



SIAD Ines

Electrical Engineer – Specialty in Powertrain Engineering PhD Student

ABOUT ME

Honors graduate from École Nationale Polytechnique of Algiers with a degree in Electrical Engineering, specialized in Powertrain Engineering from IFP School, and currently a PhD student.

Highly motivated, insightful, and adaptable with strong multi-tasking and communication skills. Dedicated to excellence and committed to giving 100% in every endeavor.

CONTACT

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Ile-de-France - France

LANGUAGES

French (C2 Level)
English (C1 Level)
German (A2 Level)
Arabic (Mother tongue)

SKILLS

- Office Pack (Word, Excel, PPT.)
- LaTeX
- Analytical and numerical calculation methods
- Machine learning

Softwares

MATLAB/Simulink ●●●●●●●●

FEMM ●●●●●●●●

NI Multisim ●●●●●●●●

Zelio soft ●●●●●●●●





Programming Languages

MATLAB ●●●●●●●●

Python ●●●●●●●●

C ●●●●●●●●

EDUCATION

- PhD in Electrical Engineering**
11/2023 - 10/2026 Rueil-Malmaison, France
IFP Energies nouvelles
Optimization of modular power electronics converter and energy management to increase the lifespan and availability of multi-stacks Fuel Cell systems.  
- DIS in Powertrain Engineering**
09/2022 - 12/2023 Rueil-Malmaison, France
IFP School
Specialized engineering studies in Powertrain Technologies design, modeling, simulation, and control. 
- MSc. in Electrical Engineering**
09/2017 - 12/2020 Algiers, Algeria
École Nationale Polytechnique
Graduate studies in Power Electronics, Electrical Machines and Control, Power systems and High Voltage Engineering. Completion of several Projects and Internships. 
- ERASMUS+ Exchange Program**
02/2020 - 06/2020 Nancy, France
École Nationale Supérieure d'Électricité et de Mécanique
Study abroad Scholarship for a spring term master's in management of electrical energy and electromechanical systems (GENESE). Focus on: Numerical modeling of electromagnetic devices; Transient and unbalanced regimes of electrical machines. 
- Preparatory Courses for Engineering Schools**
09/2015 - 07/2017 Algiers, Algeria
École Nationale Polytechnique
Undergraduate studies in engineering sciences. Success in the national entrance examination for National Graduate Schools. 
- Baccalaureate**
06/2015 Algiers, Algeria,
Mohammed Hadjres High School
BAC Mathematical series, with Honors

EXPERIENCES & INTERNSHIPS

- IFP School Final Project**
07/2023 - 10/2022 Rueil-Malmaison, France
IFP Energies Nouvelles
IFP School Powertrain program graduation internship, preparation for the PhD work. Bibliographical research on Fuel Cell systems in multi-stack/multi-storage configurations. Development of a simulation tool to simulate power converters at the switching frequency level. Comparison of different power architectures. Determination of the physical limitations of components to develop energy management control laws of hybridized sources. 
- IFP School Final Project**
02/2023 - 06/2022 Rueil-Malmaison, France
Green-GT
Creation of an environment model for Fuel Cell Electric Vehicles (FCEV) with MATLAB Simulink. Each component of the FCEV powertrain was accurately and individually modeled (Fuel Cell System, DC/DC Boost converter, High Voltage Battery, Inverter and Motor). These powertrain components were then assembled for two targets: Sizing the powertrain components based on speed, load, and slope profiles to meet the specifications; Performing Model in the Loop (MIL) tests for Electronic Control Unit (ECU) software strategies. The work was presented to a jury of specialists and rewarded by the 3rd prize in the student poster session at the international congress of the Société des Ingénieurs de l'Automobile (SIA) 
- Graduation Internship**
02/2020 - 11/2020, Nancy, France
Groupe de Recherche en Énergie Électrique de Nancy
Study and design of permanent magnet stepper motors for a positioning system in aeronautics (Use of the cogging torque as a notching mechanism for the device, to ensure its blocking in the absence of power supply. Comparative analysis of the electromagnetic performances of different topologies) 
- Internship**
12/2019 Algiers, Algeria
SETRAM, Algiers tramway operational unit
Operating principle of the tramline and its power supply (Electrical distribution network, Electrical traction motors and control, maintenance, consignment, and habilitations) 
- Internship**
04/2019 Algiers, Algeria
COLAS RAIL ALGÉRIE
Basic concepts in the field of electric railway traction applied to the Algiers Metro (Energy network, traction network, control, and command) 
- Internship**
12/2017 and 03/2018, Algiers, Algeria
SONELGAZ
Working principle of renewable energy power plants (Photovoltaic systems PV, wind energy). Working principle of a gas-fired power plant, its characteristics and command found in EL HAMMA Power plant. 