

ABDELHAK BOUGOUFFA

Ph.D. Candidate / Researcher
R&D Robotics Engineer



Orsay, France



[REDACTED]



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in/aboutouffa



github.com/aboutouffa



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LANGUAGES

Arabic - native

English & French - fluent

+ OTHER SKILLS

Git, VHDL, Yocto, C#, OpenMP, OpenCV, \LaTeX , Matlab/Octave, IPython/Jupyter, Coding standards (CERT-C, CERT-C++ & Barr-C), FreeCAD, LibreOffice, Inkscape, GIMP...

TOP TECH SKILLS

C/C++

Python

Rust

ROS

mbed

GNU/Linux

EXPERIENCE

Since Sep-2019

Full-time

R&D Robotics Engineer

[ez-Wheel, La Couronne, France](#)

As a Cifre funded Ph.D student, my mission is to bring my research works on multiphysic data fusion, SLAM, embedded & distributed systems to the industrial world, developing reliable and robust localization system for the electric wheeling system, to be used in the context of *Industry 4.0* environment.

Jun-2018 - Aug-2019

Full-time

Research Engineer

[Gustave-Eiffel University \(ex-IFSTTAR\), Champs-sur-Marne, France](#)

Worked within *TS2/Simu&Moto* team on the SimuSafe European project (H2020), mainly on artificial intelligence, multi-agent and distributed systems applied to the development of a behavioral traffic simulator.

Apr-2018 - May-2018

Visiting

Research Engineer

[Systems & Applications of Information & Energy Technologies - SATIE, Gif-sur-Yvette, France](#)

Worked on refining a data acquisition, decoding and visualization software.

Aug-2017 - Jul-2018

Full-time

Research Engineer

[Center for Development of Advanced Technologies - CDTA, Algiers, Algeria](#)

Worked in the "*Robotics and Industrial Production division*"; within NCRM team (*Navigation et Contrôle des Robots Mobiles autonomes*), mainly worked on designing and implementing an embedded and distributed control system for a car-like mobile robot, implementing ROS packages (*Robot Operating System*), SLAM (*Simultaneous Localization and Mapping*), worked on car-like/differential mobile robots, CAN bus communication...

Oct-2017 - Feb-2018

Part-time

Lecturer

[Saad Dahleb University of Blida, Blida, Algeria](#)

Taught the applied courses of "*Robotics Intelligence*" module (Master 2), and supervised the students on their mini-project, which consists of designing and programming an autonomous mobile robot using an Arduino board and infrared/ultrasonic low-cost sensors.

Feb-2017 - Jul-2017

Internship

Trainee Engineer

[Center for Development of Advanced Technologies - CDTA, Algiers, Algeria](#)

Final year internship withing the "*Robotics and Industrial Production*" division, NCRM team, worked on a new SLAM method and implemented it using Python under ROS.

Apr-2012 - Jan-2017

Freelance

Python developer, GNU/Linux sysadmin and FOSS solutions integrator

[Online on UpWork Inc. platform](#)

Worked as freelancer on many projects including data processing and scraping, Linux system administration, integrating open source CMS's, designing relational databases...

EDUCATION

Since Sep-2019

Ph.D. Candidate / Researcher

[Paris-Saclay University / ED STIC / SATIE Laboratory, Orsay, France](#)

Currently seeking for a Ph.D. degree in Robotics, at the Paris-Saclay University, within the Laboratory of Systems & Applications of Information & Energy Technologies (SATIE).

Jul-2017

Master's degree

[Mhamed Bougara University of Boumerdes, Boumerdes, Algeria](#)

Studied *Distributed Computing Systems*, graduation project titled: "A Contribution to Simultaneous Localization and Mapping (SLAM) in an Unknown Urbain Environnement"

Jul-2015

Bachelor's degree (Licence)

[Mhamed Bougara University of Boumerdes, Boumerdes, Algeria](#)

Studied *InfoTronics (Computer sciences and electronics)*, graduation project titled: "Design and implementation of a Restful API using node.js"

May – Jun-2012	Volunteer Rescuer Certification Got certified as a volunteer rescuer (first-aid man).	Algerian Civil Protection, Boumerdes unit, Algeria
Jul-2011	Highschool Diploma (Baccalauréat) Got the Baccalauréat in the field of “ <i>Mathematics and Technology / Mechanical Engineering</i> ”, with Honors.	Hammadi Highschool, Boumerdes, Algeria

BONO & VOLUNTEERING

Active member of the open source community and a contributor to many open source projects.

Sep-2002 – Apr-2018	Scout Leader / Previous Boyscout Scout leader/educator [<i>Wood Badge certified</i>], participated in the organization of many national and regional scale events and activities.	Algerian Muslim Scouts
Apr-2013 – Jun-2016	Teacher & Speaker Teacher of Programming (using C and Python), GNU/Linux and free and open source culture.	Computer Science Club of the University of Boumerdes - CIUB
Dec-2013 – Apr-2015	Club President Managed the Computer sciences club (<i>Club Informatique de l'Université de Boumerdes - CIUB</i>) during two years.	Computer Science Club of the University of Boumerdes - CIUB

PUBLICATIONS

- Sara Bouraine, **Abdelhak Bougouffa** & Ouahiba Azouaoui; “Particle swarm optimization for solving a scan-matching problem based on the normal distributions transform”; 10.1007/s12065-020-00545-y; January 2021; *Journal of Evolutionary Intelligence*.
- Sara Bouraine, **Abdelhak Bougouffa** & Ouahiba Azouaoui; “NDT-PSO, a New NDT based SLAM Approach using Particle Swarm Optimization”; 10.1109/ICARCV50220.2020.9305519; December 2020; *16th International Conference on Control, Automation, Robotics and Vision (ICARCV 2020)*.
- **Abdelhak Bougouffa**, Emmanuel Seignez, Samir Bouaziz & Florian Gardes; “SmartTrolley: An Experimental Mobile Platform for Indoor Localization in Warehouses”; 10.1109/RCAE51546.2020.9294484; November 2020; *The 3rd International Conference on Robotics, Control and Automation Engineering (RCAE 2020)*.
- **Abdelhak Bougouffa** & Anis Hocine; “Contribution à la localisation et la cartographie simultanées (SLAM) dans un environnement urbain inconnu”; UMBB/123456789/4140; *Master thesis (french); CDTA/UMBB Jul-2017*.