

## Postdoctoral

Ecole/Institution/Société:  
**CEA TECH, France / Grenoble**

Discipline:  
**Artificial Intelligence, Robotics**

Type d'emploi::  
**Full-time**

Date de publication:  
**2020-05-07**

Personne à contacter:  
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### Post Doc - MDE approach to AI-based planning for robotic and autonomous systems

**Job:** PsD-DRT-20-0063

**Research Field:** Artificial intelligence & Data intelligence

#### **Abstract**

The complexity of robotics and autonomous systems (RAS) can only be managed with well-designed software architectures and integrated tool chains that support the entire development process. Model-driven engineering (MDE) is an approach that allows RAS developers to shift their focus from implementation to the domain knowledge space and to promote efficiency, flexibility and separation of concerns for different development stakeholders.

One key goal of MDE approaches is to be integrated with available development infrastructures from the RAS community, such as ROS middleware, ROSPlan for task planning, BehaviorTree.CPP for execution and monitoring of robotics tasks and Gazebo for simulation. The goal of this post-doc is to investigate and develop modular, compositional and predictable software architectures and interoperable design tools based on models, rather than code-centric approaches.

The work must be performed in the context of European projects such as RobMoSys ([www.robmosys.eu](http://www.robmosys.eu)), and other initiatives on AI-based task planning and task execution for robotics and autonomous systems.

The main industrial goal is to simplify the effort of RAS engineers and thus allowing the development of more advanced, more complex autonomous systems at an affordable cost.

In order to do so, the postdoctoral fellow will contribute to set-up and consolidate a vibrant ecosystem, tool-chain and community that will provide and integrate model-based design, planning and simulation, safety assessment and formal validation and verification capabilities.

#### **Location**

Département Ingénierie Logiciels et Systèmes (LIST)

Labo.conception des systèmes embarqués et autonomes

**Contact Person**

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**Job Details:**

**Title: Post Doc** - Application of a MDE approach to AI-based planning for robotic and autonomous systems

**Employer:** CEA Tech

**Job types:** Postdoc

**Fields:** Informatics, Information Science, Algorithms, Artificial Intelligence, Artificial Neural Network, Computer and Society, Computer Architecture, Computer Communications (Networks),

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