

Location: Sophia-Antipolis, France  
Employment type: Experienced Professional  
Contract type: Permanent position

Ref: **RD\_SYS\_ENG**

## ELECTRIC POWERTRAIN SYSTEM EXPERT

The Automotive industry is living a revolution. Electrification, autonomous driving, diverse mobility, connectivity are trends that are drastically changing the industry's rules. Among all decisive topics revolutionizing cars in the next future, Silicon Mobility is committed to support the rapid advent of electric and hybrid cars.

Silicon Mobility is a full-stack automotive technology player powering control solutions for a cleaner, safer and smarter mobility. The Company's semiconductor, tools and software solutions provide energy efficiency and pollutant emissions reduction while keeping passengers safe.

The Company is opening an **Electric Powertrain System Expert** position in its main Research and Development center ideally located in the Sophia-Antipolis Technology Park on the French Riviera.

You are a brilliant and passionate Electric Powertrain System Expert? You want to support the development of disruptive products accelerating the car's powertrain electrification? At Silicon Mobility, we like to light up our employee's potential. Are you up for the challenge? Contact us: send your resume and cover letter to [hr@silicon-mobility.com](mailto:hr@silicon-mobility.com)

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### ROLE & MISSIONS

As part of the System Engineering team, you will be in charge of the specification, development, validation and verification of control algorithms for electrical motor drive inverters, DC/DC converters and On-Board Charger (OBC) for current and future Hybrid and Electric Vehicles.

Primary responsibilities of the position include:

- Technically lead design and development of our motor control application software and DC/DC converter control software to achieve the best performances and safety responses
- Inverter controller, DC/DC converter and AC/DC (OBC) control loop algorithms specification, development
- Model-in-the-Loop (MiL) simulation and Hardware-in-the-Loop verification
- Hardware-in-the-Loop (HiL) automation tests
- Calibration and overall KPI measurements of our control software solutions on high voltage electric motor test benches
- Technical support to customers when required

The position requires pro-active involvement with all departments of the company. You will also be interacting with our customers and suppliers.

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### REQUIRED SKILLS AND EXPERIENCE

EDUCATION:

- MSc or PhD from a top tiers' university degree in electrical engineering



#### TECHNICAL SKILLS & EXPERIENCE:

- A minimum of 10 years of experience in algorithm model development for electric motor control, inverter control, DC/DC converter and/or AC/DC charger
- An excellent knowledge of state-of-the-art optimized system control of automotive electric motors available on the market.
- A strong experience in system calibration on high voltage electric motor test bench
- A strong experience in dSPACE HiL system modelling and automation tests
- A perfect knowledge of Matlab/Simulink modeling
- A good knowledge in automatic code generation from models (C and/or VHDL/Verilog)
- Very familiar with automotive industry standards and the software quality processes (A-SPICE, CMMI, MISRA)
- Functional safety ISO 26262 knowledge and experience is a plus
- Experienced on ARM or other 32 bits RISC CPU environment
- Experienced on AUTOSAR, Lauterbach tooling
- CAN communication tools experience
- Working experience with high voltage electric systems used in EV or PHEV at an automotive OEM is a plus

#### LANGUAGE SKILLS:

- Fluent in English
- German or Chinese speaking is a plus

#### BEHAVIORAL SKILLS:

- Be self-motivated, pro-active, flexible, and capable of accepting new challenges.
- Demonstrate strong communication skills at technical and management levels.
- Must display ability to identify problems, recommended solutions and negotiate/execute contingency plans.
- Be able to work well across different teams within Silicon Mobility to understand their individual needs and constraints.

