

סמינר - SEMINAR

הנך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ב' 29.06.15 (יב' בתמוז, תשע"ה), בבניין דן-קאהן, קומה 0, אודיטוריום 1, שעה 14:30.

ירצה:

Prof. Henryk (Zvi) Flashner
University of Southern California, Los Angeles

על הנושא:

Experimentally Based Modeling of Human Movement

להלן תקציר ההרצאה:

Complex tasks performed by humans are comprised of series of phases with multiple objectives and require continual interaction with the environment. Development of an experimentally validated model is essential for exploring causal mechanisms and test hypotheses regarding control and dynamics of human movement. The understanding of the relationship between control and dynamics in human motion is a critical factor for improving performance and avoiding injury.

In this talk the problem of modeling whole body human movement will be discussed. A computational approach for the estimation of human kinematics and dynamics based on markers' position measurements will be introduced. The problem is formulated as a least squares problem with constraints. The constraints include system integrity and whole body conservation laws. An iterative procedure, based on Davenport's solution to Wahba's problem of finding optimal attitude of a single rigid body, will be presented. In the final part of the talk different applications of experimentally based modeling to human movement analysis will be discussed.

המארח: פרופ' יצחק בוכר

בברכה,

פרופ' ז'אק אריאלי
מרכז הסמינרים