

## סמינריון

הנך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ה' 20.04.17  
(כדי בניסן, תשע"ז), בניין דן-קאהן, קומה 0, אודיטוריום 1, 13:30.

ירצה: אנדרי דגטיאר

מנחה: פרופ' אולג גנדלמן, הנדסת מכונות

מנחה שותף: ד"ר אולג ורביצקי, הנדסת ביו-רפואה

על הנושא:

## **External Orthopedic Device for Foot Drop disease**

The seminar will be given in Hebrew

להלן תקציר ההרצאה:

Foot drop is a gait abnormality in which the dropping of the forefoot happens due to weakness, irritation or damage to the common fibular nerve including the sciatic nerve, or paralysis of the muscles in the anterior portion of the lower leg.. Foot Drop leads to discomfort and instability during walking. The device is designed for preventing the foot drop and support of the foot during walking, without modifying the natural directions of the ankle axis rotation and human body natural shock absorption.

The orthopedic device is based on three linear springs and knee support. Stiffness's of the springs may be adapted to each patient. The central spring prevents foot drop under  $85^\circ$ . Two side springs prevent the foot from excessive rotation.

The device has been examined by Vicon motion system In the Wingate Biomechanical laboratory facility. The patient participated in the Clinical experiments suffers from foot drop on the right and left legs. All patients endure foot drop caused by the stroke. The results of the clinical experiments demonstrate that the orthopedic device leads to more comfortable and stable walking. The Orthopedic device, invented to be easy to use, affordable and adoptable for each patient. It can be applied to the foot directly, or inserted into the shoe. Alternatively, the Orthopedic Device may be a part of the shoe.

בברכה,

פרופ' מ"א שמואל אולוסקי  
מרכז הסמינרים