# SANTIAGO CADAVID

**Biomedical Engineer**

@ santiago.cadavid94@gmail.com  022 679 5579  13 Huntly Ave, Grafton, 1023  Auckland, New Zealand
in www.linkedin.com/in/santiago-cadavis

## 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

**MK RD Limited**

August 2018 – Currently  Auckland, NZ

### Field service engineer

**Iforware S.A.S.**

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** ●●●○○

Microsoft Office | MATLAB | LabChart | LaTeX | Arduino | PCB design software

Curious | A innate talent to teach | Innovative | Approachable attitude | Commitment

## 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


**Eng. Juan David Arboleda**
@ Juan.Arboleda@foodstuffs.co.nz
Foodstuffs North Island Limited
+64 27 471 1439

**Mgr. Metesh Keshav**
@ fortst@madmex.co.nz
MK RD Limited
+64 21 115 9692

**Dr. Andrés Orozco Duque**
@ andresorozco@itm.edu.co
Instituto Tecnológico Metropolitano
+57 (300) 682-8421