BASSEM DAHROUG

PhD, Mechatronics engineer

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Besançon, France
https://bdahroug.github.io/

EXPERIENCE

Mechatronics engineer

AMAROB Technologies

6/2021 – now | Besançon, France

Participation in the different innovative projects

- improve and develop technical processes, methods and practices in the interests of the company;
- design, simulation, manufacturing and programming of mechatronic devices, in particular the microrobotic 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 – 12/2020 | 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 Bourgange 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 Gíjon)

09/2012 – 09/2014 | Besançon, France and Gíjon, 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 | 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

Prof. Nicolas Andreff
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UBFC, Institut FEMTO-ST

Dr. Sergio Lescano
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CEO Founder, AMAROB Technologies