

The HES-SO University of Applied Sciences and Arts Western Switzerland, Geneva, is recruiting for the School of Landscape, Engineering and Architecture (HEPIA) a:

SCIENTIFIC COLLABORATOR UAS, at 100%

in the field of Aero/Hydrodynamics and Autonomous Aero/Nautical Vehicles

Fixed-term appointment of 12 months, renewable

Activities

Under the responsibility of Dr Flavio Noca (Professor), the candidate will participate in large-scale R&D projects, involving various industrial partners, in connection with drones, aerodynamics, and hydrodynamic technologies:

- Research project funded by the Swiss National Science Foundation and Innosuisse, for the use of Machine Learning algorithms to teach a windshaper, a pixelated wind facility (HES-SO patent), on how to generate real meteorological winds, in particular in a city environment, which will allow the development, testing, and certification of drones and urban air mobility vehicles of the future (<http://p3.snf.ch/project-187149>).
- Research project funded by Innosuisse, for the development of low-pressure dual air-water fog-based sprinklers for fire-fighting applications
- Research project funded by HES-SO and Swiss National Science Foundation for the development of a ground-effect autonomous flying vehicle

The candidate will be required to:

- Design and build hardware and firmware (in particular for drones, flying, floating, or immersed)
- Develop aerodynamic and hydrodynamic characterization test benches
- Carry out validation tests (in wind tunnels and in hydrodynamic tanks in particular)

Profile/Skills:

- Master's degree in the field of experimental aero/nautical engineering, aerodynamics, hydrodynamics, or equivalent fields, PhD an advantage
- Ideally with some professional experience
- Familiar with hardware (PixHawk, Ardupilot) and software (ROS, PX4, MAVLink) tools for autonomous vehicles
- Know-how in the field fluid mechanics and aerodynamics measurements (PIV, LDV, Hot Wire, Schlieren)
- Practical experience in the use of flying arenas, wind/water tunnels, and the manufacturing of aero/hydrodynamic test stands
- Proficient with programming languages (Python, Matlab, C++, or similar) and design software (CREO, SolidWorks, CATIA, or similar)
- Basic skills with numerical simulations (Ansys, OpenFoam, or equivalent)
- Fluent with the English language, for scientific publications, as well as research and working sessions with project collaborators (EPFL, ETHZ, Harvard University), and other research institutions or international companies in aerodynamics and aeronautics
- Ability to work rigorously, independently, practically, and responsibly
- Very good writing skills

Particularity of the position:

- Great flexibility is expected to meet the diverse needs of the position.

Application deadline: March 15th, 2022

Start date: as soon as possible

Place of work: Rue de la Prairie 4 – 1202 Geneva

HES-SO Geneva / HEPIA adopts a recruitment policy in favour of equal opportunities and diversity.

Complete and electronic applications only should be sent to:HR Department – Valérie Martin, RHHEPIA@HESGE.CH with the subject **RH_HEPIA_CS_TIN_GM_aero_2022**

Your records must have the following form:

PDF n°1: cover letter and CV name_cover_letter_CV_CS_TIN_GM_aero_2022.pdf

PDF n°2 : annexe name_annexes_CS_TIN_GM_aero_2022.pdf

No physical – paper records will be accepted. Unstructured files as above may be refused.

File includes: a CV, a cover letter, a copy of the titles obtained, work certificates.

ref.: **RH_HEPIA_CS_TIN_GM_aero_2022** (without this label the file is returned to the sender).**Information:**Information on the specifications and salary conditions may be requested from Ms. Valérie Martin:
valerie.martin@hesge.ch and/or Mr. Flavio Noca in flavio.noca@hesge.ch