



Prof. Dr. Yusuf Özyörük
Dept. of Aerospace
Engineering

Expertise areas:

- Fixed/rotary wing aerodynamics
- Flow induced noise and propagation
- Computational modeling of energetic materials

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Recent Projects:

“Development of a noise prediction tool for helicopter rotors”, Funding Agency: DKTM - TAI Inc.

“Computational studies of aerodynamic integrity of external systems”, Funding Agency: ASELSAN Inc.

“Development of 2D and 3D high-order Navier-Stokes codes for noise predictions of wind turbines”, Funding Agency: TUBITAK

“Development of an aerodynamic panel code with shape optimization,” Funding Agency: TAI Inc.

“Turbomachinery noise radiating through the engine exhaust,” Funding Agency: EC FP6

Recent Publications:

- Özyörük Y. , Coupland J. , Tester B. , July 2015, "Numerical investigation of spinning mode transmission through variable area annular ducts with flow," ICSV22, Florence, Italy.
- Cengiz K. , Özyörük Y. , September 2015, "Zonal detached eddy simulation using a high-order low-dissipation low-dispersion computational method for aeroacoustic purposes," AIAC-2015-043, Ankara, Turkey.
- Özer C. , Özyörük Y. , September 2015, "Performance prediction of nozzleless solid propellant rocket motors," AIAC-2015-173, Ankara, Turkey.
- Narin B. , Özyörük Y. , Ulas A. , 2014, "Two Dimensional Numerical Prediction of Deflagration-to-Detonation Transition in Porous Energetic Materials," *Journal of Hazardous Materials*, 273, 44-52.
- Tester B.J. , Özyörük Y. , June 2014, "Predicting far-field broadband noise levels from in-duct phased array measurements," 20th AIAA/CEAS Aeroacoustics Conference, Atlanta, USA.
- Cengiz K., Özyörük Y., July 2013, "Helmholtz-type Numerical Simulation of Thermo- acoustic Instabilities in a 3-D Rijke Tube," in 49th AIAA/ASME/SAE/ASEE Joint Propulsion- Conference, AIAA-4060, San Jose, CA.
- Özyörük Y., Tester B.J., 2011, "Application of frequency-domain linearised Euler solutions to the prediction of aft fan tones and comparison with experimental measurements on model scale turbofan nozzles," *Journal of Sound and Vibration* , 330, 2846-3858.