

06/11/2018

Subject: Report on Workshop on Adjoint Based Turbomachinery Optimization & Uncertainty Quantification in Gas Turbines

On November 6th 2018, for the sixth consecutive year, a turbomachinery workshop organized by Asst. Prof. Beni Cukurel was held at the Technion Aerospace Department. The training activities were geared towards creating a platform for world's leading minds in the field of turbomachinery to come and share their knowledge with students, members of academia and industry.



This year we had the honor of hosting Prof. Francesco Montomoli and Prof. Tom Verstraete – experts in uncertainty quantification in turbomachinery and multidisciplinary design optimization for turbomachinery respectively.

- Prof. Francesco Montomoli session was on the topic of Uncertainty Quantification in Turbomachinery, and included:
- Impact of uncertainties and manufacturing defects in gas turbines
- Introduction to uncertainty quantification for turbomachinery
- Improving gas turbine efficiency by uncertainty quantification

Prof. Tom Verstraete presented on the topic of Adjoint Based Turbomachinery Optimization, and covered aspects such as:

- Introduction to multidisciplinary design optimization for turbomachinery
- Sensitivity Analysis for Shape Optimization
- Application of adjoint methods



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Members from branches of MAFAT, Israeli Air Force, Bet Shemesh Engines, Rafael, Israeli Aircraft Industries and Technion faculty/staff/students attended the event. Total registration included over 40 participants. We have received significant positive feedback from all those who attended the sessions.

Thank you for your support,

With best regards,

Asst. Prof. Beni Cukurel