

CURRICULUM VITAE

January 2013

1 PERSONAL DETAILS



Name: Catarina Henriques Lopes dos Santos Rúa
Date and place of birth: 11-09-1989, Lisbon - Portugal
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2 CAREER AND EDUCATION

2013 – Current Marie Curie fellow in Ultra-high field MR, leading to the award of a PhD in Medical Physics by Pisa University (European project FP7-PEOPLE-2012-ITN entitled “Ultra-High Field Magnetic Resonance Imaging”)

Doctoral Student at the University of Pisa, started on October 2013 and expected finishing date on October 2016.

Project Supervisors: Dr. Alberto del Guerra, Dr. Michela Tosetti and Dr. Mauro Costagli.

EPIC Programming Course

Title: “The 9th European EPIC Programming Course”

Location: Rotterdam/NL.

Period: July 1-4, 2014

ESMRMB Lectures on MR

Title: "Advanced methods for acquisition and analysis of fMRI data"

Location: Tübingen/DE.

Period: November 20-22, 2013

2012 – 2013

Research assistant, Brain Mapping Unit, Department of Psychiatry, University of Cambridge

My job involved assisting in the preparation and analysis of structural MR image data, including surface-based reconstruction (using FreeSurfer), through to statistical analysis. I was involved in a variety of projects ranging from secondary analysis through to an independent research question. My work was included in several publication submissions.

Head researchers: Prof. Paul Fletcher and Dr. Lisa Ronan

Type: full-time

2007-2012

5 year programme BSc+ MSc in Biomedical Engineering and Biophysics

University of Lisbon, Faculty of Sciences

Most relevant subjects included classical and modern physics courses, calculus, algebra, statistics and probabilities, numerical methods, cellular biology, human anatomy and physiology, signal processing analysis, modelling, simulation, dosimetry and medical equipment.

Classification: 17 over 20 scale

MSc THESIS PROJECT – University of Lisbon, Faculty of Sciences in collaboration with the University of Cambridge, UK.

Title: "Analysis in Magnetic Resonance Elastography: Study and Development of Image Processing Techniques."

Location: Wolfson Brain Imaging Centre (WBIC) – University of Cambridge

Project Supervisors: Dr. Marius Mada and Dr. Alexandre Andrade

Classification: 20 on a 20 scale.

BSc DEGREE PROJECT – University of Lisbon, Faculty of Sciences in collaboration with the University of Cambridge, UK

Title: "Robustness of DTI acquisition schemes"

Location: Wolfson Brain Imaging Centre (WBIC) – University of Cambridge

Project Supervisor: Dr. Guy Williams

Classification: 19 on a 20 scale.

4 LANGUAGE SKILLS (*)

Comprehension:	English (C2), Italian (B1), German (A2)
Speaking:	English (C2), Italian (B1), German (A2)
Reading:	English (C2), Italian (B1), German (A2)
Writing:	English (C2), Italian (B1), German (A2)

(*) Common European Framework of Reference (CEF) Level

5 AWARDS

- 2011 Social Merit Scholarship for the support and management of educational activities for the Physics department, Faculty of Sciences, University of Lisbon.
- 2010 Merit Scholarship attributed for outstanding grades, Faculty of Sciences, University of Lisbon.
- 2009 Merit Scholarship for Integration in Research (BII), Portuguese National Science Foundation (FCT). Ref: FCUL_IBEB_01_2009
Research project entitled "Voxel-based Morphometry of the Thalamus in Temporal Lobe Epilepsy"

6 SCIENTIFIC PUBLICATIONS

- 1 Ronan, L, Voets, N, **Rua, Catarina**, et al. 2013. Differential Tangential Expansion as a Mechanism for Cortical Gyrification. *Cerebral Cortex*. 24 (8): 2219-2228.
- 2 Forde, N, Ronan, L, Suckling, J, Scanlon, C, Neary, S, Holleran, L, Leemans, A, Tait, R, **Rua, Catarina**, Fletcher, P, Jeurissen, B, Dodds, C, Miller, S, Bullmore, E, McDonald, C, Nathan, P, Cannon, D. 2014. Structural neuroimaging correlates of allelic variation of the BDNF val66met polymorphism. *NeuroImage* (90): 280-289.

7 SCIENTIFIC COMUNICATIONS

- 1 **Rua, Catarina**; Costagli Mauro, Del Guerra Alberto, Tosetti Michela. 2014. Functional organization of the primary visual cortex. *100 Congresso Nazionale Societa' Italiana di Fisica*. Pisa, Italy. (Oral communication)
- 2 Ronan, Lisa, **Rua, Catarina**, Giedd, Jay, Fletcher, Paul. 2014. Detection of Genetic Encoding Based on Intrinsic Cortical Morphology. *Human Brain Mapping*. Hamburg, Germany. (Poster presentation)
- 3 **Rua, Catarina**, Carpenter, Adrian, Mada, Marius. 2012. Measuring Brain Stiffness using MRE: Are we there yet? *ESMRMB*. Lisbon, Portugal. 10.1007/s10334-012-0324-9 (Poster presentation)
- 4 **Rua, Catarina**; Loureiro, Joana; Carpenter, Adrian; et al. 2012. MR-

Elastography of the Liver: Comparison between Piezoelectric and Pneumatic Actuators. *IPEM*. London, UK. (Oral communication)

- 5 **Rua, Catarina**; Carpenter, Adrian; Mada, Marius. 2012. Performance comparison between Algebraic and Helmholtz Inversion and Local Frequency Estimation algorithms for elastogram reconstruction in MRE. *21st British Chapter ISMRM Postgraduate Symposium*. Bristol, UK. (Oral communication)
- 6 Ferreira, Hugo; **Rua, Catarina**; Loureiro, Joana; et al. 2011. Resting-state functional connectivity analysis of post-traumatic epilepsy patients. *29th Epilepsy Congress*. Rome, Italy. (Poster presentation)
- 7 Ferreira, Hugo; **Rua, Catarina**; Andrade, Alexandre et al. 2010. Assessment of thalamic pathology in patients with unilateral mesial temporal lobe epilepsy and hippocampal sclerosis (MTLE-HS) by means of voxel-based morphometry (VBM), T2-relaxometry and ADC mapping. *9th European Congress on Epileptology*. Rhodes, Greece. 10.1111/j. 1528-1167.2010.02658.x (Oral communication)

8 COMPUTER SKILLS AND COMPETENCES

Good programming language skills in C/C++, Matlab/Octave, PHP and SQL.
Competence in medical image analysis through the use of Matlab, and imaging software such as SPM, FSL, FreeSurfer, Caret and Fiji, as well as the statistical software R.

9 ARTISTIC SKILLS AND COMPETENCES

Classical Ballet education by the Royal Academy of Dance from the age of 5 to 16.
Music education training for four years in classical piano.
Tennis training from the age of 12 to 19.
Contemporary Dancing started in 2013 until present.