

ILARIA MARIA PAPONETTI

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The hardest part is usually believing it so much that you take the risk and start the venture

EDUCATION

Alma Mater Studiorum University, Bologna

Jan 2016 - Mar 2019

M.Sc cum laude in Energetical and Nuclear Engineering

Master's thesis in Implementation of a code to calculate mechanical deformation of an assembly, caused by thermal and neutron flux gradients, in a IV generation Nuclear Reactor

University of L'Aquila, L'Aquila

Sept 2011 - Dec 2015

Bachelor's degree in Industrial Engineering, Mechanical curriculum.

Bachelor thesis in Analysis of performance in a refrigerating machine with single and variable speed compressors.

SKILLS

Foreign languages: English, Spanish

Programming languages: c++, Fortran90

Software & Tools: Matlab, Simulink, Octave, Paraview, Thermoflex, Openfoam

RESEARCH EXPERIENCES

ENEA, TERIN

April 2021 - April 2022

Research fellow in CROSS-TECH laboratory, Bologna

- Validation of a Numerical Code, using the OCTAVE software, to calculate Electric Power produced from Photovoltaic Plants.
- Implementation of a code, using the OCTAVE software, to calculate real electric energy production from Photovoltaic Plants, considering losses for cells temperature, light polarizations, spectrum effects etc...
- Modeling the Van der Waals equation for hydrogen compressed (as a real gas), to analyze the economical and energetical advantages of the electrolyzer that produces hydrogen at high pressure, despite of the traditional one that is followed by a compressor that lead it from atmospheric to the storage pressure.
- Studying of Energy communities, to analyze the consumption of the renewable electric energy that they produce independently, the possibility of storage and the use of geothermal heat pumps, according to analysis of their habits and work rhythm, depending on different factors.

ENEA, FSN

Nov 2018 - Mar 2019

Internship, Laboratory of Technologies, Plants and materials for Nuclear fission. Bologna.

Implementation of a code for numeric calculation, using the FDM to discretize the equation of the elastic line for the axial deformation of an assembly in a lead refrigerating Reactor. At each point of discretization the contributes of internal bending moments, caused by thermal and neutron flux gradients, were calculated for each face of the wrapper hexagonal section, and then added up. As a results, the code was validate comparing the axial deformation, in stationary conditions, with the State of Art.

PROJECTS

ENEA, TERIN, E-CO2 PROJECT

Apr 2021 - April 2022

Research fellow

E-CO2 project, financed by The Emilia-Romagna Region, through the design, construction and testing of different prototypes, aims to demonstrate the technical feasibility of closing the supply chain which, starting from the separation, capture of CO2 in industrial sites, uses CO2 in the production of fuels innovative products with low environmental impact and their use by end users.

ENEA, TERIN, SELF-USER PROJECT

Apr 2021 - April 2022

Research fellow

The Self-User project, promoted by the ART-ER CLUST-ER, an in-house company of the Emilia-Romagna Region, will develop a new model of Energy Community within a condominium complex. It studies the topic of Renewable Energy production, the relative storage, the use of Geothermal Heat Pump in a complex of 48 appartements.

LANGUAGES CERTIFICATES

British Council, Milan

Feb 2021

IELTS TEST, level 6

QUALIFICATION

Alma Mater studiorum, Bologna

July 2019

Energetical Engineer.

WORK EXPERIENCES

Schneider Electric, Milan

July 2019 - July 2020

Sales-Engineer

- Interface with International Automation Market, particularly with the OEM, original equipment manufacturer.
- Technicalities about selling, problem solving facing different supply Chain of National prestige.
- Working in different group facing with people of different ages and educations.
- Strategies of communications and expositions.

Formamentis SRL, Bologna

Nov 2017 - Nov 2018

Private Teacher

- Teaching different university and school subjects to students from different educations and curriculum.