ARTURO MONCADA-TORRES Biomedical Engineer

블 February 15, 1988



Mexican



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- Passionate about improving people's health through the development of intelligent medical **solutions** for the diagnosis, treatment, monitoring, and rehabilitation of patients.
- Strong problem-solving and critical-thinking capacities, proven by the successful completion of nine research studies in diverse areas of medical technology.
- Efficient interpersonal communication skills leading to collaborations with members of diverse multidisciplinary backgrounds (e.g., scientists, health professionals, technicians, clinicians) across different teams, research groups, and institutions.
- Solid scientific analytical skills, data analysis, and technical writing abilities as shown by the authorship of seven peer-reviewed papers and nine panel-reviewed research presentations.

http://www.arturomoncadatorres.com/publications &



EXPERIENCE

KU Leuven (BE) 2014 - Today

Doctoral Researcher (Biomedical Sciences)

Designed, developed, and implemented physiologically-based computational algorithms for modelling different neurological auditory processes + implantable hearing prosthesis. Collected and analyzed behavioural data in >50 normal/impaired listeners for their validation.

In collaboration with Danmarks Tekniske Universitet (DK)

Guided, managed, and supervised master's students through their theses. Organized and coordinated scientific meetings, conferences, workshops, and outreach activities for specialized and general audiences.

Marie Skłodowska-Curie scholarship for Early Stage Researchers.

SinTrafico (MX) 2012

Mid Data Scientist + Head of the Real-time Information Division

Developed a data mining-based framework to analyze mobility data to identify trends and generate optimal routes and schedules for our clients. Supervised a team of five people focused on the gathering, processing, and dissemination of traffic data for the general public.

ETH Zurich (CH) 2011, 2013

Research Assistant

Implemented a machine learning-based framework for movement classification using wearable sensors' data of healthy and stroke participants with an accuracy of >90% \varnothing .

Designed experiment, collected, and analyzed inertial sensor data to quantify white cane usage to improve travel aids of visually impaired people \mathscr{Q} .

U. Iberoamericana (MX) 2010

Research Assistant

Designed experiment, collected, and analyzed data for the development and evaluation of augmentative and alternative communication systems, resulting in an increase of >30% of the users' input speed.

Nat. Inst. for Rehab. (MX) 2008 - 2009

Trainee

Developed prototype devices to quantify motor therapy outcomes for the assessment of patients undergoing lower-limb rehabilitation.

ETH Zürich (CH) 2012 - 2014

Master of Science in Biomedical Engineering (Cum Laude) Focused on Bioimaging (MRI) and Medical Image Analysis

MSc Thesis: MR Measurements of Dynamic Changes in Aortic Vessel Area and Pulse Wave Velocities Induced by Simulated Obstructive Apnoea Semester Thesis: Image Interpolation for Reconstruction of 4D MRI Data

In collaboration with U. of Basel (CH) Excellence scholarship for Master's studies.

U. Iberoamericana (MX) 2007 - 2012

Bachelor of Science in Biomedical Engineering (Summa Cum Laude) Major in **Instrumentation**

Thesis: Activity Classification in Healthy Subjects Using an Enhanced IMU In collaboration with ETH Zürich (CH)

Developed the hardware and signal processing algorithms for a home control system based on electrooculography. National Instruments University

Challenge first national prize \mathscr{O} .

Excellence scholarship for Bachelor's studies.



SKILLS

Programming + Informatics

MATLAB LabVIEW MS Office

.... Python LaTeX R

C

0000 Git MySQL



LANGUAGES



.... French Dutch Italian

0000 German Czech



M KNOWLEDGE

Machine learning Computational modelling (Medical) image analysis Digital (sensory) signal processing Data analysis/visualization Human anatomy + physiology



SPECIAL ABILITIES

Focused attention to detail Out-of-the-box thinking Fast learner driven to action Team leader + team player Project management Interdisciplinary communication



EXTRACURRICULAR ACTIVITIES

Community manager

Engaged with and generated content for social media audience.

ExpORL, ETH BEEZ

Student society delegate

Represented students at university academic councils; organized events.

ETH Zurich, U. Iberoamericana

HOBBIES

Mid-distance running Volleyball

Indoor, beach

Dancing

Latin, swing, ballroom

Cooking and baking

References are available upon request