

PhD Position in Cyber-Secure Avionics Operating Systems

We invite applications for a **PhD position** dedicated to integrating **cyber-security measures into the core design and operation of avionics systems**.

Required Knowledge

- Strong background in **cyber-security, computer systems, or embedded systems**.
- Proficiency in **C/C++** or other low-level programming languages used in OS development.
- Solid understanding of **operating system principles**, including memory management, scheduling, and kernel-level programming.
- Strong analytical skills and fluency in **English** (spoken and written).

Desired Knowledge

- Familiarity with **intrusion detection systems (IDS), cryptographic techniques, or avionics communication protocols** (e.g., ADS-B).
- Knowledge of **machine learning or deep learning algorithms** for anomaly or attack detection.
- Background in **safety-critical systems or certification processes** (e.g., DO-178C, ARINC 653).
- Interest in **security-by-design methodologies** and **real-time operating systems** (RTOS).


General Requirements

- Master's degree (or equivalent) in **Computer Science, Computer Engineering, Electrical Engineering**, or a closely related field.
- High motivation for independent and collaborative research.
- Strong communication and documentation skills.
- Commitment to disseminating results in leading conferences and journals.

Application

Interested candidates should submit the following documents:

1. Curriculum Vitae (CV)
2. Motivation letter outlining research interests and relevant experience
3. Academic transcripts
4. Contact information for two references

 Review of applications will begin immediately and continue until the position is filled. Selected candidates will work at the Heterogeneous Embedded Systems lab, co-directed by Professors Gabriela Nicolescu and Felipe Gohring de Magalhaes.