

**Job Description: Research scientist/engineer (M/F) for the Royal Military Academy,
Department Communication, Information, Systems & Sensors (CISS)
IRIS ('Intelligent Recognition Information System')**

Publication date : Jan 2020

1. Job description and associated tasks

In the framework of a research project funded by the Walloon Region and conducted in collaboration with other academic and Industrial partners, we are looking for a research scientist/engineer with a master's degree in Electrical Engineering (Applied Sciences, Engineering Sciences), Physics, Computer Science or Mathematics.

The project consists in developing an AI-based system to extract information about ground targets (vehicles, people, ...) from images from camera's on-board a vehicle, looking outwards at 360°. From that information, a situational awareness map is to be created from which a threat analysis is conducted. The Royal Military Academy is more specifically in charge of the creation of the situational awareness map, modelling the environment to extract the location the most susceptible to be used by a threat and a modelling of threat behaviour (trajectories, speed, ...) in order to assess a threat probability to each target.

The successful candidate will have, in cooperation with his colleagues and partners, to devise the necessary algorithms, implement, evaluate their performance and validate them. There are no specific constraints as to the methods that have to be used. The candidate is also expected to publish the relevant results in the scientific literature while taking the industrial valorisation of these results into account.

The successful candidate will be integrated in the « Image Processing » research unit lead by Prof. Xavier Neyt. This research unit is part of the Signal and Image Centre where about 20 researchers are active.

2. Required skills

Technical skills:

- The applicant shall have a master's degree in Electrical Engineering (Applied Sciences, Engineering Sciences), Physics, Computer Science or Mathematics.
- Training or experience in pattern recognition
- Good programming skills (Python, Matlab or C++).
- Experience in machine learning or image processing is a plus.
- Knowledge of platforms such as Tensorflow, Caffe en MXN is an added value.

Specific requirement:	<ul style="list-style-type: none"> The researcher will be exposed to classified information and will therefore have to obtain the required security clearance. The candidate must consent with the background check required to obtain this clearance, which will be executed by the Belgian Defence.
Personal skills:	<ul style="list-style-type: none"> Ability to conduct scientific research at university level Ability to work independently and in a multidisciplinary research team Excellent written communication skills, both for scientific communications and for general public communications Good oral communication skills for scientific communications
Experience & other skills:	<ul style="list-style-type: none"> The applicant shall have an excellent command of the English language (to read and write scientific publications). Knowledge of French is an asset, as the project is conducted with the Walloon Region.

3. Application	
<ul style="list-style-type: none"> Candidates should send <ul style="list-style-type: none"> A motivation letter; A CV; A scan of your ID card (both sides) ; The form attached to this vacancy, filled and signed; 	<p>to Prof. Xavier Neyt (Xavier.Neyt@rma.ac.be) and to Mr Thierry Deprez (Thierry.Deprez1@rma.ac.be) .</p> <ul style="list-style-type: none"> Please mention clearly the reference of the project: IRIS Application deadline: 28 Feb 2020 An interview (+/- 30min) will take place at the Royal Military Academy, Hobbemastraat 8, 1000 Brussels.

4. Miscellaneous	
Point of contacts	<ul style="list-style-type: none"> Concerning the research project: Prof. X. Neyt (Xavier.Neyt@rma.ac.be) Concerning the recruitment modalities: Mr Thierry Deprez Thierry.Deprez1@rma.ac.be For more information about the Royal Military Academy, see http://www.rma.ac.be and for the SIC, http://www.sic.rma.ac.be/
Others	<ul style="list-style-type: none"> Probable date of recruitment: to be agreed with the applicant. Status: Open-ended contract with the patrimony of the Royal Military Academy (you will not be a civil servant). Wage scale: A11 (holders of a Master's degree in Science) / A21 (Ir or holders of a Master's degree in Engineering) Extra-legal benefits: <ul style="list-style-type: none"> Possibility to obtain a bonus for bilingualism (Dutch/French); Holiday allocation; End-of-year bonus; Hospitalisation insurance; Free public transport (home-work commute); Free access to the on-campus sport infrastructure; On-campus restaurant and cafeteria. Workplace: Royal Military Academy, 1000 Brussels, occasional travels

	abroad, measurement campaigns off campus, meeting at partner's premises.
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