Sean Froudist-Walsh CV

Work Experience

New York University (USA) 01/09/2017 -
Postdoctoral associate
Xiao-Jing Wang lab
Main project: “Connectome-based biophysical modelling of dopamine in working memory”

Icahn School of Medicine at Mount Sinai (USA) 01/09/2015 – 31/08/2017
Postdoctoral fellow
Paula Croxson lab
Main project: “Distributed plasticity following focal hippocampal lesions in the monkey”

Institute of Psychiatry, King’s College London (UK) 10/10/2011 – 20/04/2015
Research Worker
Chiara Nosarti and Oliver Howes labs
Main project: “The long-term effects of brain injury following very preterm birth on dopamine and memory function”

University of Barcelona (Spain) 01/03/2011 – 31/09/2011
MRI Analyst
Antoni Rodríguez-Fornells lab
Main project: “Diffusion MRI tractography investigation of language and motor recovery following stroke”

University of Málaga (Spain) 01/12/2010 – 31/09/2011
Specialist MR Technician
Marcelo Berthier lab
Main project: “Multimodal MRI investigation of recovery following aphasia and related disorders”

Trinity College Dublin (Ireland) 01/06/2009 – 01/09/2009
Research Assistant
Conor Houghton lab
Main project: “Bayesian fitting methods for analysing spike train data”

Education

Institute of Psychiatry, King’s College London (UK) 01/01/2012 – 01/07/2015
PhD in Neuroimaging
Advisors: Chiara Nosarti, Oliver Howes
Thesis: “Very early brain damage leads to dopamine dysregulation in adulthood”

Institute of Psychiatry, King’s College London (UK) 01/09/2009 – 08/09/2010
MSc in Neuroscience (graduated with Distinction)
Thesis: “Disruption to the corpus callosum in adults with autism spectrum disorder”

Trinity College Dublin (Ireland) 01/10/2005 – 25/06/2009
BA (Hons) in Pure and Applied Mathematics (graduated with First Class Honours)

Publications

[total 41 papers, 2 preprints, 1180 citations, h-index = 20 (Google Scholar, August 2021)]

Preprints

1) **Froudist-Walsh S**; T Xu; M Niu; L Rapan; D Margulies; K Zilles; XJ Wang[+] N Palomero-Gallagher[+]. ([+]co-last authors). "Gradients of receptor expression in the macaque neocortex". *bioRxiv* 2021.02.22.432173 (2021) (being revised at *Nature Neuroscience*).
2) Gao* Z; H Wang*; C Lu; **S Froudist-Walsh**, M Chen; XJ Wang[+]; J Hu[+]; W Sun[+]. "The neural basis of delayed gratification." (being revised at *Science Advances*).

Peer-reviewed publications
1st /Joint 1st author published papers - * signifies equal contribution

3) **Froudist-Walsh S**; DP Bliss; X Ding; L Rapan; M Niu; K Knoblauch; K Zilles; H Kennedy; N Palomero-Gallagher; XJ Wang. "A dopamine gradient controls access to distributed working memory in monkey cortex". *Neuron* (2021 – In press).
4) **Froudist-Walsh, S**; PGF Browning; JJ Young; KL Murphy; RB Mars; L Fleysher; PL Croxson. "Macro-connectomics and microstructure predict dynamic plasticity patterns in the non-human primate brain". *eLife* (2018): 7:e34354
5) **Froudist-Walsh, S**; PGF Browning; PL Croxson; KL Murphy; JL Shamy; TL Veuthey; CRE Wilson; MG Baxter. "The rhesus monkey hippocampus contributes to scene memory retrieval, but not new learning". *Journal of Neuroscience* (2018): 38(36):7800 –7808
6) **Froudist-Walsh, S**; MP Bloomfield; J Kroll; V Karolis; Sameer Jauhar; Ilaria Bonoldi; PK McGuire; RM Murray; S Kapur; C Nosarti; O Howes. "Presynaptic striatal dopamine dysfunction in people who experienced neonatal brain injury". *eLife* (2017): 6: e29088.
7) Kroll, J*; **S Froudist-Walsh***; PJ Brittain; CEJ Tseng; V Karolis; R M. Murray; C Nosarti. "A dimensional approach to assessing psychiatric risk in adults born very preterm." *Psych. Med* (2017): 48 (10) 738-1744
8) **Froudist-Walsh, S**; D López-Barroso; MJ Torres-Prioris; PL Croxson; ML Berthier. "Plasticity in the Working Memory System: Life Span Changes and Response to Injury." *The Neuroscientist* (2017): 1073858417717210.
9) **Froudist-Walsh, S**; V Karolis; C Caldinelli; PJ Brittain; J Kroll; E Rodríguez-Toscano; M Tesse; M Colquhoun; O Howes; F Dell'Acqua; M Thiebaut de Schotten; RM Murray; SCR Williams; C 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.
10) Salvan, P*; **S Froudist-Walsh***; MPG Allin; M Walshe; RM Murray; S Bhattacharyya; PK McGuire; SCR Williams; C 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.
11) Lawrence, EJ*; **S Froudist-Walsh*;** R Neilan; KW Nam; V Giampietro; PK McGuire; RM Murray; and C Nosarti. "Motor fMRI and Cortical Grey Matter Volume in Adult Born Very Preterm." *Developmental Cognitive Neuroscience* 10 (2014): 1-9.

2nd author published papers:

12) Rapan, L; **S Froudist-Walsh,** M Niu, T Xu, T Funck, K Zilles, N Palomero-Gallagher. "Multimodal 3D atlas of the macaque monkey motor and premotor cortex". *NeuroImage* (2020) 117574.
13) Tseng, CEJ; **S Froudist-Walsh**; J Kroll; V Karolis; PJ Brittain; N Palamin; H Clifton; S Counsell; SCR Williams; RM Murray; C Nosarti. "Verbal fluency is affected by altered brain lateralization in adults who were born very preterm". *eNeuro* (2019): 6(2) 1-16.
14) Velthorst, E; **S Froudist-Walsh** et al., "Genetic risk for schizophrenia and autism, social impairment and developmental pathways to psychosis". *Translational Psych.* (2018): 8:204.
15) Karolis, V; **S Froudist-Walsh**; J Kroll; PJ Brittain; CEJ Tseng; KW Nam; A Reinders; RM Murray; SCR Williams; PM Thompson; C Nosarti; "Volumetric grey matter alterations in adolescents and adults born very preterm suggest accelerated brain maturation". *NeuroImage,* 163, (2017): 379-389.

16) Caldinelli, C; **S Froudist-Walsh**; V Karolis; CEJ Tseng; MP Allin; M Cuddy; RM Murray; C Nosarti. “White matter alterations to the cingulum and fornix following very preterm birth and their relationship with cognitive functions”. *NeuroImage*. 150, (2017): 373-382.
17) Karolis,V; **S Froudist-Walsh**; PJ Brittain; J Kroll; G Ball; AD Edwards; F Dell'Acqua; SCR Williams; RM Murray; C Nosarti. "Reinforcement of the Brain's Rich-Club Architecture Following Early Neurodevelopmental Disruption Caused by Very Preterm Birth." *Cerebral Cortex* 26; 3 (2016): 1322-1335.
18) Nosarti, C; **S Froudist-Walsh**. “Alterations in development of hippocampal and cortical memory mechanisms following very preterm birth.” *Developmental Medicine and Child Neurology* 58; S4 (2016): 35-45.
19) Tseng, CEJ, **S Froudist-Walsh**, PJ Brittain, V Karolis, C Caldinelli, J Kroll, SJ Counsell, SCR Williams, RM Murray; C Nosarti. "A multimodal imaging study of recognition memory in very preterm born adults." *Human Brain Mapping* 38, no. 2 (2017): 644-655.
20) Brittain, PJ; **S Froudist-Walsh**; KW Nam; V Giampietro; V Karolis; RM Murray; S Bhattacharyya; A Kalpakidou; and C Nosarti. "Neural compensation in adulthood following very preterm birth demonstrated during a visual paired associates learning task." *NeuroImage: Clinical* 6 (2014): 54-63.
21) Berthier, ML; **S 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).

Middle author published papers:

22) Klink PC, JF Aubry, V Ferrera, AS Fox, **S Froudist-Walsh** et al. “Combined brain perturbation and neuroimaging in non-human primates”. *NeuroImage* (in press, 2021)
23) Niu, M; L Rapan; T Funck; **S Froudist-Walsh**, L Zhao, K Zilles, N Palomero-Gallagher. “Organization of the macaque monkey inferior parietal lobule based on multimodal receptor architectonics.” *NeuroImage* (2021): 117843.
24) Milham, M et al., “Accelerating the evolution of non-human primate imaging”. *Neuron* (2020). 105, 600-603.
25) Papini, C; L Palaniyappan; J Kroll; **S Froudist-Walsh;** RM Murray; C Nosarti. “Altered cortical gyrification in adults who were born very preterm and its associations with cognition and mental health.” *Biological Psychiatry: CNNI* (2020): 5(7) 640-650
26) Kroll, J; V Karolis; PJ Brittain; CEJ Tseng; **S Froudist-Walsh**; R M. Murray; C 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.
27) D'Ambrosio, E; T Dahoun; AF Pardiñas; M Veronese; MAP Bloomfield; S Jauhar; I Bonoldi; M Rogdaki, **S Froudist-Walsh**; JTR Walters; O 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* (2019): 291: 34-41.
28) Xu, T; D Sturgeon; JSB Ramirez; **S Froudist-Walsh**; DS Margulies, CE Schroeder; DA Fair; M Milham. “Inter-individual variability of functional connectivity in awake and anesthetized rhesus monkeys”. *Biological Psychiatry: CNNI* (2019): 4(6), 543-553.
29) Milham, M et al. “An open resource for non-human primate imaging”. *Neuron* (2018) 100(1) 61-74.
30) Dahoun, T; AF Pardiñas; M Veronese; MAP Bloomfield; S Jauhar; I Bonoldi; **S Froudist-Walsh**; C Nosarti; C Korth; W Hennah; J Walters; D Prata; O D Howes; “The effect of the DISC1 Ser704Cys polymorphism on striatal dopamine synthesis capacity an [^{18}F]-DOPA PET study ”. *Human Molecular Genetics* (2018): 27(20) 3498-3506.
31) Parvaz, MA; K Kim; **S Froudist-Walsh,** JH Newcorn, I 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* (2018): 28(8) 547-553.
32) Kroll, J; PJ Brittain; V Karolis; Jane Tseng; **S Froudist-Walsh**; R M Murray; C Nosarti. “Real-life impact of executive function impairments in adults who were born very preterm.” *JINS,* 23, 5 (2017): 381-389.
33) Catani , M; F Dell’Acqua; H Howells; S Budisavljevic; M Thiebaut de Schotten; **S Froudist-Walsh**; L D’Anna; ET Bullmore; J Suckling; S Baron-Cohen; MV. Lombardo; A Leemans; MC

Craig; DGM Murphy. "Frontal networks in adults with autism spectrum disorder." *Brain* 139; no. 2 (2016): 616-630.

34) Papini, C; TP White; A Montagna; PJ Brittain; **S Froudist-Walsh**; J Kroll; V Karolis; A Simonelli; Steven C Williams; R M Murray; C Nosarti. "Altered resting state functional connectivity in emotion processing brain regions in adults who were born very preterm." *Psychological Medicine* (2016): 46(14) 3025-3039.

35) Sarkar, S; F Dell'Acqua; **S Froudist Walsh**; N Blackwood; S Scott; MC Craig; Q Deeley; DGM Murphy. "A Whole-Brain Investigation of White Matter Microstructure in Adolescents with Conduct Disorder." *PloS one* 11; no. 6 (2016): e0155475.

36) Nam, KW; N Castellanos; **S Froudist-Walsh**; A Simmons; MP Allin; M Walshe; RM Murray; A Evans; JS Muehlboeck; C Nosarti. "Alterations in cortical thickness development in preterm-born individuals: implications for high-order cognitive processing." *NeuroImage* 115 (2015); 64-75

37) White, TP; I Symington; NP Castellanos; PJ Brittain; **S Froudist-Walsh**; KW Nam; JR Sato et al. "Dysconnectivity of neurocognitive networks at rest in very-preterm born adults." *NeuroImage: Clinical* 4 (2014): 352-365.

38) Tuomiranta, LM.; E Càmara; **S Froudist-Walsh**; P Ripolles; JP Saunavaara; R Parkkola; N Martin; A Rodríguez-Fornells; M Laine. "Hidden word learning capacity through orthography in aphasia." *Cortex* 50 (2014): 174- 191.

39) De-Torres, I; G Dávila; ML Berthier; **S Froudist-Walsh**; I Moreno-Torres; R Ruiz-Cruces. "Repeating with the right hemisphere: reduced interactions between phonological and lexical-semantic systems in crossed aphasia?." *Frontiers in human neuroscience* 7 (2013).

40) Moreno-Torres, I; ML Berthier; M del Mar Cid; C Green; A Gutiérrez; N García-Casares; **S Froudist-Walsh** et al. "Foreign accent syndrome: a multimodal evaluation in the search of neuroscience-driven treatments." *Neuropsychologia* 51; no. 3 (2013): 520-537.

41) García-Casares, N; ML Berthier Torres; **S Froudist-Walsh**; P Gonzalez-Santos. "A model of musical cognition and amusia." *Neurología* 28; no. 3 (2013): 179-186.

42) Amengual, JL; A Valero-Cabré; MV de las Heras; N Rojo; **S Froudist-Walsh**; P Ripollés; N 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).

43) Berthier, ML; N Garcia-Casares; **S Froudist-Walsh**; A Nabrozidis; MRJ 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.

Manuscripts in preparation

1) Klatzmann* U, **S Froudist-Walsh***, D Bliss, P Theodoni, M Niu, L Rapan, N Palomero-Gallagher, C Sergent, S Dehaene, XJ Wang. "A connectome-based model of conscious access in monkey cortex".

2) Ding X, **S Froudist-Walsh**, J Jiang, D Bliss, XJ Wang. "A large-scale model of distributed working memory in mouse cortex"

3) Pereira U, **S Froudist-Walsh**, XJ Wang. "Mixed selectivity and chaotic dynamics in a large-scale model of macaque working memory".

Grants, Awards and Fellowships

1) CRCNS, NIH R01MH122024 (PI: XJ Wang, co-PI N Palomero-Gallagher). Gradients of receptors underlying distributed cognitive functions. *(Co-written with Dr. Palomero-Gallagher & Prof. Wang)*. Role: Key Personnel. 2019-2022
2) NIMH/Kavli/Wellcome Travel Grant. PRIME-DE Conference, London, UK. 2019
3) Trinity Visiting Academic Programme, Trinity College Dublin, Ireland. 2019
4) International Postdoc Fellowship, Paris Brain Institute (ICM), Paris, France (Declined). 2017
5) Young Investigator Award. Persistent Maladaptive Beh. Conf. Rochester, NY, USA. 2016
6) Future Leaders in Science Education and Communication Scholar. Mount Sinai, USA. 2015-2016
7) Brain Travel Grant, Pediatric Academic Societies Meeting. Washington DC, USA. 2013
8) MSc Neuroscience Bursary. King's College London, UK. 2009-2010

Invited and contributed talks

1) Feindel Brain and Mind Seminar. Virtual, Montreal Neurological Institute, Canada (Invited). "Gradients of receptor expression shape distributed cognitive functions" 2021
2) Neuroscience Ireland Conference. Virtual, Ireland (Invited). "A dopamine gradient controls access to distributed working memory in monkey cortex". 2021
3) Gradients of Brain Organization Workshop, pre-OHBM satellite meeting. Virtual, hosted by Montreal Neurological Institute, Canada (Invited). "Gradients of receptor expression in the macaque cortex". 2021
4) NeuroNex consortium meeting. International consortium meeting, led by Yale University, USA, and Western University, Canada (Invited). "A dopamine gradient controls access to distributed working memory in monkey cortex". 2021
5) Joint Psychiatric Imaging and Methodology Meeting. Imperial College London and King's College London, UK (Invited) – "A gradient of dopamine engages distributed working memory". 2020
6) American Psychological Association (APA) (Invited) - "The rhesus monkey hippocampus contributes to scene memory retrieval, but not new learning". Session cancelled due to coronavirus pandemic. 2020
7) MMTI Seminar, Department of Psychiatry, Stony Brook University, New York, USA (Invited). "Dopaminergic modulation of large-scale cortical circuits underlying working memory". 2019
8) Flux Congress, New York, USA (Invited). "Brain injury at birth disrupts the development of dopamine and working memory networks in humans". 2019
9) British Neuroscience Association Conf. Dublin, Ireland. (Selected). "Emergence of working memory in macaque cortical areas with high neurotransmitter density." 2019
10) Neuroscience Society seminar, Trinity College Dublin, Ireland (Invited). "Distributed effects of hippocampal and prefrontal cortical lesions." 2019
11) Large-Scale Gradients in Brain Organization Meeting, Collège de France, Paris, France (Organized). "Dopamine gradients modulate distributed working memory representations." 2019
12) Séminaire Exceptionnel, Brain & Spine Institute, Hôpital Pitié Salpetrière, Paris, France (Invited). "Distributed effects of hippocampal and prefrontal cortical lesions in space and time." 2019
13) C-BIN Science Lecture Series, Nathan Kline Institute, New York, USA (Invited). "Distributed effects of hippocampal lesions in space and time." 2018
14) Large-scale Trends in Cortical Organisation Meeting, Leipzig, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany (Invited). "Linking gradients of cortical microstructure to plasticity and cognition." 2017
15) Brain Imaging Centre Symposium; Icahn School of Medicine at Mount Sinai; New York; USA. (Selected talk). "Local and global network alterations following focal hippocampal lesions in the monkey." 2016
16) Pediatric Academic Societies Meeting (Selected talk). Baltimore; MD; USA "Alterations to memory-related tracts in adults who were born very preterm." 2016
17) Brain Imaging Centre Symposium; Icahn School of Medicine at Mount Sinai; New York; USA (Selected talk). "Prematurity-related brain injury leads to altered dopamine function and whole brain connectivity in adult life." 2015
18) Cognition and Brain Plasticity Unit; University of Barcelona; Spain (Invited). "Dopamine function and reorganisation of brain networks after very early brain injury." 2015
19) Centre for Neuroimaging Science, King's College London, UK (Invited). "Reorganisation of brain networks following neonatal brain injury. A 30 year study." 2015
20) Friedman Brain Institute; Icahn School of Medicine at Mount Sinai; New York; USA (Invited). "Reorganisation of brain networks following neonatal injury. A 30-year study." 2014
21) Pediatric Academic Societies Meeting (Selected talk). Vancouver; Canada. "The effects of preterm birth and periventricular hemorrhage on working memory function in adult life: An fMRI Study. 2014
22) Pediatric Academic Societies Meeting (Selected talk). Washington; D.C.; USA. "Road work on memory lane - functional and structural alterations to the learning and memory circuit in adults born preterm." 2013

Teaching and outreach experience

1) Introduction to the neuroscience of memory. Oral History, Freshman Course, New York University. 2021
2) Growing Up In Science. Organiser & Interviewer for Dr. Sindy Joyce. Rebroadcast on "This Irish American Life" radio show on WNYE 91.5 FM and www.irishradio.com 2021
3) Bellwether Hub podcast. Host: Jim Frawley. Interviewed about learning and memory. 2020
4) Tourist Information podcast (by The Ring Magazine). Host: Brin-Jonathan Butler. Interviewed about dopamine, brain injury and learning. 2020
5) Responsible Conduct in Research Course (Racism in Science) – co-organiser. Audience – graduate students. 2020
6) Neuroconnect Course. 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. 2016
7) Sinai Methods Bootcamp. Taught introduction to fMRI, diffusion MRI and structural MRI. Audience: new PhD students. 2016
8) Center of Excellence in Youth Education, Mount Sinai, New York. Co-organised and taught classes and activities for the neuroscience engagement day for 45 local students. Audience: 16-17 year olds. 2016
9) Boys and Girls Harbor School (East Harlem, New York). Taught neural connectivity class to 5th grade children. Audience: 10-11 year olds. 2016
10) Curriculum Design Team; Centre for Excellence in Youth Education; Icahn School of Medicine at Mount Sinai. Planned and taught range of classes and activities. Audience: adolescents in New York schools. 2015-2016
11) Eagle Academy for Young Men (Bronx; New York). Taught three classes on brain disorders to 9th and 10th grade adolescents. Audience: 16-17 year olds. 2015
12) Eagle Academy for Young Men (Queens; New York). Taught a class on brain disorders to 9th and 10th grade adolescents. Audience: 16-17 year olds. 2015
13) King's College London. Neuroanatomy lecturer. Audience: MSc in Mental Health students. 2012

Mentoring experience

PhD students:

Xingyu Ding (PhD student at New York University, USA) 2017-
Winnie Yang (PhD student at New York University, USA) 2019

MSc students:

Chiara Caldinelli (now PhD student at Trinity College Dublin, Ireland). 2015
Prakriti Agarwal (now Director of Little Newton Autism Centre, Bengaluru, India). 2014
Anita Montagna (now MRC PhD student at King's College London, UK). 2013
Kerry Stephenson (now Founding Director at Mind over Monkey, London, UK). 2013
Piergiorgio Salvan (now Postdoc at University of Oxford, UK). 2012

Undergraduate students:

Ulysse Klatzmann (research worker at New York University, USA) 2021-
Hector Sainvet (now MSc student at École Polytechnique, Paris, France). 2020
Hanqing Wang (now PhD student at Johns Hopkins University, Baltimore, USA). 2018

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
Science Education and Communication. Mount Sinai. October 2015- June 2016
Python data structures. University of Michigan/Coursera. March 2016

Python for everybody. University of Michigan/Coursera. March 2016
Dynamical Modeling Methods for Systems Biology. Mount Sinai/Coursera. January – March, 2016
Machine Learning. Stanford University/Coursera. July – September 2015
Computational Neuroscience. University of Washington/Coursera. May-June 2015
Live Science Communication Training. Science Museum, London. September 2014
Advanced Neuroimaging Summer Program. UCLA. July 2013
Open Collaboration & Innovation Programme. University of London. December 2011 - June 2012
FSL course. University of Oxford (online). October 2010
Neuroanatomy and Tractography Workshop. King's College London. March 2010

Workshops co-organised

PRIME-DRE Global Collaboration Workshop. Co-lead of Modeling, Analysis and Informatics Section. Online (International). 2021
Large-scale gradients in cortical organisation. Collège de France (Paris, France). 2019
Mechanisms of dopamine ramping. New York University (USA). 2018

Further skills

Programming languages: Python, Matlab, R, shell scripting
Machine learning platforms/software: TensorFlow, Keras
Neuroimaging software packages: FSL, SPM, ExploreDTI, FreeSurfer; ANTs, Connectome Workbench
Statistical analysis programs: R; SPSS
Task presentation programs: PsychToolbox; MonkeyLogic
Languages spoken: English (native); Spanish (fluent); Italian (upper intermediate); French (intermediate); Irish Gaelic (intermediate).

Reviewer for academic journals

Biological Psychiatry, Nature Communications, Cerebral Cortex, Science Advances, Journal of Neuroscience, Lancet Child & Adolescent Health, NeuroImage, Cortex, Brain Structure & Function, PLoS One.

Editorial Board

Frontiers in Integrative Neuroscience

Academic society memberships

NYU Neuroscience Postdoc Organisation (Co-founder), Society for Neuroscience, Federation of European Neuroscience Societies, Neuroscience Ireland, Organization for Human Brain Mapping

Consortium participant

PRIMatE Data & Resource Exchange (PRIME-DRE). International consortium for the advancement of non-human primate imaging.
NeuroNex Consortium. International consortium devoted to understanding working memory, from transcriptomics to single neurons and neuronal networks.