

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

DOCTORAL STUDENT / RESEARCH ASSISTANT at 100%
in the field of Fluid Mechanics, Aerodynamics, and Advanced Air Mobility (AAM)
Fixed-term appointment of 12 months, renewable

Activities

The candidate will participate in large-scale R&D projects at the international level (NASA Jet Propulsion Laboratory, German Aerospace Center DLR), in connection with Advanced Air Mobility (AAM) and aerodynamics

- AI Teaching of pixelated wind facilities for the generation of authentic winds (Earth, Mars)
- Scientific research on flying vehicle aerodynamics in real wind conditions (gusts, turbulence, shear)
- Practical use case for the next NASA Jet Propulsion helicopter on planet Mars

The candidate will be required to:

- Design and build hardware and firmware in particular for drones
- Develop aerodynamic and hydrodynamic characterization test benches
- Carry out validation tests in wind tunnels
- Perform CFD (Open Foam) simulations

Profile/Skills desired or to be developed:

- Master's degree in the field of experimental aero/nautical engineering and aerodynamics and willing to do a doctorate
- Familiar with the basics of hardware (PixHawk, Ardupilot) and software (ROS, PX4, MAVLink) tools for autonomous vehicles
- Know-how in the field of fluid mechanics and aerodynamics measurements (PIV, 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 (NASA Jet Propulsion Laboratory, German Aerospace Center DLR)
- Ability to work rigorously, independently, practically, and in a responsible fashion way
- Motivated by disruptive technologies, publications, conferences, patents, startups

Particularity of the position:

- Desire to learn new things
- Great flexibility is expected to meet the diverse needs of the position.
- **Willing to travel (NASA Jet Propulsion Laboratory, DLR)**

The reference scale for determining salary is the salary scale of the Geneva cantonal administration, which can be consulted on ge.ch/etat-employeur.

- HES assistants are hired for a fixed term of one year, renewable a maximum of four times;
- The function class for the position of HES assistant is a class 8 - annuity 0, for holders of a Bachelor's degree, and a class 9 - annuities 2, for holders of a Master's degree;

Application deadline: March 22, 2023
Start date: April 15, 2023
Place of work: Rue de la Prairie 4 – 1202 Geneva

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

Complete and electronic applications only should be sent to:

HR Department – recrutement.hepia@hesge.ch, with the subject **RH_HEPIA_AS_TIN_GM_aero_2023**

Your records must have the following form:

PDF n°1: cover letter and CV name_cover_letter_CV_AR_TIN_GM_aero_2023.pdf

PDF n°2: annex name_annexes_AR_TIN_GM_aero_2023.pdf

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

Information:

Information on salary conditions may be requested from HR Department, recrutement.hepia@hesge.ch.