SANTIAGO CADAVID

Biomedical Engineer

■ 13 Huntly Ave, Grafton, 1023

Auckland, New Zealand

PROFILE

I am a biomedical engineer with experience measuring, acquiring and processing physiological human signals as well as controlling environmental variables in hospitals and clinical laboratories. I have a good understanding of a wide range of medical devices, electronics principles and medical concept which allow me to liaise between the clinical personnel and engineers making me an effective member in cross-functional teams. On top of my research and engineering background, I have a general understanding of literature reviewing, technical writing, clinical data acquisition and analysis software. Additionally, during my last research experience at ITM university, I was able to produce and perform several papers and courses related to swallowing disorders and surface electromyography.

EXPERIENCE

Assistant manager

Q Auckland, NZ

Field service engineer

Iforware S.A.S.

M January 2017 - June 2017

- Medellín, Antioquia (Colombia)
- To design and create prototypes using open-source electronic prototyping platforms (i.e. Arduino) and commercial electronics.
- To operate with a variety of analog and digital transducers (temperature, humidity, dew point, gas concentration) for industrial and healthcare applications.
- To design and develop printed circuit boards (PCB) and assemble them
- To develop hardware of traceability, telemetry and control.
- To support software tests in traceability, telemetry and control.
- To keep the correct operation of sensors and the telemetry system that were installed in hospitals and laboratories.

Research Fellow

Instituto Tecnológico Metropolitano

🛗 January 2016 – December 2016

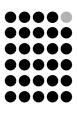
- ▼ Medellín, Antioquia (Colombia)
- To evaluate different kinds of electrodes and their position configurations to improve the signal-noise ratio during surface electromyography (sEMG) signal acquisition.
- Acquisition of sEMG signals in healthy people during motor gestures involved during swallowing.
- To evaluate the activation patterns of each motor gesture performed.
- To prepare and carry out a workshop for students from different universities about electromyography and its applications.

ADDITIONAL INFORMATION

- Open work Visa permit.
- NZ full driver license.

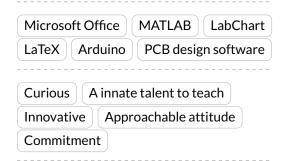
SKILLS

Swallowing disorders
Surface electromyography
Digital signal acquisition
Digital signal processing
Academic and clinical research
Electronics



Polygraph medical devices Mechanical ventilators Physical exam medical devices Laboratory medical devices





LANGUAGES

English Spanish



EDUCATION

BSc(Eng) Biomedical Engineering Instituto Tecnológico Metropolitano (ITM)

2012 - 2017

Diploma level 7 in Technology Management Aspire2 International

2017 - 2018

PUBLICATIONS

Journal Articles

- Cadavid-Arboleda, Santiago et al. (2017). "Assessment of Surface Electromyography During Orofacial Praxis in Healthy Subjects". In: VII Latin American Congress on Biomedical Engineering CLAIB 2016, Bucaramanga, Santander, Colombia, October 26th -28th, 2016 60, pp. 165–168. DOI: 10.1007/978-981-10-4086-3. URL: http://link.springer.com/10.1007/978-981-10-4086-3.
- Cantillo-Mackenzie, German et al. (2017). "Surface Electromyographic Characterization of Five Orofacial Ideomotor Praxis in 20 Healthy Individuals". In: VII Latin American Congress on Biomedical Engineering CLAIB 2016, Bucaramanga, Santander, Colombia, October 26th -28th, 2016 60, pp. 221–224. DOI: 10.1007/978-981-10-4086-3. URL: http://link.springer.com/10.1007/978-981-10-4086-3.
- Restrepo-Agudelo, Sebastian et al. (2017). "Improving surface EMG burst detection in infrahyoid muscles during swallowing using digital filters and discrete wavelet analysis". In: Journal of Electromyography and Kinesiology 35, pp. 1–8. ISSN: 10506411. DOI: 10.1016/j.jelekin.2017.05.001. URL: http://www.sciencedirect.com/science/article/pii/S1050641116302991.

REFERENCES

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