Work Experience:

New York University (September 2017 -) : Postdoctoral associate in the lab of Professor Xiao-Jing Wang. This is a world-leading computational neuroscience lab, at the interface of neuroscience, psychiatry and machine learning. In this position, in close collaboration with cutting-edge experimental neuroscience groups, I am developing large-scale biophysically realistic neural network models of distributed cognitive functions, linking animal systems neuroscience with human brain disorders.

Icahn School of Medicine at Mount Sinai (September 2015 - August 2017): Postdoctoral fellow in the lab of Dr. Paula Croxson in the Friedman Brain Institute, the Fishberg Department of Neuroscience and the Translational and Molecular Imaging Institute. This is the number 1 ranked Neuroscience department in the USA in terms of NIH funding (Blue Ridge Institute for Medical Research, 2018). In this position I led a project investigating how lesions to the hippocampus lead to specific types of amnesia, and how the brain dynamically adapts its connectivity in response to such injury. For this project I pioneered the integration of *in-vivo* functional neuroimaging with postmortem anatomy in order to predict changed to brain connectivity following injury.

Institute of Psychiatry, King's College London (October 2011 – April 2015): Research Worker in the Neurodevelopment & Mental Health Group, Department of Psychosis Studies, working for Prof. Chiara Nosarti and Prof. Oliver Howes. My position involved the planning, organisation and execution of a project using diffusion MRI tractography, fMRI, [18F]-DOPA PET, mcDESPOT (myelin water imaging) and neuropsychological testing, in which I was the lead neuroimaging analyst, and undertook a large proportion of the neuropsychological assessments. This was the world's first study of dopamine function (using PET) in people with neonatal brain damage and the longest follow-up study people born very preterm.

University of Barcelona (March 2011 – September 2011): Pre-doctoral research worker**.** My work in the laboratory of Dr. Antoni Rodríguez-Fornells involved the processing and analysis of neuroimaging data on projects investigating chronic stage recovery of language and movement following stroke. I also taught diffusion MRI methods to the other staff in the laboratory.

University of Málaga (December 2010 – September 2011): Specialist MR Researcher in CIMES, the Centre for Medical and Health Research in the University of Málaga. I was the lead fMRI/diffusion MRI analyst on studies researching the effect of intensive language action treatment and pharmacological intervention on the chronic stage recovery from post-stroke aphasia and foreign accent syndrome led by Dr. Marcelo Berthier. I also taught diffusion processing and analysis methods to other researchers in the center.

Trinity College Dublin (June 2009 – September 2009): Research assistant in the Dr. Trinity College Mathematical Neuroscience Laboratory (PI Conor Houghton) in the summer of 2009. My role was to research modern statistical methods used to describe spike train sequences.

Education:

PhD in Neuroimaging (January 2012 – January 2015) - Department of Psychosis Studies, Institute of Psychiatry, King's College London: PhD title: Early Brain Damage Leading to Dopamine Dysregulation. Supervisors: Prof. Chiara Nosarti, Prof. Oliver Howes. My PhD duties were mostly overlapping with those as a Research Worker in the same department (see Work Experience section). The Institute of Psychiatry is the most frequently cited psychology/psychiatry research institute outside of the US and is the fourth most highly cited center in the world (Essential Science Indicators). It is ranked as the second best university in the world for Psychiatry/Psychology (US News Global Best Universities 2014).

MSc in Neuroscience (2009-2010) - Institute of Psychiatry, King's College London. I was awarded a distinction for the MSc (the highest possible grade). I completed a 6-month diffusion tensor tractography project in the lab of Dr. Marco Catani. Dr. Catani's lab is a world leader in the study of white matter connections in the human brain. I was one of five students awarded a fees-only bursary prior to the course. The bursaries were awarded upon successful completion of invitation-only interviews, given to candidates who achieved first class honours in their previous degrees.

BSc (Honours) Pure and Applied Mathematics (2005-2009) - Trinity College Dublin, I graduated with first-class honours (the highest possible grade). Trinity is consistently ranked as Ireland's best university in national and international rankings. I took various courses in statistics, applied mathematics and computer programming as well as many pure mathematics courses.

Published papers
1st /Joint 1st author - * signifies equal contribution

1) **Froudist-Walsh, Sean,** Philip G.F. Browning; James J. Young; Kathy L. Murphy; Rogier B. Mars; Lazar Fleysher; Paula L. Croxson. "Macro-connectomics and microstructure predict dynamic plasticity patterns in the non-human primate brain". *eLife* (In press, 2018).
2) **Froudist-Walsh, Sean**; Philip G.F. Browning; Paula L. Croxson; Kathy L. Murphy; Jul L Shamy; Tess L Veuthey; Charles R.E. Wilson; Mark G. Baxter. "The rhesus monkey hippocampus contributes to scene memory retrieval, but not new learning". *Journal of Neuroscience* (In press, 2018). https://doi.org/10.1523/JNEUROSCI.0832-18.2018
3) **Froudist-Walsh, Sean**; Michael P Bloomfield; Jasmin Kroll; Vyacheslav Karolis; Sameer Jauhar; Ilaria Bonoldi; Philip McGuire; Robin M Murray; Shitij Kapur; Chiara Nosarti; Oliver Howes. "Presynaptic striatal dopamine dysfunction in people who experienced neonatal brain injury". *eLife* (2017), 6: e29088.
    - Press release (picked up by 14 news outlets): https://www.kcl.ac.uk/ioppn/news/records/2017/11-November/Complications-at-birth-associated-with-lasting-chemical-changes-in-the-brain.aspx
4) Kroll, Jasmin*; **Sean Froudist-Walsh***; Philip J. Brittain; Chieh-En Jane Tseng; Vyacheslav Karolis; Robin M. Murray; Chiara Nosarti. "A Dimensional Approach To Assessing Psychiatric Risk In Adults Born Very Preterm." *Psych. Med* (2017, In Press)

5) **Froudist-Walsh, Sean**; Diana López-Barroso; María José Torres-Prioris; Paula Croxson; Marcelo L. Berthier. "Plasticity in the Working Memory System: Life Span Changes and Response to Injury." *The Neuroscientist* (2017): 1073858417717210.
6) **Froudist-Walsh, Sean**; Vyacheslav Karolis; Chiara Caldinelli; Philip J. Brittain; Jasmin Kroll; Elisa Rodríguez-Toscano; Marcello Tesse; Matthew Colquhoun; Oliver Howes; Flavio Dell'Acqua; Michel Thiebaut de Schotten; Robin M. Murray; Steven C.R. Williams; Chiara Nosarti. "Very Early Brain Damage Leads to Remodeling of the Working Memory System in Adulthood: A Combined fMRI/Tractography Study." *The Journal of Neuroscience* 35, no. 48 (2015): 15787-15799.
    - As featured in the New Scientist magazine (17-Feb-2016 issue): https://www.newscientist.com/article/2077401-premature-birth-how-its-effects-can-stay-with-you-for-life/
7) Salvan, Piergiorgio*; **Sean Froudist-Walsh***; Matthew PG Allin; Muriel Walshe; Robin M. Murray; Sagnik Bhattacharyya; Philip K. McGuire; Steven CR Williams; Chiara Nosarti. "Road work on memory lane—Functional and structural alterations to the learning and memory circuit in adults born very preterm." *NeuroImage.* 102 (2014): 152-161. (Journal cover article).
8) Lawrence, Emma J*; **Sean Froudist-Walsh*;** Rachel Neilan; Kie-Woo Nam; Vincent Giampietro; Philip McGuire; Robin M. Murray; and Chiara Nosarti. "Motor fMRI and Cortical Grey Matter Volume in Adult Born Very Preterm." *Developmental Cognitive Neuroscience* 10 (2014): 1-9.

2nd author:

9) Milham, Michael et al., "Accelerating the evolution of non-human primate imaging". *Neuron* (In press, 2020).
10) Tseng, Jane; **Sean Froudist-Walsh**; Jasmin Kroll; Vyacheslav Karolis; Philip Brittain; Nadia Palamin; Hayley Clifton; Serena Counsell; Steve Williams; Robin Murray; Chiara Nosarti. "Verbal fluency is affected by altered brain lateralization in adults who were born very preterm". *eNeuro* (In press, 2019).
11) Velthorst, Eva; **Sean Froudist-Walsh**; Eli Stahl; Douglas Ruderfer; Ilyan Ivanov; Joseph Buxbaum; iPSYCH-Broad ASD Group; the IMAGEN consortium; Tobias Banaschewski; Arun L.W. Bokde; Uli Bromberg; Christian Büchel; Erin Burke Quinlan; Sylvane Desrivières; Herta Flor; Vincent Frouin; Hugh Garavan; Penny Gowland; Andreas Heinz; Bernd Ittermann; Marie-Laure Paillère Martinot; Eric Artiges; Frauke Nees; Dimitri Papadopoulos Orfanos; Tomáš Paus; Luise Poustka; Sarah Hohmann; Juliane H. Fröhner; Michael N. Smolka; Henrik Walter; Robert Whelan; Gunter Schumann; Abraham Reichenberg. "The role of polygenic risk and social impairment in the developmental pathway to psychotic experiences in adolescence". *Translational Psychiatry* (In press, 2018).
12) Karolis, Vyacheslav R; **Sean Froudist-Walsh**; Jasmin Kroll; Philip J Brittain; Chieh-En Jane Tseng; Kie-Woo Nam; Antje Reinders; Robin M Murray; Steven C Williams; Paul M Thompson; Chiara Nosarti; "Volumetric grey matter alterations in adolescents and adults born very preterm suggest accelerated brain maturation". *NeuroImage,* 163, (2017): 379-389.
13) Caldinelli, Chiara; **Sean Froudist-Walsh**; Vyacheslav Karolis; Chieh-En Tseng; Matthew P Allin; Marion Cuddy; Robin M Murray; Chiara Nosarti. "White matter alterations to the cingulum and fornix following very preterm birth and their relationship with cognitive functions". *NeuroImage*. 150, (2017): 373-382.

14) Karolis,Vyacheslav R; **Sean Froudist-Walsh**; Philip J. Brittain; Jasmin Kroll; Gareth Ball; A. David Edwards; Flavio Dell'Acqua; Steven C. Williams; Robin M. Murray; and Chiara Nosarti. "Reinforcement of the Brain's Rich-Club Architecture Following Early Neurodevelopmental Disruption Caused by Very Preterm Birth." *Cerebral Cortex* 26; no.3 (2016): 1322-1335.

15) Nosarti, Chiara and **Sean Froudist-Walsh**. "Dynamic development of hippocampal and cortical memory mechanisms and their alterations following very preterm birth." *Developmental Medicine and Child Neurology* 58; no. S4 (2016): 35-45.

16) Tseng, Jane; **Sean Froudist-Walsh**; Philip Brittain; Vyacheslav Karolis; Chiara Caldinelli; Jasmin Kroll; Steven Williams; Robin M Murray; Chiara Nosarti. "Altered neural network for episodic memory in adults following early brain injury: a very preterm birth model". *Human Brain Mapping* (In Press - 2016).

17) Brittain, Philip J.; **Sean Froudist-Walsh**; Kie-Woo Nam; Vincent Giampietro; Vyacheslav Karolis; Robin M. Murray; Sagnik Bhattacharyya; Anastasia Kalpakidou; and Chiara Nosarti. "Neural compensation in adulthood following very preterm birth demonstrated during a visual paired associates learning task." *NeuroImage: Clinical* 6 (2014): 54-63.

18) Berthier, Marcelo L.; **Sean Froudist-Walsh**; Guadalupe Dávila; and Alejandro Nabrozidis. "Dissociated repetition deficits in aphasia can reflect flexible interactions between left dorsal and ventral streams and gender-dimorphic architecture of the right dorsal stream." *Frontiers in human neuroscience* 7 (2013).

Other published papers:

19) Papini, Chiara; Lena Palaniyappan; Jasmin Kroll; **Sean Froudist-Walsh;** Robin M Murray; Chiara Nosarti. "Altered cortical gyrification in adults who were born very preterm and its associations with cognition and mental health." *Biological Psychiatry: CNNI.* (In Press, 2020).

20) Kroll, Jasmin; Vyacheslav Karolis; Philip J. Brittain; Chieh-En Jane Tseng; **Sean Froudist-Walsh**; Robin M. Murray; Chiara Nosarti. "Systematic assessment of perinatal and socio-demographic factors associated with IQ from childhood to adult life following very preterm birth." *Intelligence*. (2019) 77, 101401.

21) D'Ambrosio, Enrico; Tarik Dahoun; Antonio F. Pardiñas; Mattia Veronese; Michael AP Bloomfield; Sameer Jauhar; Ilaria Bonoldi; Maria Rogdaki, **Sean Froudist-Walsh**; James TR Walters; Oliver Howes. "The effect of a genetic variant at the schizophrenia associated AS3MT/BORCS7 locus on striatal dopamine function: a PET imaging study." *Psychiatry Research: Neuroimaging* (In Press, 2019).

22) Xu, Ting; Darrick Sturgeon; Julian SB Ramirez; **Sean Froudist-Walsh**; Daniel S Margulies, Charlie E Schroeder; Damien A Fair; Michael Milham. "Inter-individual variability of functional connectivity in awake and anesthetized rhesus monkeys". *Biological Psychiatry: Cognitive Neuroscience & Neuroimaging* (In Press; 2019).

23) Milham, Michael P; Lei Ai; Bonhwang Koo; Ting Xu; Céline Amiez; Fabien Balezau; Mark G. Baxter; Thomas Brochier; Aihua Chen; Paula L. Croxson; Christienne G. Damatac; Stanislas Dehaene; Stefan Everling; Damian A. Fair; Lazar Fleysher; Winrich Freiwald; **Sean Froudist-Walsh**; Timothy D. Griffiths; Carole Guedj; Fadila Hadj-Bouziane; Suliann Ben Hamed; Noam Harel; Bassem Hiba; Bechir Jarraya; Benjamin Jung; Sabine Kastner; P. Christiaan Klink; Sze Chai Kwok; David A. Leopold; Rogier B. Mars; Ravi S. Menon; Adam Messinger; Martine Meunier; Kelvin Mok; John H. Morrison; Jennifer Nacef; Jamie Nagy;

Michael Ortiz Rios; Christopher I. Petkov, Mark Pinsk; Colline Poirier; Emmanuel Procyk; Reza Rajimehr; Simon Reader; Pieter R. Roelfsema, David A. Rudko; Matthew F.S. Rushworth; Brian E. Russ; Jerome Sallet; Michael C. Schmid; Caspar M. Schwiedrzik; Jakob Seidlitz; Julien Sein; Amir Shmuel; Elinor L. Sullivan; Leslie Ungerleider; Alexander Thiele; Doris Tsao; Zheng Wang; Charles R.E. Wilson; Essa Yacoub; Frank Q. Ye; Wilbert Zarco; Yong-di Zhou; Daniel S. Margulies; Charles E. Schroeder. "An open resource for non-human primate imaging". *Neuron* (In Press; 2018).

24) Dahoun, Tarik; Antonio F Pardiñas; Mattia Veronese; Michael AP Bloomfield; Sameer Jauhar; Ilaria Bonoldi; **Sean Froudist-Walsh**; Chiara Nosarti; Carsten Korth; William Hennah; James Walters; Diana Prata; Oliver D Howes; "The effect of the DISC1 Ser704Cys polymorphism on striatal dopamine synthesis capacity an [^{18}F]-DOPA PET study ". *Human Molecular Genetics* (In Press; 2018).

25) Parvaz, Muhammad A; Kristen Kim; **Sean Froudist-Walsh,** Jeffrey H Newcorn, Iliyan Ivanov; "Reward-based learning as a function of severity of substance abuse risk in Drug-Naïve Youth with ADHD". *Journal of Child and Adolescent Psychopharmachology* (In Press; 2018).

26) Kroll, Jasmin; Philip J. Brittain; Vyacheslav Karolis; Jane Tseng; **Sean Froudist-Walsh**; Robin M Murray; Chiara Nosarti. "Real-life impact of executive function impairments in adults who were born very preterm." *JINS,* 23, 5 (2017): 381-389.

27) Catani , Marco; Flavio Dell'Acqua; Henrietta Howells; Sanja Budisavljevic; Michel Thiebaut de Schotten; **Sean Froudist-Walsh**; Lucio D'Anna; Edward T. Bullmore; John Suckling; Simon Baron-Cohen; Michael V. Lombardo; Alexander Leemans; Michael C. Craig; Declan G.M. Murphy. "Frontal networks in adults with autism spectrum disorder." *Brain* 139; no. 2 (2016): 616-630.

28) Papini, Chiara; Thomas P White; Anita Montagna; Philip Brittain; **Sean Froudist-Walsh**; Jasmin Kroll; Vyacheslav Karolis; Alessandra Simonelli; Steven C Williams; Robin M Murray; Chiara Nosarti. "Altered resting state functional connectivity in emotion processing brain regions in adults who were born very preterm." *Psychological Medicine* (In Press - 2016)

29) Sarkar, Sagari; Flavio Dell'Acqua; **Sean Froudist Walsh**; Nigel Blackwood; Stephen Scott; Michael C. Craig; Quinton Deeley; Declan GM Murphy. "A Whole-Brain Investigation of White Matter Microstructure in Adolescents with Conduct Disorder." *PloS one* 11; no. 6 (2016): e0155475.

30) Nam, Kie-Woo; Nazareth Castellanos; **Sean Froudist-Walsh**; Andrew Simmons; Matthew P. Allin; Muriel Walshe; Robin M. Murray; Alan Evans; J-Sebastian Muehlboeck; Chiara Nosarti. "Alterations in cortical thickness development in preterm-born individuals: implications for high-order cognitive processing." *NeuroImage* 115 (2015); 64-75.

31) White, Thomas P.; Iona Symington; Nazareth P. Castellanos; Philip J. Brittain; **Sean Froudist-Walsh**; Kie-Woo Nam; João R. Sato et al. "Dysconnectivity of neurocognitive networks at rest in very-preterm born adults." *NeuroImage: Clinical* 4 (2014): 352-365.

32) Tuomiranta, Leena M.; Estela Càmara; **Sean Froudist-Walsh**; Pablo Ripolles; Jani P. Saunavaara; Riitta Parkkola; Nadine Martin; Antoni Rodríguez-Fornells; and Matti Laine. "Hidden word learning capacity through orthography in aphasia." *Cortex* 50 (2014): 174- 191.

33) De-Torres, Irene; Guadalupe Dávila; Marcelo L. Berthier; **Sean Froudist-Walsh**; Ignacio Moreno-Torres; and Rafael Ruiz-Cruces. "Repeating with the right hemisphere: reduced interactions between phonological and lexical-semantic systems in crossed aphasia?." *Frontiers in human neuroscience* 7 (2013).

34) Moreno-Torres, Ignacio; Marcelo L. Berthier; Maria del Mar Cid; Cristina Green; Antonio Gutiérrez; Natalia García-Casares; **Sean Froudist-Walsh** et al. "Foreign accent syndrome: a multimodal evaluation in the search of neuroscience-driven treatments." *Neuropsychologia* 51; no. 3 (2013): 520-537.

35) García-Casares, Natalia; Marcelo L. Berthier Torres; **Sean Froudist-Walsh**; and Pedro Gonzalez-Santos. "A model of musical cognition and amusia." *Neurología* 28; no. 3 (2013): 179-186.

36) Amengual, Julia L.; Antoni Valero-Cabré; Misericordia V. de las Heras; Nurja Rojo; **Sean Froudist-Walsh**; Pablo Ripollés; Nils Bodammer et al. "Prognostic value of cortically induced motor evoked activity by TMS in chronic stroke: Caveats from a revealing single clinical case." *BMC neurology* 12; no. 1 (2012).

37) Berthier, Marcelo L.; Natalia Garcia-Casares; **Sean Froudist-Walsh**; Alejandro Nabrozidis; de Mier RJ Ruíz; et al. "Recovery from post-stroke aphasia: lessons from brain imaging and implications for rehabilitation and biological treatments." *Discovery medicine* 12; no. 65 (2011): 275-289.

Grants, Awards and Fellowships:

National Science Foundation, CRCNS (2020-2023, PI: Xiao-Jing Wang, co-PI Nicola Palomero-Gallagher). Gradients of receptors underlying distributed cognitive functions. Role: Collaborator.

National Institute of Mental Health, R01MH062349-16 (2018-2023, PI: Xiao-Jing Wang). Distributed dynamics and cognition in a large-scale primate cortical circuit model. Role: Key Personnel.

NIMH/Kavli/Wellcome Travel Grant for PRIME-DE Conference, Wellcome Trust, London, UK. September 2019.

Trinity Visiting Academic Programme, Trinity College Dublin, July 2019. Competitive programme to facilitate short-term visits by outstanding academics.

International Postdoc Fellowship, Brain & Spine Institute (ICM), Paris, France, 2017. Declined.
Young Investigator Award. Persistent Maladaptive Behaviors Conference, 2016. Rochester; NY; USA.
Brain Travel Grant, for Pediatric Academic Societies Meeting, 2013. Washington DC, USA.
King's College London, MSc Neuroscience Bursary. 2009-2010.

Invited/Contributed talks:

1) MMTI Seminar Series, Department of Psychiatry, Stony Brook University, New York, USA (Invited). December 2019. "Dopaminergic modulation of large-scale cortical circuits underlying working memory"
2) Flux Congress 2019, New York, USA (Invited). August 2019. "Brain injury at birth disrupts the development of dopamine and working memory networks in humans"
3) British Neuroscience Association Conference 2019, Dublin, Ireland. April 2019. (Selected Rapid-fire talk). "Emergence of working memory in macaque cortical areas with high neurotransmitter density."
4) Neuroscience Society seminar, Trinity College Dublin, Ireland (Invited). April 2019. "Distributed effects of hippocampal and prefrontal cortical lesions."

5) Large-Scale Gradients in Brain Organization Meeting, Collège de France, Paris, France (Organized). February 2019. “Dopamine gradients modulate distributed working memory representations.”
6) Séminaire Exceptionnel, ICM (Brain & Spine Institute), Hôpital Pitié Salpetrière, Paris, France (Invited). February 2019. “Distributed effects of hippocampal and prefrontal cortical lesions in space and time.”
7) C-BIN Science Lecture Series, Nathan Kline Institute, New York, USA (Invited). December 2018. “Distributed effects of hippocampal lesions in space and time.”
8) Large-scale Trends in Cortical Organisation Meeting, December 2017, Leipzig, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany (Invited). “Linking gradients of cortical microstructure to plasticity and cognition.”
9) Brain Imaging Centre Symposium; Icahn School of Medicine at Mount Sinai; New York; USA. October 2016 (Selected talk). “Local and global network alterations following focal hippocampal lesions in the monkey.”
10) Pediatric Academic Societies Meeting 2016 (Selected talk). May 2016. Baltimore; MD; USA “Alterations to memory-related tracts in adults who were born very preterm.”
11) Brain Imaging Centre Symposium; Icahn School of Medicine at Mount Sinai; New York; USA (Selected talk). October 2015. “Prematurity-related brain injury leads to altered dopamine function and whole brain connectivity in adult life."
12) Cognition and Brain Plasticity Unit; University of Barcelona; Spain (Invited). February 2015. "Dopamine function and reorganisation of brain networks after very early brain injury. New results from a 30-year study.”
13) Centre for Neuroimaging Science, King’s College London, UK (Invited). January 2015. “Reorganisation of brain networks following neonatal brain injury. A 30 year study.”
14) Friedman Brain Institute; Icahn School of Medicine at Mount Sinai; New York; USA (Invited). November 2014.
"Reorganisation of brain networks following neonatal injury. A 30-year study."
15) Pediatric Academic Societies Meeting 2014 (Selected talk). May 2014. Vancouver; Canada.
“The effects of preterm birth and periventricular hemorrhage on working memory function in adult life: An fMRI Study.
16) Pediatric Academic Societies Meeting 2013 (Selected talk). May 2013. Washington; D.C.; USA. “Road work on memory lane - functional and structural alterations to the learning and memory circuit in adults born preterm.”

Teaching experience:
Neuroconnect Course (November 2016) – Diffusion MRI course at Mount Sinai. Developed and taught a class on ‘Promises and Pitfalls of Tractography’ and a practical on ‘Manual dissection of white matter tracts’ (audience: Postdocs – Associate Professors).
Sinai Methods Bootcamp (September 2016) – Taught introduction to fMRI; diffusion MRI and structural MRI (new PhD students).
Center of Excellence in Youth Education; Mount Sinai; New York (2016). Co-organised and taught classes and activities for the neuroscience engagement day for 45 local students (16-17 year olds).
Boys and Girls Harbor School (East Harlem; New York; 2016). Taught neural connectivity class to 5th grade children (10-11 year olds)
Eagle Academy for Young Men (Bronx; New York; 2015). Taught three classes on brain disorders to 9th and 10th grade adolescents (16-17 year olds).

Eagle Academy for Young Men (Queens; New York; 2015). Taught a class on brain disorders to 9th and 10th grade adolescents (16-17 year olds).
King's College London MSc in Mental Health Studies. Neuroanatomy lecturer (2012) (MSc students).
King's College London (2012-2015); second supervisor to six MSc students in Neuroscience; Neuroimaging and Psychology.
Future Leaders in Science Education and Communication Scholar. I was selected for this competitive program. I attended 8 weeks of lectures; peer reviewed 4 classes and gave one primary school and one graduate level class.
Curriculum Design Team; Centre for Excellence in Youth Education; Icahn School of Medicine at Mount Sinai. Planned and taught range of classes and activities, with colleagues, for adolescents in New York schools.

Co-supervised undergraduate summer students:
Hanqing Wang - 2018 (now PhD student at Johns Hopkins University, Baltimore, USA).
Co-supervised MSc students:
Chiara Caldinelli - 2015 (now PhD student at Trinity College Dublin, Ireland).
Prakriti Agarwal - 2014 (now Director of Little Newton Autism Centre, Bengaluru, India).
Anita Montagna – 2013 (now MRC PhD student at King's College London, UK).
Kerry Stephenson – 2013 (now Founding Director at Mind over Monkey, London, UK).
Piergiorgio Salvan - 2012 (now Postdoc at University of Oxford, UK).
Co-supervised PhD students:
Xingyu Ding – current (PhD student at New York University, USA)
Winnie Yang - current (PhD student at New York University, USA)

Further education:
Deep Learning Specialization. deeplearning.ai/Coursera. January 2020
Sequence Models. deeplearning.ai/Coursera. January 2020
Convolutional Neural Networks. deeplearning.ai/Coursera. March 2018
Neuronal Networks. Courant Institute of Mathematical Sciences, New York University. Fall 2017
Structuring Machine Learning Projects. deeplearning.ai/Coursera. November 2017
Improving Deep Neural Networks . deeplearning.ai/Coursera. October 2017
Neural Networks and Deep Learning. deeplearning.ai/Coursera. September 2017
Future Leaders in Science Education and Communication. Icahn School of Medicine at Mount Sinai. Eight weeks classes attended. Taught one primary school class and one graduate level class. October 2015- June 2016.
Python data structures. University of Michigan/Coursera. 6 week course – March 2016.
Python for everybody. University of Michigan/Coursera. 7 week course – March 2016.
Dynamical Modeling Methods for Systems Biology. Icahn School of Medicine at Mount Sinai/Coursera.7 week course. 8 hours per week. January – March, 2016.
Machine Learning. Stanford University/Coursera. 11 week course. July – September 2015.
Computational Neuroscience. University of Washington/Coursera. 8 week course; 6-8 hours per week. May-June 2015.
Live Science Communication Training. Science Museum, London. September 2014.
Advanced Neuroimaging Summer Program. UCLA. 70 hours, 2 weeks full time on site. July 2013.
Open Collaboration & Innovation Programme. University of London. 3 days in house & 6 monthly meetings. December 2011 - June 2012.

FSL course. University of Oxford - online - October 2010.
Neuroanatomy and Tractography Workshop. King's College London - March 2010.

Compliance/Good Practice:
Proper Use of Chemical Fume Hoods (US) – April 2016.
Working Safely With Primates in Biocontainment (US) – September 2015.
Introduction to Nonhuman Primates (US) - September 2015.
8th Edition of the Guide for the Care and Use of Laboratory Animals (US) – September 2015.
AMVA guidelines for the Euthanasia of Animals (US) - September 2015.
Working with Controlled Substances (US) – September 2015.
Non-human primate zoonosis training (US) – September 2015.
IACUC training (US) – September 2015.
HIPAA Health Information Privacy (US) – August 2015.
Good Clinical Practice (UK) - May 2012.
Radiation Protection; IRMER (UK) – May 2012.
MRI Safety (UK; US) – 2010; 2013; 2015.

Further Skills and Details:
Programming languages: Python (proficient); Matlab (proficient); R (occasional); shell scripting (proficient).
Neuroimaging software packages: FSL; SPM; ExploreDTI; Trackvis; FreeSurfer; ANTs and other MATLAB-based packages.
Statistical analysis programs: R; SPSS
Task presentation programs: PsychToolbox; MonkeyLogic
Other skills: proficient in Microsoft Word; Excel and Powerpoint as well as their Mac-based equivalents
Nationality**:** Irish/Australian (dual nationality)
Languages spoken: English (native); Spanish (fluent); Italian (upper intermediate); French (intermediate); Irish Gaelic (intermediate).

Reviewer for Academic Journals:
Biological Psychiatry, Nature Communications, Cerebral Cortex, Journal of Neuroscience, Lancet Child & Adolescent Health, Cortex, PLoS ONE.

Professional Society Memberships
Society for Neuroscience, Federation of European Neuroscience Societies, Neuroscience Ireland, Organization for Human Brain Mapping (occasional)