PERSONAL INFORMATION   Niccolò Fiorini

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Date of birth 31-12-1988

Nationality Italian

PROFILE

My experience as PhD student allowed me to work closely with companies on industrial processes. In particular, I carried out numerical analysis for energy optimization of reciprocating compressor and internal combustion engines. More in detail, together with a research team of the University of Florence, I contributed to the development of a one-dimensional numerical model for the analysis of reciprocating compressors, useful tool for the optimization of the compression process. Mainly working with numerical software for one dimensional modeling I also practiced experimental analysis on an acoustic test bench for acoustic characterization of silencing devices.

WORK EXPERIENCE

November 2015 – October 2018   **PhD student**

University of Florence – Faculty of Engineering, Florence (Italy)
- One dimensional modeling on reciprocating compressors in partnership with Baker Huges, a GE company.
- One dimensional modeling on internal combustion engine in collaboration with Beta motors spa and Piaggio srl.
- Experimental and numerical analysis on silencer components for acoustic characterization.

April 2014 – November 2014   **Internship during studies as mechanical engineer**

LINEA Lab Prato, Università degli studi di Firenze. Study and numerical simulation in the acustic field on mufflers for reciprocating engines.
Assimilated competencies:
- Matlab
- LMS Virtual Lab (application in the acoustic field)
- Hypermesh

September 2011 – March 2011   **Internship during studies as mechanical engineer**

Dipartimento di energetica - University of Florence, Faculty of Engineering, Florence (Italy)
Numerical simulations and analysis on ORC plant

EDUCATION

January 2015 – March 2015	**Intensive English course in Bristol, UK** Study of English at EF school 8 weeks Experience abroad
March 2012 – November 2014	**Master's degree in Energy Engineering** Università degli studi di Firenze; department of engineering Grade 110/110 Dissertation about "Analysis and development of an active noise reduction system for automotive industry"
September 2007 – March 2012	**Bachelor's degree in Mechanical Engineering** Università degli studi di Firenze, department of engineering Grade 100/110 Dissertation about "Analysis and numerical simulation on energy ORC system"
September 2002 – June 2007	**High School/Secondary Diploma** Liceo scientifico Castelnuovo, Firenze Grade 85/100

Personal skills

Mother tongue   Italian

Other language(s)   English

UNDERSTANDING		SPEAKING		WRITING
Listening	**Reading**	**Interaction**	**Production**	
B2	B2	B2	B2	B2
Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user Common European Framework of Reference for Languages				

IT competencies   Good mastery of:

- Windows environments and Microsoft Office tools
- Ricardo WAVE software
- GT Power
- Matlab language

Fairly good knowledge of:
- C language
- Altair Hyperworks (Finite Elements Modelling code)

Publications

1. *"An indirect in-cylinder pressure measurement technique based on the estimation of the mechanical strength acting on an engine head screw: development and assessment",* 73rd Conference of the Italian Thermal Machines Engineering Association, 2018
2. *Large size reciprocating compressor analysis with a Finite Volume 1D model,* 3rd International Rotating Equipment Conference (IREC), 2016

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