

# Antiopi-Malvina Stamatellou

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Laboratory of Fluid dynamics and Turbomachinery  
Aristotle University of Thessaloniki

## EDUCATION

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**PhD candidate ‘Piezoelectric energy harvesting from flow-induced and mechanical vibration’: Aristotle University of Thessaloniki, Greece (September 2018 - Today)**

The project is an experimental investigation of the characteristics of the vibration of energy harvesters with the aim of increasing their power output and enabling their use in real applications (powering WSN nodes) where they will replace or lower the need for battery use. The investigation involves the disciplines of fluid-structure interaction and piezoelectric transduction.

**Diploma in Mechanical Engineering: Aristotle University of Thessaloniki, Greece (September 2012 – April 2018)**

- **Bachelor** – Mechanical engineering
- **Integrated master** – Aeronautics, CFD, Turbomachinery and Internal combustion engines
- **Diploma Thesis** – ‘Experimental investigation of energy harvesting from turbulent flows using piezoelectric transducers’

## PUBLICATIONS

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- **Stamatellou A-M**, Kalfas A.I. Piezoelectric energy harvesting experiments under combined aerodynamic and base excitation. *Journal of Intelligent Material Systems and Structures*. August 2020. doi:10.1177/1045389X20952534
- **Stamatellou, A.-M.**, & Kalfas, A. I. (2019). Testing of piezoelectric energy harvesters isolated from base vibrations. *Energy Conversion and Management*, 196, 717-728. doi:https://doi.org/10.1016/j.enconman.2019.06.046
- Foteinos, I. M., Papazoglou, A., Kyratatos, P. N., Stamatelos, A., Zogou, O., & **Stamatellou, A.-M.** (2019). A Three-Zone Scavenging Model for Large Two-Stroke Uniflow Marine Engines Using Results from CFD Scavenging Simulations. *Energies*, 12(9). doi: 10.3390/en12091719
- **Stamatellou, A.-M.**, & Kalfas, A. I. (2018). Experimental investigation of energy harvesting from swirling flows using a piezoelectric film transducer. *Energy Conversion and Management*, 171, 1405-1415. doi: https://doi.org/10.1016/j.enconman.2018.06.081
- **Antiopi-Malvina Stamatellou**, Anestis .I Kalfas, Design Optimization of a Piezoelectric Energy Harvesting Test Rig with Swirling Air Flow, in Flow 2018. 23-24 November 2018: Kozani, Greece.

## WORKING EXPERIENCE

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**SIELMAN S.A., industry of manufacturing and maintenance of defense systems: Volos, Greece – Design and manufacturing engineer**

- 3D printing – prototyping
- Design of a dust extraction system
- Design and manufacturing of devices to test the tolerance of incoming parts

## SKILLS & LANGUAGES

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- **Languages:** Fluent English and Greek. Good French, basic German.
- **IT Skills:** Experienced with SolidWorks, ANSYS Fluent and CFX, MATLAB, AutoCAD, MS Visual Studio.
- **Experimental techniques:** Pressure, temperature and flow velocity measurements, laser flow visualization, infrared thermography, Arduino – Matlab (Data acquisition & Control)
- **Memberships:** Technical Chamber of Greece, ASME