

תכנית האנרגיה ע"ש גרנד מתכבדת להזמין להרצאה סמינריונית
שתינתן ע"י:

ענאן גרזוזי

התכנית הבין-יחידתית לאנרגיה

בנושא:

A Pulsed Coandă-Effect Reciprocating Wind Energy Generator

The seminar will be given in English

Exorbitant small wind turbine costs, combined with their low efficiency, served as motivation for the construction and testing of a novel reciprocating wind energy generator that is driven by pulsed Coandă jets. The system comprises a sting-mounted cylinder on a pivot that is counterbalanced by tension springs and loaded using an electromagnetic brake. Two diametrically disposed spanwise blowing slots are pulsed alternately to produce bi-directional transverse loads (lift) made possible by the Coandă effect, and thus force the system at or close-to resonance. Experiments were performed in a modified open-jet wind tunnel and included static load measurements, flow visualization and system performance evaluations. A maximum gross power of 10% was produced by the system and the results compared very favorably to a linear model. Significant improvements can be made to the system performance by increasing the oscillation amplitude, increasing the resonance frequency, minimizing the power input, and introducing a second degree-of-freedom.

מנחה: פרופ' דוד גרינבלט, הפקולטה להנדסת מכונות

במסגרת עבודת מחקר לתואר מגיסטר

ההרצאה תתקיים ביום ב', 16.1.17, בשעה 14:30, אודיטוריום 1, בניין דן קאהן,
הפקולטה להנדסת מכונות