

סמינריון

הנדך מוזמנות/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ה' 8.11.2018 (ל' בחשוון, תשע"ט), בניין דן קאהן, אודיטוריום 1, 13:30.

מרצה: מיכל ויסבורד

מנחה: פרופ' שמעון הבר

על הנושא:

INVESTIGATION OF INTERSTITIAL FLUID FLOW OF ALVEOLAR PRIMARY SEPTA AFTER PNEUMONECTOMY

The seminar will be given in Hebrew

תקציר ההרצאה:

Neoalveolation is known to occur in the remaining lung after a pneumonectomy. While compensatory lung growth is a complex process, stretching of the lung tissue appears to be crucial for tissue remodeling. Even a minute shear stress exerted on fibroblasts in the interstitial space is known to trigger cell differentiation into myofibroblasts that are essential to building new tissues.

We hypothesized that the non-uniform motion of the primary septa due to their heterogeneous mechanical properties under tidal breathing and/ or operation of an external pressure gradient induces a spatially unique interstitial flow and shear stress distribution in the interstitial space. This may, in turn, trigger pulmonary fibroblast differentiation and neoalveolation.

In this study, we developed a theoretical basis for how cyclic motion of the primary septal walls with heterogeneous mechanical properties and/ or the operation of an external pressure gradient affects the interstitial flow and shear stress distribution.

בברכה,

פרופ' א"מ אתיו סאס

מרכז הסמינרים