

# Function Development, Application and Test

## Ihre Aufgaben

### Job description:

The system integration requirement, test and control function application engineer is an hybrid engineer able to work across the development V cycle. He/She has a wide ranges of technical knowledge.

He/She is responsible for the correct Electronic Brake Systems Function development, Application and test on the Benches & vehicle. She/He is able to manage requirement analysis, Feature development, rapid prototyping, HIL/vehicle testing and control functions application and development.

Manage the SensePlanAct Customer requirements related to the driving and assistance control functions.

Ensure quality and software releases according to the Continental and OEM processes.

Interface internally (with other team) and externally (OEM) for a successful control function implementation on Project.

## Reporting

The resource will report to the integration and application leader.

## Tasks:

- Control Function Development and Integration Engineer (Development according to ISO 26262 and SE / Automotive Process)
- Control function Requirements Engineer
- Simulation with MATLAB / Simulink - Model Base Design (When needed/requested), rapid prototyping
- Development of control algorithms (When needed/requested)
- Creation and maintenance of the functional architecture
- Evaluation and definition of the interfaces between the components
- Create requirements specification for the System (HW components & Interfaces), Software, Vehicle Interfaces
- Consolidate internal functional and safety requirements
- Create and adapt functional safety concepts
- Create prototype software for vehicle functions in C programming language (When needed/requested)
- Implementation, application and testing of the developed functional components



Job ID  
**REF16402S**

Arbeitsbereich  
**Forschung und Entwicklung**

Standort  
**Torino**

Leadership Level  
**Leading Self**

Job Flexibilität  
**Hybrid Job**

Ansprechpartner  
**Paola Fornasari**

Rechtliche Einheit  
**Continental Automotive Italy  
S.p.A.**

- Handling the requirements analysis according to internal processes
- Drive/Steer the control functions related topics in your project
- Plan the function and maturity relevant project milestones & timing with the project team
- Coordinate and track project milestones and schedule to ensure achievement of goals
- Ensure the implementation, verification, and validation of all functional requirements in the project
- Plan and execute function and application testing on vehicle and HIL/SIL
- Support for the handling of test equipment and maintenance of test vehicles and needed test tools
- Control Functions improvement (or new development) based on any research project (model Base Design, C Code, Rapid prototyping, ...)
- Interface with other department personnel in resolution of development issues from above (System, SW, Architecture, ...)
- Collaborate cross BU when our system has a multiple interface with other Continental system on vehicle or for Advanced/Innovation projects
- Interface to customer (OEM) for all function related issues of your project
- Active steering. Agree and steer new request with Stellantis Engineers, find a win-win solution
- Continuous improvement: improve customer perception through excellence in customer interaction. Capability to increase information flow & understanding between customer and Continental Teams

#### **Additional responsibility & support:**

- to support in vehicle model development and/or refinement
- to support in the logic implementation in case of virtual ECUs (proper signals identification, reference system and units);
- VF Implementation & Verification support
- bus communication set-up between model signals and ECU or between two different ECUs (the ECUs could be either physical or simulated depending on the system requirements);
- CarMaker scenarios definition and/or adaption depending on desired requirements.
- Support to create a flexible architecture to ensure the SIL/MIL/HIL closed loop simulation on OEM & Conti Test benches.
- Test cases definition according to customer & Internal continental needs
- Test automation when feasible
- Data collecting / Failure analysis/ reports generation

#### **Quality & stakeholders' satisfactions**

- Ensure Quality in all the related responsibility, processes according to continental & customer requirements
- Customer & CES/Continental Interfaces
- Establish Lessons learned process & feedback culture within the Conti & OEM interfaces

#### **Required knowledge & skill**

- Good Knowledge on Automotive Software development for control functions modelling
- Good Knowledge on Functional Safety ISO 26262
- Good Designer knowledge on of HIL Test Bench, including HW, SW and tests case
- Good Knowledge on CARMAker / IPG SW & Tools
- Good Knowledge of Diagnostic, BUS (Message Map, Network Management, Transport protocol), FlashLoader, Cyber Security, Autosar, FSF, Vehicle Functions)
- Experience of analytic testing and trouble shooting in Bench, test environments (HIL, SIL, ...) and plant facilities
- Experiences with CAN, DIA (ISO), FSF, Vehicle Functions, E&E Architectures
- Good Knowledge for:
  - Matlab, Simulink, C code programming, Rapid prototyping, CANoe (Including CAPL Script generation), Canalyzer (Including CAPL Script generation), Dianalyzer, Office packages, Automotive Linux
  - HIL Bench architecture
- Hand over experiences
- Complex system engineering experiences
- Knowledge of IEC 61508 or SPiCE processes (level 3 target)
- Desired a good knowledge on vehicle, vehicle components, vehicle dynamic,
- Knowledge on ESC/ABS, ADAS Components: Camera & Radar
- Knowledge on HAD (Autonomous driving features)

## Ihr Profil

### QUALIFICATION/REQUIREMENTS (including education):

- Graduated with master thesis on one of the following engineering fields: Mechanics, Electronic, Informatics, Electrical, Mechatronics, Automation, Aerospace or equivalent (to be evaluated)

## Unser Angebot

### Languages

- English à Fluent
- Italian à Mother Language
- German à Desired

### Soft Skills:

- Good team worker, problem solving oriented, flexibility, ability to take good decisions (win-win) quickly.
- Good international social skills and drive-force to get the required support from all the responsible persons within Conti and OEM requirements and testing departments to solve the issues, with

quality, on time.

- Authority to lead/steer meetings (@ Continental and Customer) discussing issues and their solutions.
- Excellent communication skills.
- Continue improvement & motivation for knowledge increase.
- Proactive behavior.
- Team player with strong focus on final target
- Self-dependent with a high degree of passion, dedication, and commitment
- Ability to travel frequently, no blocking points
- Big passion on vehicle particularly on vehicle SensPlanAct controls
- Excellent performances in learning new tools, new technologies and development process
- Ability in summarizing succinctly and precisely

## **Others**

- Driving License B
- Good Driving Skills

Ready to drive with Continental? Take the first step and fill in the online application.