiency and comfort level of the disable person.

## Biography

Heena Patel has completed her Bachelor's in BE Biomedical & Instrumentation Engineering, and Post-graduation in ME Instrumentation and Control. Presently she is working as an Assistant Professor in Ganpat University, Mehsana, India.

hkp01@ganpatuniversity.ac.in; patel.im@gmail.com

## Notes:

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