

## Hardware and software package "Spatial video analysis of motion"

### Development overview (project idea)

Scope of application	The study of biomechanical characteristics of locomotions can be used to diagnosticate a patient's condition in the restorative medicine, neurology, neurorehabilitation, traumatology and orthopedics, physiology
Abstract	Analysis of human gait to detect the joints excessive load. Evaluation of prosthesis quality
Brief description	The system of non-contact (optical) registration of kinematic and dynamic characteristics of human gait and formation of biomechanical model of patients is designed for biomechanical analysis and computer diagnostics of locomotions
Development stage	An algorithmic model has been created
Term of commercialization	18 months
Possible sources of investment	Equipment - 25,000 UAH; software development - 900 thousand UAH

### Developer information

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The searchers' field of study is mathematical problems of mechanics

### Expected result from implementation

Economic result – taking into account the relatively simple design and the related price factor, the hardware-software package "Spatial video analysis of motion" is available for domestic clinics

Social result – computer diagnostics, which is based on software and hardware methods of human gait's biomechanical studies, will allow to better determine the rehabilitation effect and assess the quality of prosthesis and the conformity of the prosthesis to the anatomical data of a particular patient