

## *Curriculum Vitae*

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Birth: September 3rd 1971, in Lisbon.

### *Academic record:*

Technological Physics Bachelor's Degree at Faculdade de Ciências da Universidade de Lisboa (1995).

MSc. In Biophysics at Universidade de Lisboa (1997), thesis work carried out at Ospedale San Raffaele, Milan, Italy.

PhD in Biophysics at Universidade de Lisboa (2001), thesis work carried out at Service Hospitalier Frédéric Joliot, Orsay, France.

Post-doc at Medical Research Council/Cognition and Brain Sciences Unit, Cambridge, UK (2001-2002).

### *Teaching record:*

Assistant professor at Physics department of Faculdade de Ciências da Universidade de Lisboa (since 2002).

### Main Scientific Interests:

Analysis of human brain anatomy and function with magnetic resonance imaging.  
Analysis of human brain function with electroencephalography.  
Development of methods for the study of brain functional images and signals.

### Main publications:

Fernandes, T.T., Direito, B., Sayal, A., Pereira, J., **Andrade, A.**, Castelo-Branco., M. 2020 *The boundaries of state-space Granger causality analysis applied to BOLD simulated data: A comparative modelling and simulation approach* Journal of Neuroscience Methods, 341: 108758 doi: 10.1016/j.jneumeth.2020.108758

Pfurtscheller, G., Ressler, B., Schwerdtfeger, A.R., Klimesch, W., **Andrade, A.**, Schwarz, G., Thayer, J.F. 2019 *"Switch-Off" of Respiratory Sinus Arrhythmia May Be Associated With the Activation of an Oscillatory Source (Pacemaker) in the Brain Stem* Frontiers in Physiology, 10:939

Pfurtscheller, G., Schwerdtfeger, A.R., Fink, D., Brunner, C., Aigner, C.S., Brito, J., **Andrade, A.** 2018 *MRI-related anxiety in healthy individuals, intrinsic BOLD oscillations at 0.1 Hz in precentral gyrus and insula, and heart rate variability in low frequency bands* PloS One, 13(11): e0206675

Pfurtscheller, G., Schwerdtfeger, A.R., Seither-Preisler, A., Brunner, C., Aigner, C.S., Calisto, J., Gens, J., **Andrade, A.** 2018 *Synchronization of intrinsic 0.1-Hz blood-oxygen-level-dependent oscillations in amygdala and prefrontal cortex in subjects with increased state anxiety* European Journal of Neuroscience, 47(5): 417-426

Rodrigues, J., **Andrade, A.** 2015 *Causal inference in neuronal time-series using adaptive decomposition*, Journal of Neuroscience Methods, 245:73-90.

Pfurtscheller, G., **Andrade, A.**, Koschutnig, K., Brunner, C., Lopes da Silva, F., 2014 *Initiation of voluntary movements at free will and ongoing 0.1-Hz BOLD oscillations in the insula—a pilot study*, Frontiers in Integrative Neuroscience, 8:93.

Rodrigues, J., **Andrade, A.** 2014 *Lag-based effective connectivity applied to fMRI: a simulation study highlighting dependence on experimental parameters and formulation*, NeuroImage, 89:358-377.

Catarino, A., **Andrade, A.**, Churches, O., Wagner, A.P., Baron-Cohen, S., Ring, H. 2013 *Task-related functional connectivity in autism spectrum conditions: an EEG study using wavelet transform coherence*, Molecular Autism, 4:1-14.

Catarino, A., Churches, O., Baron-Cohen, S., **Andrade, A.**, Ring, H. 2011 *Atypical EEG complexity in autism spectrum conditions: A multiscale entropy analysis*, Clinical Neurophysiology, 122:2375-2383

Catarino, A., Luke, L., Waldman, S., **Andrade, A.**, Fletcher, P.C., Ring, H. 2011 *An fMRI investigation of detection of semantic incongruities in autistic spectrum conditions*, European Journal of Neuroscience, 33:558-567

Caseiro, P., Fonseca-Pinto, R., **Andrade, A.** 2010 *Screening of obstructive sleep apnea using Hilbert–Huang decomposition of oronasal airway pressure recordings*, Medical Engineering & Physics, 32: 561-568

Fonseca-Pinto, R., Ducla-Soares, J.L., Araújo, F., Aguiar, P., **Andrade, A.** 2009 *On the influence of time-series length in EMD to extract frequency content: Simulations and models in biomedical signals*, Medical Engineering & Physics, 31: 713-719

Cox, S.M.L., **Andrade, A.**, Johnsrude, I.S. 2005 *Learning to Like: A Role for Human Orbitofrontal Cortex in Conditioned Reward*, The Journal of Neuroscience, 25: 2733 - 2740

Cachia, A., Mangin, J.-F., Rivière, D., Kherif, F., Boddaert, N., **Andrade, A.**, Papadopoulos-Orfanos, D., Poline, J.-B., Bloch, I., Zilbovicius, M., Sonigo, P., Brunelle, F., Régis, J. 2003 *A Primal Sketch of the Cortex Mean Curvature: a Morphogenesis Based Approach to Study the Variability of the Folding Patterns*, IEEE Trans. Med. Imag., 22(6):754-765

**Andrade, A.**, Kherif, F., Mangin, J.-F., Worsley, K.J., Paradis, A.-L., Simon, O., Dehaene, S., Le Bihan, D., Poline, J.-B. 2001, *Detection of fMRI Activation Using Cortical Surface Mapping*, Human Brain Mapping, 12 :79-93

**Andrade, A.**, Paradis, A.-L., Rouquette, S., Poline, J.-B. 1999, *Ambiguous Results in Functional Neuroimaging Data Analysis Due to Covariate Correlation*, NeuroImage, 10: 483-486.

Silva, C., Pimentel, I.R., **Andrade, A.**, Foreid, J.P., Ducla-Soares, E. 1999, *Correlation Dimension Maps of EEG from Epileptic Absences*, Brain Topography, 11:(3) 201-209.