**Name: TOUMASATOS ZISIMOS**

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**Date of Birth:** 29/09/1989

**Nationality:** Greek

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| Work experience | |
|---|---|
| 2016–2017: | Military service as Second Lieutenant Reserve Officer in Hellenic NATO Army |
| 2013–2015: | Research Assistant in the Laboratory of Applied Thermodynamics (LAT) in Mechanical Engineering Department of Aristotle University of Thessaloniki |
| 2012–2013: | Participation in cofounded by E.U LIFE project SMARt – CHP. During this period i was conducting experiments in small scale gasification unit in order to investigate the use of biomass for decentralized combined heat and power. SMARt - CHP awarded as one of the 20 best E.U. LIFE projects for 2013. |
| 2010: | Two months' period internship in KREKA S.A. Biogas production unit. Control operation and maintenance of the unit was in my duties. |

| Education | |
|---|---|
| 2016-2017: | Eastern Macedonia and Thrace Institute of Technology |
| | Msc in Oil and Gas Technology (pending) |
| 2008-2014: | Aristotle University of Thessaloniki |
| | Dipl.-Ing, Mechanical Engineering specialized in Energy |
| | Grade 7.43 (out of 10) |
| 2004-2007: | High school degree, grade 19.4 (out of 20) |
| | Commendation for high performance (2001-2007) |

## Diploma Thesis

Experimental study of internal combustion engine operation characteristics, supplied with producer gas from biomass gasification.

Experiments had been taken in single spark ignition engine, fueled with producer gas – propane mixtures in various proportions and from different biomass feedstocks each time.

## Selected Coursework

Thermodynamics I, Thermodynamics II, Heat transfer, Heating, Electronics, Mechanical Laboratory, Fluid mechanics, Aerodynamics, Thermal Turbine, Turbomachinery Technology, Internal Combustion Engines, Gasification, Cogeneration

## Academic Design projects

**Central Heating & Cooling Design**

Energy demand calculation of two stage building. Thermal heating and cooling diagram design and selection of the proper equipment (Valve, pump, boiler, expansion tank, heater, radiator)

**Internal combustion engine modelling**

Development and calibration of engine model in Matlab & AVL Boost for prediction of heat release and in-cylinder pressure. Analysis of engine operational characteristics using different scenarios such us valve timing, exhaust gas recirculation system

**Cogeneration Systems using biomass**

Investigation of the possibility of using biomass residues in gasification unit coupled with internal combustion engine for cogeneration (electricity and heat)

**Techno economic evaluation of 10kw photovoltaic unit**

Full techno-economic analysis of 10 kw photovoltaic system installation in building

## Publications & Seminars

2015: Development of a Template Model and Simulation Approach for Quantifying the Effect of WLTP. Introduction on Light Duty Vehicle $CO_2$ Emissions and Fuel Consumption (SAE)

2014: Experimental study of combustion in a spark ignition engine operating with producer gas from various biomass feedstocks (ELSEVIER / FUEL)

2010: 7th National Conference "Fluid Flow Phenomena - FLOW 2010" (http://tetraktys.meng.auth.gr/flow2010/)

2011: Introduction into the use of ANSA and META software (BETA CAE Systems) (http://www.beta-cae.gr/)

## Computer literacy

| Operating Systems | Software | Other |
|---|---|---|
| Windows | AutoCAD/Solidworks | Microsoft Office |
| Linux | Matlab | Visual Studio |
| | AVL Boost - Cruise | Lindo |
| | Fortran | Ansys |

## Memberships & Activities

Member of Technical Chambers of Greece

Member of philharmonic orchestra of Pangaion and Chortatis municipality

## Languages

English (full professional proficiency), Greek (native language)

## Interests

Reading, Fishing, Cycling, Travelling, Cinema, Stamp collection, Folk dancing, Agriculture engineering, Wine making, escargot farming.