BASSEM DAHROUG

PhD, Mechatronics research engineer

@ bdahroug@gmx.com
Besançon, France
https://bdahroug.github.io/

EXPERIENCE

Researcher, Post-doctoral

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

Sept. 2018 – Sept. 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.

Research assistant, PhD student

Institute FEMTO-ST, Dept. AS2M

Oct. 2014 – Feb. 2018 Besançon, France

Early research stage of the project "μ*RMES*" (Micro-Robot for Middle Ear Surgery)

- analysis of the clinical need for cholesteatoma surgery,
- development of an image-guided micro-robotic system dedicated to this procedure.

EDUCATION

Ph.D. in Engineering Sciences

UBFC (Université Bourgange Franche-Comté)

10/2014 – 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.

09/2006 – 09/2001 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

Solidworks | CATIA V5 | Creo

C/C++ | Java | ViSP, OpenCV | PCL, VTK | micro-controller | Ladder | JS, HTML, CSS

Matlab/Simulink | Octave

Egale | Proteus | Quartus

CMSOL Multiphysics | Blender

Ubuntu | Windows

LANGUAGES

mother tongue | fluent level C1

usual level B2 | usual level B2

REFEREES

Prof. Nicolas Andreff
@ nicolas.andreff@femto-st.fr
UBFC, Institut FEMTO-ST

Dr. Brahim Tamadazte
@ brahim.tamadazte@femto-st.fr
CNRS, Institut FEMTO-ST