Marius Ștefan Enache

Bucharest, Romania

WORK EXPERIENCE

01/06/2018 – CURRENT

Research and development engineer (Combustion)

National Research and Development Institute for Gas Turbines COMOTI 220 D Iuliu Maniu Bd., 061126 B

- Combustion chambers design, manufacturing, testing and development;
- Low and high pressure combustion experiments;
- Experimental measurements of combustion chamber, flame stability and aero dynamical parameters;
- CFD analysis for reactive and non-reactive flows;
- Experimental measurements and numerical simulations for micro and small propulsion systems;
- Non - intrusive Laser based measurements of velocity, gas composition and temperature;
- Experimental measurements of non-conventional gaseous and liquid fuelled combustion;
- Renewable energies experiments: biomass, gasification, biofuels combustion.

10/03/2016 – 31/05/2018

Research assistant - Mechanical Engineer

National Research and Development Institute for Gas Turbines COMOTI

- -Design of aircraft combustion chambers;
- -CFD analisys of combustion in aerospace engines and other propulsion systems;
- -Responsible of tehnical quality control;
- -Assembly the parts necessary for running the experiments and measurements;
- -Pyrolysis of biomass, degraded engine oil, crude oil;
- -Author of several research papers.

Professional, scientific and technical activities / www.comoti.ro / 220 D Iuliu Maniu Bd., 061126, Bucharest, Romania

22/06/2015 – 25/09/2015

Mechanical engineering technician (Erasmus+ Internship)

Arjakon Ltd.

- - Building Energy Optimization;
- - Maintenance of air conditioning units;
- - Relations with customers and suppliers;
- - Updating main office's database;
- - Administration of the company's warehouse;

Electricity, gas, steam and air conditioning supply / http://www.arjakon.com / Triq Testaferrata, XBX 1402, Ta' Xbiex, Malta

EDUCATION AND TRAINING

01/10/2018 – CURRENT – Bucharest, Romania

PhD Student - Research in the field of combustion in gas turbines

University Politehnica of Bucharest

The topics chosen for this purpose were flame structure, flame holding/extinction, chemical kinetics, turbulence-kinetics interaction, transition to detonation, and reacting free shear layers. The flow trough porous media was investigated in order to limit the flash-back fenomena for hydrogen-methane gas mixtures in high intensity turbulent reactive flows.

Field(s) of study

- Combustion

EQF level 8

15/10/2019 – 20/10/2019 – Craiova, Romania

Certificate ANSYS CFD (CFX & FLUENT) v.2019 R3

INSA S.A.

09/10/2017 – 13/10/2017 – Waterloosesteenweg 72 B-1640 Sint-Genesius-Rode, Brussels, Belgium

Specialist in Measurement Techniques

The Von Karman Institute For Fluid Mechanics

The objective of this course was to provide young engineers with a broad overview of traditional and advanced measurement techniques applicable to fluid dynamics. Each measurement technique and its field of application was described. Limitations and advantages were discussed and special attention was given to the subject of error estimation.

- 1. Components of a measurement chain
- 2. Measurement uncertainties and errors
- 3. Transducers
- 4. Pressure measurements
- 5. Temperature measurements
- 6. Hot wire anemometry
- 7. Optical measurement techniques
- 8. Flow visualisation
- 9. Force measurements
- 10. Signal displays, recording & processing

https://www.vki.ac.be/

01/10/2016 – CURRENT – Bucharest, Romania

Master studies in Mechanichal Engineering - The Management of Thermal Systems and Equipment

University POLITEHNICA of Bucharest

The Faculty of Mechanical Engineering

Research in Thermodynamics, motors, heating and refrigeration equipment:

- Renewable energy: - Solar collectors, concentrators, passive houses, radiative regime;

- Burning fossil and renewables fuels ;

- Waste energy recovery;

- Reducing emissions of pollutants and greenhouse gas emissions;

-Disciplines: -Advanced Thermodynamics;

-Thermoeconomic analysis of thermal systems, refrigeration and conditioning;

-Participation in various fuels and energy conferences related to my research background.

EQF level 7

29/08/2016 – 20/09/2016 – Bucharest, Romania

Certificate in CAD/CAM/CAE

INAS S.A. & University Politehnica of Bucharest

Courses

- Introduction to ANSYS CFD v. 17;
- Introduction to ANSYS SpaceClaim Direct Modeler v. 17.

01/10/2012 – 31/05/2016 – Splaiul Independentei nr. 313, sector 6, Bucharest, Romania

Bachelor studies in Mechanichal Engineering - Thermal Systems and Equipment

University POLITEHNICA of Bucharest

The Faculty of Mechanical Engineering and Mechatronics

Achievements:

-1st place at Scientifical Session of Students Debates - "The efficiency of a condensing boiler for underfloor heating combined with solar panel modules"

- 3rd place at Scientifical Session of Students Debates (Study on the subject:" Rolul motivatiei in recuperarea medicala" - "The role of motivation in the medical recovery".

-Disciplines: Steam generators; Steam and gas turbines; Engines with internal combustion; Refrigeration and air conditioning technology.

-3rd best ranked of my class (Thermal Systems and Equipment).

Field(s) of study

- Engineering and engineering trades

EQF level 6

01/09/2008 – 15/06/2012 – Strada Nicolae Titulescu, Nr 37, Caracal, Romania

High school Diploma

Colegiul National "Ionita Asan"

Mathematics; Computer Science; Chemistry; Physics; Biology.

- 1st Place at "**Cassini Scientist for a day" - Organized by NASA ;**
- 3rd Place at "**ChimExpert regional contest**".

EQF level 4

LANGUAGE SKILLS

MOTHER TONGUE(S): Romanian

OTHER LANGUAGE(S):

English

Listening	Reading	Spoken production	Spoken interaction	Writing
B2	B2	B2	B2	B2

French

Listening	Reading	Spoken production	Spoken interaction	Writing
A2	A2	A2	A2	A2

PUBLICATIONS

Publications

- "The design of an annular combustion chamber" - 6th CEAS Air & Space Conference - Palace of the Parliament - Bucharest, Romania ISBN: 978-973-0-25597-3
- "Experimental studies on injection nozzle flame stability for gas turbines using in-situ combustion applications"- 6th CEAS Air & Space Conference - Palace of the Parliament - Bucharest, Romania ISBN: 978-973-0-25597-3 & Transportation Research Procedia 00 (2017) 000–000 ELSEVIER

CONFERENCES AND SEMINARS

Conferences

"THE ANALYSIS OF THE COMBUSTION OFPREMIXED METHANE-HYDROGEN MIXTURES STABILISED BY AN INNOVATIVE SWIRL INJECTOR" - 10th Mediterranean Combustion Symposium Naples, Italy 17-21 2017

ORGANISATIONAL SKILLS

Organisational skills

- leadership (responsible for a group of 32 people).
- good organisational skills gained as event plannner, responsible for meetings and promoting events.

COMMUNICATION AND INTERPERSONAL SKILLS

Communication and interpersonal skills

- good communication skills gained through my experience during the internships in a foreign country.
- excellent contact skills with children and adults gained through my experience as karate volunteer coach.

JOB-RELATED SKILLS

Job-related skills

- good command of quality control processes (currently responsible for technical quality control)
- mentoring skills (as warehouse master, I was responsible for the training and induction of new warehouse staff)