



## ZEINEB BAKLOUTI

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### COMPUTER SKILLS

Libraries: Boost Graph library

Virtual globe application: Marble

Programming: C++, C, Java, shell,  
LATEX

Tools: Qt creator, Eclipse, Visual  
Studio

Design: UML, Petri net

SGBD: Oracle

Scientific programming languages:

Matlab, Maple

Operating system: Linux/windows

### KEY SKILLS

Research and Development

Innovation

Project management

### LANGUAGE SKILLS

✓ ✓ ✓ ✓ ✓

✓ ✓ ✓ ✓ ✓

✓ ✓ ✓ ✓ ✓

### OTHER INTERESTS

Theater

Reading

## RESUME

Engineer in Computer Science specializing in optimization, AI in aeronautics with 5 years experience.

Seeking a full time opportunity in AI and path planning for avionic systems.

Available from February 2018

## PROFESSIONAL EXPERIENCE

**Airbus Helicopters / UVHC, Marseille / Valenciennes, France; October 2014-present**

Research Engineer

*Achievement of an innovative mission preparing tool for helicopters (offline: mission preparing or online : mission re-planning) :*

- Discretization of the 3D space by different data structures,
- Shortest path algorithm for a flight plan generation that avoids obstacles, respects the constraints of the aircraft and ensures safety,
- Adaptive solution according to the type of mission, the performances of the aircraft and the environment (terrain, weather...),
- Solution that satisfy : response time and accuracy,
- Theoretical and experimental studies about the temporal and spatial complexity related to different data structures (Octree, Quadtree, BSP...),
- Patent,
- Technological transfer of the mission-preparing tool into a Ground Station at AH.

**ENSIAME Valenciennes, France; October 2017 – present**

Temporary Lecturer and Research Assistant: computer science engineering

**ISTV Valenciennes, France; October 2014 – August 2016**

Assistant Professor :

- L1 Computer science students: C Programming, algorithmic, programming project, Scala programming.

**Airbus Helicopters / UVHC, Marseille / Valenciennes, France; September 2012 – September 2014**

Engineer :

- Avionic simulator allowing the supervision of a complex avionic task on a hybrid architecture CPU/FPGA,
- Implementation of a kernel module that permits CPU monitoring,
- CPU/FPGA communication via Xillybus tool,
- Writing scientific papers for international conferences.

## EDUCATION

**PhD in Computer science: 3D path planning for Helicopters**

2014-2018(expected) | LAMIH, University of Valenciennes

**Engineering degree in Computer science**

2009-2012 | University of Sfax-Tunisia: Engineering National School of Sfax

### INNOVATION AND TECHNOLOGICAL TRANSFER :

[http://www.univ-valenciennes.fr/LAMIH/en/membre?id=baklouti\\_zeineb](http://www.univ-valenciennes.fr/LAMIH/en/membre?id=baklouti_zeineb)

**Patent (submission pending) :**

*Zeineb Baklouti (LAMIH/UVHC), Rabie Ben Atitallah (LAMIH/UVHC) et Pierre Feyzeau (Airbus Helicopters). System of aircraft flight planning offline for preparing mission and online face to the occurrence of a complex event. (2017) International Patent pending in the national institute of intellectual property.*

**Project in collaboration with Airbus Helicopters for mission path-planning and embedded decision making in emergencies.**

References available upon request.