

BASSEM DAHROUG

PhD, Mechatronics engineer

@ bdahroug@gmx.com

📍 Besançon, France

🌐 <https://bdahroug.github.io/>



EXPERIENCE

PhD, Mechatronics engineer

AMAROB Technologies

📅 6/2021 – present

📍 Besançon, France

Participation in different innovative projects

- design, simulation, manufacturing, and programming of mechatronic devices, in particular, the micro-robotic systems dedicated to intracorporeal laser surgery that AMAROB proposes;
- validation of the devices developed with AMAROB's collaborators, including partner hospitals and AMAROB's customers.

Researcher, Post-doctoral

Institute FEMTO-ST, Dept. AS2M (Automatique et Systèmes Micro-Mécatroniques)

📅 9/2018 – 9/2020

📍 Besançon, France

Participation in the INSERM project "ROBOT" (Robotics and Optical coherence tomography for optical BiOpsy in the digestive Tract)

- design and development of a prototype in order to validate and integrate the distinct technological and methodological proposed by the different project's teams,
- implement a visual servoing scheme based on the 3D imaging (C-scan) obtained from the OCT for guiding a robot during the intra-operative phase in order to perform a repeatable optical biopsy.

EDUCATION

Ph.D. in Engineering Sciences

UBFC (Université Bourgogne Franche-Comté)

📅 11/2014 – 02/2018

📍 Besançon, France

Dissertation title: *Minimally Invasive Surgery in the Middle Ear: a guided micro-robotic system to efficiently remove cholesteatoma.*

double degree M.Sc. in Mechatronics and Micro-Mechatronics Systems

ENSMM (Ecole National Supérieur de Mécanique et des Microtechnique) and EPI (Escuela Politécnica de Ingeniería de Gijón)

📅 09/2012 – 09/2014

📍 Besançon, France and Gijón, Spain

Master thesis title: *Design, modelling and control of a contactless modular conveyor.*

B.Sc. in Mechanical Engineering

AAST, College of Engineering Studies and Technology, Mechantronics Depart.

📅 09/2011 – 09/2006

📍 Alexandria, Egypt

Graduation project title: *Mobile robot control for parking manoeuvre.*

SKILLS & KNOW-HOW

Mechatronic design	● ● ● ● ●
Robotics	● ● ● ● ○
Automatic control	● ● ● ● ○
Scientific programming	● ● ● ● ○
Mechanics	● ● ● ● ○
Electronics	● ● ● ● ○
Robotic experimentation	● ● ● ● ●
Analysis, synthesis and solving problems	● ● ● ● ○
Oral and writing communication	● ● ● ● ○
Organization, rigor and autonomy	● ● ● ● ○
Project Collaboration	● ● ● ● ○

COMPUTER SKILLS

FreeCAD	Solidworks	CATIA V5
C/C++	ViSP, OpenCV	PCL, VTK
Python, Java	JS, HTML, CSS	
micro-controller	G-code	Ladder
Matlab/Simulink	Octave	
KiCAD	Egale	Proteus
Quartus		
CMSOL Multiphysics	Blender	
Linux	Windows	

LANGUAGES

🇪🇸 fluent level C1 🇫🇷 fluent level C1

🇬🇧 usual level B2 🇪🇸 usual level B2

REFEREES

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✓ CNRS, Institut FEMTO-ST