הטכניון – מכון טכנולוגי לישראל
הפקולטה להנדסת מכונות

TECHNION – Israel Institute of Technology
Faculty of Mechanical Engineering

SEMINAR - סמינר

הנך מוזמן/ת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ב' 27.07.15 (יא' באב, תשע"ה), בבניין דן-קאהן, קומה 3, אולם 316, שעה 11:30.

יצרה:

Dr. Daniel M. Israel
Los Alamos National Laboratory

על הנושא:

Low Order Models for Assessing RANS Models

להלן תקציר ההרצאה:

Historically, most coefficients in RANS models have been calibrated to match the growth rates of certain canonical self-similar flows. However, for many of these flows, the growth rates observed in experiments and DNS vary widely. In fact, George (1986) argues that a universal self- similar solution does not exist. This would imply that RANS model calibration is specific to a particular experiment. Using classical integral methods to reduce RANS models to ODEs, it is possible to obtain a low-order dynamical system which can be used to study the approach to self-similarity for the model. Comparing the trajectory maps for such low-order models to data suggests that most, if not all, of the discrepancy between different experiments can be explained by transient deviations from self-similarity, and that there is indeed a universal self-similar behavior. Furthermore, such trajectory maps can be used to assess how well transient behavior due to the initial conditions in RANS calculations captures the experimentally observed flow physics.

המארח: פרופ'/ח דוד גרינבלט

בברכה,

פרופ'/א אמיר שמן
מרכז הסמינרים