



## סמינריון

הנך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות שתתקיים ביום די 4.03.2020 (חי באדר, תשייפ), בניין דן קאהן, אודיטוריום 1, 11:00.

צין-ציוואן הונג : צין-ציוואן הונג

**מנחה**: פרופי ענת פישר

על הנושא:

## Extrusion-based bio-mimetic Hamiltonian tool path for scaffolds

The seminar will be given in English

## תקציר ההרצאה:

This research provides an optimization algorithm for the extrusion-based tool path designed for bone scaffold with complicated microstructure. It is important to present bone's microstructure truthfully on a scaffold used to facilitate recovery from unrepairable bone defects. Biodegradable bone scaffold needs to consider fluid permeability, mechanical strength, porosity, pore surface-volume ratio, etc. All these parameters play a crucial role in bone healing mechanism. This research takes images from the real bone in order to reach the standard of these parameters and then use a four-stage algorithm to optimize the tool path on two goals: the number of paths and the number of 90-degree turn number. These two goals can enhance the outcome quality of the bone scaffold. Overall, this research endeavor to optimize the bone scaffold closer to the real bone to let patients have a better healing experience.

בברכה,

0/00 אתי 1900 מרכז הסמינרים