

# Anselmo Frizera Neto

Curriculum Vitae

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## Short Bio (250 words)



Anselmo Frizera-Neto holds a bachelor's degree in Electrical Engineering (2006) from the Federal University of Espirito Santo (UFES, Brazil) and a PhD (2010) in Electronics from the University of Alcalá (UAH, Spain). Between 2006 and 2010, he worked as a pre-doctoral researcher at the Bioengineering Group at the Spanish National Research Council (CSIC, Spain). Since 2010, he has held a permanent position as a Professor of the Electrical Engineering Department at UFES. He acted as the Adjunct Coordinator of the Graduate Program in Electrical Engineering for two terms.

From 2014 to 2018, he served as a Member of the Board of *Asociación Iberoamericana de Tecnologías de Apoyo a la Discapacidad* (AITADIS), contributing to support the dissemination of knowledge in the area of assistive technologies in countries of Latin America and the Iberian Peninsula. Currently, he is the Coordinator of the Brazilian Research Group on Brain and Cognitive Engineering (BRAEN), a multidisciplinary group of experts in Engineering, Medicine and Psychology that aim at modeling and studying the human brain. In his career as a researcher, Prof. Frizera-Neto has published more than 300 scientific articles, of which more than 140 are publications in international scientific journals. He worked in the training of masters and doctors in institutions in Brazil, Argentina, Italy, and Portugal. He has experience in Electronics, Photonics and Biomedical Engineering. His research interests and areas of expertise are rehabilitation robotics for assisting cognitive and motor impairments, development of optical and electronic sensors for human-machine interfaces, biomedical signal processing and smart textiles.

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## Personal information

<b>Name</b>	Anselmo Frizera Neto
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<b>Extended CV</b>	<a href="http://lattes.cnpq.br/8928890008799265">http://lattes.cnpq.br/8928890008799265</a>

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## Education

<b>2006 - 2010</b>	PhD in Electronics, Universidad de Alcalá (Spain) Title [Spanish]: INTERFAZ MULTIMODAL PARA MODELADO, ESTUDIO Y ASISTENCIA A LA MARCHA HUMANA MEDIANTE ANDADORES ROBÓTICOS Advisors: Ramón Ceres Ruiz   José Luis Pons Rovira
<b>2001 - 2005</b>	BSc in Electrical Engineering, Universidade Federal do Espírito Santo (Brazil) Title [Portuguese]: CONTROLE DE UM ROBÔ MÓVEL A RODAS COM BASE NO PROCESSAMENTO DE SINAIS DE EMG Advisor: Teodiano Freire Bastos Filho

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## Professional Experience

- Universidade Federal do Espírito Santo - UFES**
  - 2010 - Present** Lecturer and Researcher.
  - 2016 - 2018** Adjunct coordinator - Graduate Program in Electrical Engineering.
  - 2012 - 2014** Adjunct coordinator - Graduate Program in Electrical Engineering.
- Instituto de Automática Industrial - IAI/CSIC**
  - 2006 - 2010** PhD Candidate and Researcher.
- Asociación Iberoamericana de Tecnologías de Apoyo a la Discapacidad - AITADIS**
  - 2014 - 2018** Member of the Board.
  - 2007 - 2013** Technical Coordinator.

4. **Universidad Nacional de San Juan - UNSJ**  
     2018 - 2018      Visiting Professor.  
     2016 - 2016      Visiting Professor.
5. **Escuela Colombiana de Ingeniería Julio Garavito**  
     2017 - 2017      Visiting Professor.

## Summary of Scientific Production

Journal Papers	143
Accepted Manuscripts (Journal)	1
Published Books	1
Book Chapters	39
Paper in Conference Proceedings	230
Patents	3

## Summary of Academic Advisory

Master's Thesis	38
PhD Thesis	18
Postdoctoral Supervision	3
Graduation Project	22
Scientific Initiation (Undergraduate)	28

*Anselmo Frizera is currently advising graduate students in two research topics: (i) optical and electronic sensor design for industrial and biomedical applications and (ii) robotics for motor and cognitive rehabilitation.*

## Recent publications

### Journal Articles

Leal-Junior, Arnaldo; Guo, Jingjing; Min, Rui; Fernandes, António José; **Frizera, Anselmo**; Marques, Carlos. Photonic smart bandage for wound healing assessment. *Photonics Research*, v.9, p.272 - 280, 2021.

Vargas-Valencia, L. S.; Schneider, F. B. A.; Leal-Junior, A. G.; Caicedo-Rodriguez, Pablo; Sierra-Arevalo, Wilson A.; Rodriguez-Cheu, L. E.; Bastos-Filho, Teodiano; **Frizera-Neto, A.** Sleeve for Knee Angle Monitoring: An IMU-POF Sensor Fusion System. *IEEE Journal of Biomedical and Health Informatics*, v.25, p.465 - 474, 2021.

Leal-, Arnaldo G.; Ribeiro, Diana; Avellar, Leticia M.; Silveira, Mariana; Díaz, Camilo A. R.; **Frizera, Anselmo**; Blanc, Wilfried; Rocon, Eduardo; Marques, Carlos. Wearable and Fully-Portable Smart Garment for Mechanical Perturbation Detection with Nanoparticles Optical Fibers. *IEEE Sensors Journal*, v.21, p.2995 - 3003, 2021.

Jiménez, Mario F.; Mello, Ricardo C.; Bastos, Teodiano; **Frizera, Anselmo**. Assistive Locomotion Device with Haptic Feedback For Guiding Visually Impaired People. *MEDICAL ENGINEERING & PHYSICS*, v.80, p.18 - 25, 2020.

Leal-Junior, Arnaldo; Avellar, Leticia; Jaimes, Jonathan; Díaz, Camilo; Dos Santos, Wilian; Siqueira, Adriano A. G.; Pontes, Maria José; Marques, Carlos; **Frizera, Anselmo**. Polymer Optical Fiber-Based Integrated Instrumentation in a Robot-Assisted Rehabilitation Smart Environment: A Proof of Concept. *SENSORS*, v.20, 3199, 2020.

Leal-Junior, Arnaldo; Avellar, Leticia; **Frizera, Anselmo**; Marques, Carlos. Smart textiles for multimodal wearable sensing using highly stretchable multiplexed optical fiber system. *Scientific Reports*, v.10, 13867, 2020.

Aycardi, L. F. ; Cifuentes, C. A.; Múnera, M. ; Bayón, C.; Ramírez, O.; Lerma, S.; **Frizera, A.**; Rocon, E. Evaluation of biomechanical gait parameters of patients with Cerebral Palsy at three different levels of gait assistance using the CPWalker. *Journal of NeuroEngineering and Rehabilitation*, v. 16, p. 15, 2019.

Jimenez, M. F.; Monllor, M.; **Frizera, A.**; Bastos, T.; Roberti, F.; Carelli, R. Admittance Controller with Spatial Modulation for Assisted Locomotion using a Smart Walker. *JOURNAL OF INTELLIGENT & ROBOTIC SYSTEMS*, v. 94, p. 621-637, 2019.

### Books

Cifuentes, Carlos A. ; **Frizera, Anselmo** . Springer Tracts in Advanced Robotics. 1. ed. Suíça: Springer International Publishing, 2016. v. 1. 105p.