

## 1. EDUCATION

### 1.1. Degrees

- Sep 2015 – Jan 2020    PhD in Cognitive Neuroscience and Neuroimaging, University of York, UK. Focused on hemispheric differences in semantic cognition using resting-state and task-based analysis methods applied to fMRI, Supervised by Beth Jefferies and Jonathan Smallwood. Thesis approved with no corrections: external examiner Michel Thiebaut de Schotten.
- Aug 2006 – Jan 2008    MSc in Psychology, Internship in Clinical Neuropsychology. National Autonomous University of Mexico (UNAM), Mexico City. G.P.A. 9.6. *Summa cum Laude* (Excellence Program Full Scholarship, 1<sup>st</sup> in the class).
- Aug 2000 – Jan 2005    Bachelor's degree in Psychology, Anahuac Mayab University, Yucatan, Mexico. G.P.A. 9.7. *Summa cum Laude* (Academic Merits Full Scholarship, 1<sup>st</sup> in the class).

## 2. PUBLICATIONS AND CONFERENCE PRESENTATIONS

### 2.1. Publications

- Gonzalez Alam, T., Karapanagiotidis, T., Smallwood, J., & Jefferies, E. (2019). Degrees of lateralisation in semantic cognition: Evidence from intrinsic connectivity. *NeuroImage*, 202(June), 116089. <https://doi.org/10.1016/j.neuroimage.2019.116089>
- Teige, C., Cornelissen, P. L., Mollo, G., del Jesus Gonzalez Alam, T., McCarty, K., Smallwood, J., ... Jefferies, E. (2019). Dissociations in semantic cognition: Oscillatory evidence for opposing effects of semantic control and type of semantic relation in anterior and posterior temporal cortex. *Cortex*, 120, 308–325. <https://doi.org/10.1016/j.cortex.2019.07.002>
- Gonzalez Alam, T., Murphy, C., Smallwood, J., & Jefferies, E. (2018). Meaningful inhibition: Exploring the role of meaning and modality in response inhibition. *NeuroImage*, 181(February), 108–119. <https://doi.org/10.1016/j.neuroimage.2018.06.074>
- Wang, X., Bernhardt, B. C., Karapanagiotidis, T., De Caso, I., Gonzalez Alam, T., Cotter, Z., ... Jefferies, E. (2018). The structural basis of semantic control: Evidence from individual differences in cortical thickness. *NeuroImage*, 181(July), 480–489. <https://doi.org/10.1016/j.neuroimage.2018.07.044>
- Evans, M., Krieger-Redwood, K., Gonzalez Alam, T., Smallwood, J. & Jefferies, E. (in press). Semantic summation is predicted by intrinsic connectivity between default mode and control networks.
- Gonzalez Alam, T., Krieger-Redwood, K., Evans, M., Rice, G. Smallwood, J. & Jefferies, E. (In prep.). Individual differences in the connectivity of left and right anterior temporal lobe relate to modality and category effects in semantic categorisation.

## 2.2. Conference Presentations

Gonzalez Alam, T., Smallwood, J., & Jefferies, E. (2019, June). Hemispheric differences in connectivity in semantic sites and their contribution to cognition. Poster session presented at the Organization for Human Brain Mapping (OHBM) Annual Meeting, Rome, Italy.

Gonzalez Alam, T., Smallwood, J., & Jefferies, E. (2019, January). Meaningful inhibition. Poster session presented at the Experimental Psychological Society (EPS) Meeting in UCL, London.

Gonzalez Alam, T., Smallwood, J., & Jefferies, E. (2017, July). Meaningful inhibition: Evidence for visual ventral stream involvement when behavioural inhibition depends on stimulus meaning. Poster session presented at the International Conference for Cognitive Neuroscience (ICON17), Amsterdam, Netherlands.

## 3. EMPLOYMENT / PROFESSIONAL EXPERIENCE

2019-current: Ongoing collaboration with Jefferies lab (functional connectivity of ATL; hemispheric differences in structural connectivity in semantic control).

### 3.1. Research

**Methods:** statistical analysis in Python, SPSS and R – including regression, correlation, ANOVA, dimensionality reduction, comparing means, bootstrapping –; analyses of intrinsic connectivity in FSL and CONN; task-based fMRI analyses in FSL; automated meta-analyses and cognitive decoding using Neurosynth and Neurovault; machine learning in Python and MATLAB; behavioural experiment design and implementation.

**Skills:** MRI Operator training (GE & Siemens); programming (Python, Bash, R, Matlab); version control (Git); statistical analyses including neuroimaging (FSL, CONN, SPM, MrVista, NIPYPE, ScikitLearn, SPSS, MVSP, Minitab); data handling (Pandas, SQL) and visualisation (Seaborn, Pyplot); task design and implementation (PsychoPy, Pavlovia, E-Prime, Presentation, DirectRT); reference management in Mendeley.

**Recent Courses:** Machine Learning in Python, Machine Learning for MATLAB, Introduction to the Linux Shell, Programming in Neuroimaging, Research, Design and Analysis in Neuroimaging, Advanced Research Methods. First Aid certification.

### Research Experience:

2019: Data analysis consultant for the Academic Support Office, University of York, UK. Helped obtain insights to guide policy decisions in education, by modelling and applying machine learning to large datasets of surveys.

2015 – 2019: PhD work under the supervision of Beth Jefferies (<https://goo.gl/s9eXdJ>) and Jonathan Smallwood (<https://goo.gl/ekpTVF>) in the Department of Psychology and Neuroimaging Centre at the University of York. I held a scholarship from the Mexican Government for 4 years. Responsible for three studies during the PhD. Collaborated with data analysis and acquisition in several research projects for the Semantics and Mind-wandering labs.

2009 – 2015: Research Fellow, Department of Psychology, Universidad Anahuac Mayab, Yucatan, México. Founded and led the Clinical and Cognitive Neuropsychology Research Group as Principal Investigator. Proposed, designed, secured funding for, and executed five research projects in neuropsychology focused on Semantics and Hemispheric Specialization for Language.

2013 – 2014: Research Stay, General Hospital of Mexico / Department of Psychology, National Autonomous University of Mexico (UNAM), México City. Worked on clinical assessment of language lateralisation in the context of temporal lobectomy for drug-resistant epilepsy.

2008 – 2009: Research Internship, International Centre for Neurological Restoration (Centro Internacional de Restauración Neurológica, CIREN). Havana, Cuba. Worked on neuropsychology of aphasia in the context of stroke.

### **3.2. Supervision**

2018: Trained and supervised ten undergraduate students in data collection for their dissertation.

2017 – 2018: Supervised a new PhD Graduate Teaching Assistant (University of York).

2016 – 2018: Mini-projects supervisor for 2<sup>nd</sup> year undergraduate students in Psychology in the Brain and Behaviour and Perception and Cognition strands (University of York). Supervised eighteen groups of six students each.

2009 – 2015: Supervised seventeen undergraduate dissertations as PI of the Cognitive and Clinical Neuropsychology Research Group, Department of Psychology, Anahuac Mayab University.

2011 – 2012: Supervised eight undergraduate students' clinical practice in Neuropsychology in Anahuac Mayab University Teaching Hospital

### **3.3. Teaching**

#### Recent highlights (5 years)

2018 – 2019: Statistics Tutor in the Maths Skills Centre of the University of York, providing university-wide support and help to students from Undergraduate to PhD with statistics.

2018: MSc Course, Programming in Neuroimaging (Python)

2018: Research Methods (Year 1), Introduction to SPSS

2016 – 2018, Research Methods: regression (linear, multiple), correlation, PCA, one-way, two-ways, repeated measures and mixed design ANOVAs, power analysis.

#### Previous Experience

2015 – 2019, Graduate Teaching Assistant in the Department of Psychology, University of York. delivered tutorials in 13 courses on research methods, language & development, brain & behaviour and perception & cognition strands, on topics ranging from research methods and statistics to language genes, neuropsychology, dementia, hearing and decision making. Provided support and facilitation in: Programming in Neuroimaging (MSc Course), Introduction to SPSS and Research Methods, and Helping students provide feedback effectively (Workshop).

2011 – 2015, Course leader in 16 undergraduate courses in various universities in Mexico, where the role required designing the course and its materials, planning and designing the assessments, lecturing, implementing the assessments, marking, tutoring and keeping records of the students. Eight of these were as Research Fellow in the Department of Psychology, Anahuac Mayab University (2011 – 2015), one as Visiting Lecturer at Marista University (Sep – Dec 2015), two as Visiting Lecturer at Anahuac University as Visiting Lecturer, Department of Psychology, and Universidad Latina (2012 – 2013). A comprehensive list of the courses taught can be downloaded from the applicant's website: [www.TirsoGonzalez.me](http://www.TirsoGonzalez.me).

2009 – 2011, Course leader in 3 undergraduate courses and one laboratory course, where the role required delivering lectures, implementing assessments, teaching techniques and marking in courses that were already designed. The three courses were as Associate Lecturer at Anahuac Mayab University (2009 – 2011), and the laboratory course was as Assistant Lecturer at Universidad Latina (Sep – Dec 2009).

2009 – 2015, Designed and taught 20+ workshops and qualification modules in the Department of Psychology (UNAM), the Mexican Association of Neuropsychology, the General Hospital of Mexico, and the School of Psychology of Anahuac Mayab University. Full list at [www.TirsoGonzalez.me](http://www.TirsoGonzalez.me).

### **3.4. Curriculum Design**

2013 – 2015, Helped develop and design curricula for Psychopedagogy, a new undergraduate degree in Anahuac Mayab University's Department of Psychology, and for the Neuropsychology Practicum in Anahuac Mayab's Teaching Hospital.

### **3.5. Public Engagement and Outreach**

2019, Scientist in "I'm a Scientist, Get me Out of Here", March 2019 edition (Perception Zone). This is an online activity where schools connect sixth-form students with scientists so they can ask questions online, via chat or forum, and they vote on their favourite scientist.

2003 – 2015, Founded, designed, executed and assessed the Goya Film Club Project, which started as a University Radio programme for making film culture accessible to everyone; secured funding and extended to a series of film clubs aimed at developing film culture in vulnerable populations.

2012, Wrote a book for the Secretary of Government and VIRAL (Mexico), detailing social network dynamics in a high-risk neighbourhood (Tepito, Mexico).

### **3.6. Administration**

2018: Organising committee of Postgraduate Research Day, Department of Psychology, U. of York.

2016 – 2017: Organiser of weekly journal club for my research group.

2009 – 2015: Organised 3 regional and 2 national academic events and conferences (Mexico).

2012 – 2014: Helped create an interdisciplinary collegiate research body spanning Health Sciences to pool research strengths (Psychology, Medicine and Nutrition Science) as part of a faculty committee at Anahuac Mayab University (Yucatan, Mexico).

### 3.7. Clinical Work

**Clinical Skills:** Coordinating work in hospitals; clinical neuropsychology assessment and diagnosis; behavioural test batteries, standardised and ad hoc testing; neuropsychological rehabilitation.

2013 – 2014, Founder, coordinator and practice supervisor for the Service of Clinical Neuropsychology at Anahuac Mayab University Teaching Hospital in Yucatan, Mexico.

2008 – 2009, Neuropsychology Intern at International Centre for Neurological Restoration, Havana, Cuba.

2006 – 2008, Neuropsychology Intern at General Hospital of Mexico, Mexico City ('06 – '07); National Institute of Neurology and Neurosurgery, Mexico City ('07 – '08).

### 4. GRANTS, SCHOLARSHIPS AND BURSARIES

2015, September – 2019 September: National Council of Science and Technology (Mexico) full scholarship for PhD project "Interhemispheric Differences in Semantic Cognition". £87,760

2019, May: Guarantors of Brain travel grant for attending OHBM in Rome. £600

2019, January: EPS travel grant for attending the January meeting. £175

2017, July: EPS travel grant for attending ICON 2017 conference in Amsterdam. £450

2008, January: National Autonomous University of Mexico Semester Abroad Academic Merit Scholarship for research / clinical Internship in CIREN (Havana, Cuba). £2,185

2006 September – 2008 September: National Council of Science and Technology (Mexico) full scholarship for M.Sc. / Clinical internship studies in Clinical Neuropsychology. £12,914

2000 September – 2005 January: Anahuac Mayab Academic Merits Full Scholarship. £24,797

### 5. PROFESSIONAL MEMBERSHIPS

2019: Organization for Human Brain Mapping

2016: Association for Psychological Science

2013: Full Member of the Academic Committee of the National Centre for Assessment in Higher Education in Mexico, tasked with designing items for the National Psychology Examination.

2011: Mexican Neuropsychological Association (Full member, responsible for the scientific committee and member of the Editorial board of *Revista Mexicana de Neuropsicologia*).