

MATHEMATICAL MODELS FOR THE HUMAN BODY MOTIONS ANALYSIS

Mihai Tofan¹, Ioan Burcă², Mircea Mihălcică¹, Eugenia Secară¹, Romeo Hisom¹ & Ionatan Popa¹

¹TRANSILVANIA University of Braşov-Romania, Department of Mechanics

² University of Medicine, Târgu-Mureş-Romania, Department of Sport

Corresponding author (who upload the abstract): Mihai Tofan, mtofan@unitbv.ro

Abstract: In order to simulate the human body motion mechanical models and representations of the topology and the geometry were used. The purpose of the reserch was the athlete's dynamical identification in order to simulate the mechanical motion of athletic event aiming at the improvement of the athletic performance.

Key words: athletics, hurdle race, human model, kinematics, sport performance.