

Call for a postdoctoral research associate

The naXys research institute at the University of Namur is looking for a full-time postdoctoral candidate to apply within the framework of the **BEWARE 2021 – 1** call together with the industrial partner **Aerospacelab** located in Wallonia. If awarded, the mandate covers salary, mobility allowance and operating costs for 2 years. The successful applicant will equally conduct their research within the naXys institute and the industrial partner. PhD degree is required at the time of submission.

REPORTING STRUCTURE

The position reports to Prof. Anne Lemaitre, Prof. Timoteo Carletti, Dr. Jérôme Daquin, Mikko Viitala and Benoît Deper. We expect to shortlist the successful candidate during the third week of March.

WORK AREA

The Namur Institute for Complex Systems, **naXys**, is active in the field of complex systems, with a broad expertise in the analysis of real-world phenomena, their modeling through mathematics and numerical simulations, control and optimisation. The industrial partner, **Aerospacelab**, awarded "Digital Wallonia Startup of The Year 2019", is combining AI & Machine learning techniques to develop tools to automate a broad range of tasks in geospatial intelligence. The company, hiring about 60 employees, is also building its own small satellites that should be launched later this year.

DESCRIPTION OF THE PROJECT

The near-Earth space environment, with its increasing orbital traffic, deployment of "mega-constellations" and proliferation of space junk, poses serious and growing scientific and societal challenges. One among such aspects is the assessment of the risk posed by orbital bodies to operational spacecraft. This project aims to generate innovative approaches, techniques and algorithms in the field of space traffic management and space situational awareness to better predict the time-evolution of the collisional risk. We aim to combine tools from dynamical systems theory, network science and machine learning to better apprehend, manage and advance the automation of the treatment of the satellite Conjunction Data Messages (CDMs).

RESEARCH PROFILE

- PhD degree in applied mathematics, computer science, aerospace engineering or related fields, with strong knowledge in astrodynamics,
- Experience with computational toolkits (MATLAB, Fortran, C/C++, python),
- Attitude in working as a team player, preferably within a cross-disciplinary team,
- Record of research publication relative to the opportunity is an asset,
- Developed written and verbal communication skills in the preparation of reports, presentations and publications.

HOW TO APPLY

The application consists in a cover letter, a Curriculum Vitae containing a list of publications and oral presentations, the names and contact details of two (2) scientific referees. Please send the application in a one file folder by email to jerome.daquin@unamur.be. **Deadline for the application is March 12, 2021, 5 pm (Brussels time).**

COMPLEMENTARY INFORMATIONS

Intending applicants are welcome to seek further informations and eligibility criteria on the **BEWARE FELLOWSHIPS 2** website or by contacting **Nathalie Malengreau** at the research administration. For further scientific informations, please contact Dr. Jérôme Daquin.