TAYLOR SALO







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PROFILE

Methodologically oriented cognitive neuroscientist interested in neuroinformatics. Strong technical skills in neuroimaging data processing, analysis, and meta-analysis. Passionate about transparency and reproducibility.

EDUCATION

Florida International University, Doctor of Philosophy, Cognitive Neuroscience

2015 - 2022

- Advisor: Dr. Angela Laird

Cornell University, Bachelor of Arts, Psychology

2009 - 2013

- Concentration in behavioral and evolutionary neuroscience

- Advisor: Dr. Timothy DeVoogd

EXPERIENCE

Graduate Assistant, Neuroinformatics and Brain Connectivity Laboratory

2015 - 2022

Dr. Angela Laird, Florida International University

- Currently assisting in the development of a tool for annotation of the neuroimaging literature using natural language processing and machine learning.
- Currently engaged in a project quantitatively comparing the Neurosynth and BrainMap frameworks.
- Providing assistance in the development and implementation of neuroimaging data analysis pipelines for several projects within the lab.

Junior Specialist, Translational Cognitive and Affective Neuroscience Laboratory

2013 - 2015

Dr. Cameron Carter, University of California, Davis

- Acquired neuroimaging and behavioral data from healthy controls and patients with psychosis for projects studying the effects of psychosis on cognitive control, emotion regulation, and brain structure.
- Contributed to and maintained a custom codebase for the analysis of neuroimaging and behavioral data.
- Processed and analyzed neuroimaging and behavioral data for several lab projects.
- Administered behavioral tests and cognitive tasks, including the WASI and WRAT, to both control and clinical
- Trained incoming personnel to administer behavioral and cognitive tasks.

Lab Co-Manager/Research Assistant, Laboratory for Lifespan Affective Neuroscience

2011 - 2013

Dr. Barbara Ganzel, Cornell University

- Contributed to projects investigating functional and structural changes associated with subclinical trauma.
- Trained undergraduate students to preprocess and perform data diagnostics on fMRI data.

Undergraduate Research Assistant, Bird Song Behavior Laboratory

2012 - 2013

Dr. Timothy DeVoogd, Cornell University

- Prepared solutions for, and assisted in, intracranial perfusion, dissection, and staining of bird brains.
- Examined avian song-related neural regions microscopically.

PUBLICATIONS

- 1. Bouget MH, Kamentsky L, Ghosh SS, Mazzamuto G, Lazari A, Markiewicz CJ, Oostenveld R, Niso G, Halchenko YO, Lipp I, Takerkart S, Toussaint PJ, Khan AR, Nilsonne G, Castelli FM, **The BIDS Maintainers**¹, & Cohen-Adad J. (2022). Microscopy-BIDS: An Extension to the Brain Imaging Data Structure for Microscopy Data. *Frontiers in Neuroscience*. doi:10.3389/fnins.2022.871228.
- Poudel R, Tobia MJ, Riedel MC, Salo T, Flannery JS, Hill-Bowen LD, Dick AS, Laird AR, Parra CM, & Sutherland MT. (2022). Risky decision-making strategies mediate the relationship between amygdala activity and real-world financial savings among individuals from lower income households: A pilot study. *Behavioural Brain Research*. doi:10.1016/j.bbr.2022.113867.
- Flannery JS, Riedel MC, Hill-Bowen LD, Poudel R, Bottenhorn KL, Salo T, Laird AR, Gonzalez R, & Sutherland MT. (2022). Altered large-scale brain network interactions associated with HIV infection and error processing. Network Neuroscience. doi:10.1162/netn_a_00241.
- Norgaard M, Matheson GJ, Hansen HD, Thomas A, Searle G, Rizzo G, Veronese M, Giacomel A, Yaqub M, Tonietto M, ..., Salo T, ..., & Ganz M. (2022). PET-BIDS, an extension to the brain imaging data structure for positron emission tomography. Scientific data. doi:10.1038/s41597-022-01164-1.
- Flannery JS, Riedel MC, Salo T, Hill-Bowen LD, Poudel R, Adams AR, Laird AR, Gonzalez R, & Sutherland MT. (2021). Interactive Effects of HIV Infection and Cannabis Use on Insula Subregion Functional Connectivity. *Journal of Neuroimmune Pharmacology*. doi:10.1007/s11481-021-10005-8.
- DuPre E², Salo T², Ahmed Z, Bandettini PA, Bottenhorn KL, Caballero-Gaudes C, Dowdle LT, Gonzalez-Castillo J, Heunis S, & Kundu P. (2021). TE-dependent analysis of multi-echo fMRI with tedana. *Journal of Open Source Software*. doi:10.21105/joss.03669.
- 7. Flannery JS, Riedel MC, **Salo T**, Poudel R, Laird AR, Gonzalez R, & Sutherland MT. (2021). HIV infection is linked with reduced error-related default mode network suppression and poorer medication management abilities. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*. doi:10.1016/j.pnpbp.2021.110398.
- 8. Witt ST, van Ettinger-Veenstra H, **Salo T**, Riedel MC, & Laird AR. (2021). What executive function network is that? An image-based meta-analysis of network labels. *Brain topography*. doi:10.1007/s10548-021-00847-z.
- Hill-Bowen LD, Riedel MC, Poudel R, Salo T, Flannery JS, Camilleri JA, Eickhoff SB, Laird AR, & Sutherland MT. (2021). The cue-reactivity paradigm: An ensemble of networks driving attention and cognition when viewing drug and natural reward-related stimuli. *Neuroscience & Biobehavioral Reviews*. doi:10.1016/j.neu-biorev.2021.08.010.
- Poudel R, Riedel MC, Salo T, Flannery JS, Hill-Bowen LD, Eickhoff SB, Laird AR, & Sutherland MT. (2020). Common and distinct brain activity associated with risky and ambiguous decision-making. *Drug and alcohol dependence*. doi:10.1016/j.drugalcdep.2020.107884.
- 11. Botvinik-Nezer R, Holzmeister F, Camerer CF, Dreber A, Huber J, Johannesson M, Kirchler M, Iwanir R, Mumford JA, Adcock RA, ..., **Salo T**, ..., & Rieck JR. (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*. doi:10.1038/s41586-020-2314-9.
- 12. Bielczyk NZ, Ando A, Badhwar A, Caldinelli C, Gao M, Haugg A, Hernandez LM, Ito KL, Kessler D, Lurie D, ..., Salo T, ..., & Postdoc Special Interest Group (2020). Effective self-management for early career researchers in the natural and life sciences. *Neuron*. doi:10.1016/j.neuron.2020.03.015.
- Flannery JS, Riedel MC, Bottenhorn KL, Poudel R, Salo T, Hill-Bowen LD, Laird AR, & Sutherland MT. (2020).
 Meta-analytic clustering dissociates brain activity and behavior profiles across reward processing paradigms.
 Cognitive, Affective, & Behavioral Neuroscience. doi:10.3758/s13415-019-00763-7.

¹Member of the BIDS maintainers group

²Co-first authors

- Morawetz C, Riedel MC, Salo T, Berboth S, Eickhoff SB, Laird AR, & Kohn N. (2020). Multiple large-scale neural networks underlying emotion regulation. *Neuroscience & Biobehavioral Reviews*. doi:10.1016/j.neu-biorev.2020.07.001.
- 15. Esteban O, Ciric R, Finc K, Blair RW, Markiewicz CJ, Moodie CA, Kent JD, Goncalves M, DuPre E, Gomez DE, ..., Salo T, ..., & Gorgolewski KJ. (2020). Analysis of task-based functional MRI data preprocessed with fMRIPrep. *Nature Protocols*. doi:10.1038/s41596-020-0327-3.
- 16. Bolt T, Nomi JS, Arens R, Vij SG, Riedel M, **Salo T**, Laird AR, Eickhoff SB, & Uddin LQ. (2020). Ontological dimensions of cognitive-neural mappings. *Neuroinformatics*. doi:10.1007/s12021-020-09454-y.
- 17. Yarkoni T, Markiewicz CJ, de la Vega A, Gorgolewski KJ, **Salo T**, Halchenko YO, McNamara Q, DeStasio K, Poline J, & Petrov D. (2019). PyBIDS: Python tools for BIDS datasets. *The Journal of Open Source Software*. doi:10.21105/joss.01294.
- 18. Riedel MC, **Salo T**, Hays J, Turner MD, Sutherland MT, Turner JA, & Laird AR. (2019). Automated, efficient, and accelerated knowledge modeling of the cognitive neuroimaging literature using the athena toolkit. *Frontiers in neuroscience*. doi:10.3389/fnins.2019.00494.
- Gonzalez AA, Bottenhorn KL, Bartley JE, Hayes T, Riedel MC, Salo T, Bravo EI, Odean R, Nazareth A, & Laird RW. (2019). Sex differences in brain correlates of STEM anxiety. NPJ science of learning. doi:10.1038/s41539-019-0058-9.
- Bartley JE, Riedel MC, Salo T, Boeving ER, Bottenhorn KL, Bravo EI, Odean R, Nazareth A, Laird RW, & Sutherland MT. (2019). Brain activity links performance in science reasoning with conceptual approach. NPJ Science of Learning. doi:10.1038/s41539-019-0059-8.
- Bartley JE, Boeving ER, Riedel MC, Bottenhorn KL, Salo T, Eickhoff SB, Brewe E, Sutherland MT, & Laird AR. (2018). Meta-analytic evidence for a core problem solving network across multiple representational domains. Neuroscience & biobehavioral reviews. doi:10.1016/j.neubiorev.2018.06.009.
- 22. Brewe E, Bartley JE, Riedel MC, Sawtelle V, **Salo T**, Boeving ER, Bravo EI, Odean R, Nazareth A, & Bottenhorn KL. (2018). Toward a neurobiological basis for understanding learning in university modeling instruction physics courses. *Frontiers in ICT*. doi:10.3389/fict.2018.00010.
- 23. Ray KL, Lesh TA, Howell AM, **Salo T**, Ragland JD, MacDonald AW, Gold JM, Silverstein SM, Barch DM, & Carter CS. (2017). Functional network changes and cognitive control in schizophrenia. *NeuroImage: Clinical*. doi:10.1016/j.nicl.2017.05.001.
- 24. Lopez-Garcia P, Lesh TA, **Salo T**, Barch DM, MacDonald AW, Gold JM, Ragland JD, Strauss M, Silverstein SM, & Carter CS. (2016). The neural circuitry supporting goal maintenance during cognitive control: a comparison of expectancy AX-CPT and dot probe expectancy paradigms. *Cognitive, Affective, & Behavioral Neuroscience*. doi:10.3758/s13415-015-0384-1.
- 25. Phillips RC, **Salo T**, & Carter CS. (2015). Distinct neural correlates for attention lapses in patients with schizophrenia and healthy participants. *Frontiers in human neuroscience*. doi:10.3389/fnhum.2015.00502.

PREPRINTS

- 1. Pankey BS, Riedel MC, Cowan I, Bartley JE, Lobo RP, Hill-Bowen LD, **Salo T**, Musser ED, Sutherland MT, & Laird AR. (2022). Extended functional connectivity of convergent structural alterations among individuals with PTSD: A neuroimaging meta-analysis. *bioRxiv*. doi:10.1101/2022.04.07.487478.
- 2. Lobo RP, Bottenhorn KL, Riedel MC, Toma AI, Hare MM, Smith DD, Moor AC, Cowan IK, Valdes JA, Bartley JE, **Salo T**, ..., & Laird AR. (2022). Neural systems underlying RDoC social constructs: An activation likelihood estimation meta-analysis. *bioRxiv*. doi:10.1101/2022.04.04.487016.

- 3. Bottenhorn KL, **Salo T**, Riedel MC, Sutherland MT, Robinson JL, Musser ED, & Laird AR. (2021). Denoising physiological data collected during multi-band, multi-echo EPI sequences. *bioRxiv*. doi:10.1101/2021.04.01.437293.
- 4. Bottenhorn K, Bartley J, Riedel M, Salo T, Bravo E, Odean R, Nazareth A, Laird R, Pruden S, & Sutherland M. (2021). Intelligence and academic performance: Is it all in your head?. *bioRxiv*. doi:10.1101/2021.01.23.427928.
- 5. Clement P, Castellaro M, Okell TW, Thomas DL, Vandemaele P, Elgayar S, Oliver-Taylor A, Kirk T, Woods JG, Vos S, ..., **The BIDS Maintainers**³, ..., & Mutsaerts H. (2021). ASL-BIDS, the brain imaging data structure extension for arterial spin labeling. *PsyArXiv*.
- 6. Karakuzu A, Appelhoff S, Auer T, Boudreau M, Feingold F, Khan AR, Lazari A, Markiewicz C, Mulder MJ, Phillips C, **Salo T**, ..., & de Hollander G. (2021). qMRI-BIDS: An extension to the brain imaging data structure for quantitative magnetic resonance imaging data. *medRxiv*. doi:10.1101/2021.10.22.21265382.
- 7. Bartley JE, Riedel MC, **Salo T**, Bottenhorn KL, Boeving ER, Laird RW, Sutherland MT, Pruden SM, Brewe E, & Laird AR. (2019). Sex and pedagogy influences in physics learning-related reorganization of brain activation. *bioRxiv*. doi:10.1101/791301.

INVITED TALKS AND SOFTWARE DEMONSTRATIONS

- 1. **Salo T** & Uruñuela E. (2020). How to Start an Open Science Project from Scratch: ICA-AROMA. Presented at BrainHack Donostia; virtual. More information here.
- 2. **Salo T**. (2020). BIDS for MRI: Structure and Conversion. Presented at the University of Oldenburg Open and reproducible neuroimaging workshop; virtual. More information here.

PRESENTATIONS

- 1. Laird AR & **Salo T**. (2021). Meta-analysis and reproducibility. Presented at Neurohackademy 2021; virtual. More information here.
- 2. **Salo T**. (2021). Hands-on tutorial with NiMARE. Presented at the Organization for Human Brain Mapping 2021 Annual Meeting; virtual. More information here.
- 3. **Salo T**. (2018). NiMARE: A Neuroimaging Meta-Analysis Research Environment. Presented at Brainhack Global 2018; Miami, Florida. More information here.
- 4. **Salo T**, Riedel MC, Bartley JE, Bottenhorn KL, Yarkoni T, Turner MD, Turner JA, Sutherland MT, & Laird AR. (2017). A quantitative evaluation of Neurosynth's annotation methods. Presented at the 23rd annual meeting of the Organization for Human Brain Mapping; Vancouver, British Columbia. More information here.
- 5. Salo T, Riedel MC, Bartley JE, Bottenhorn KL, Yarkoni T, Turner MD, Turner JA, Sutherland MT, & Laird AR. (2017). A quantitative evaluation of Neurosynth's annotation methods. Presented at Florida International University's 2017 Graduate Student Scholarly Forum; Miami, Florida.
- 6. **Salo T** & Renfro A. (2017). Open science tools: GitHub, BIDS, & preregistration. Presented at Brainhack Global 2017; Miami, Florida. More information here.

³Member of the BIDS maintainers group

POSTERS

- 1. Poudel R, Tobia MJ, Riedel MC, Salo T, Flannery JS, Hill-Bowen LD, Laird AR, Dick AS, Parra CM, & Sutherland MT. (2021). Working memory is linked with default mode network deactivation and real-world money saving behavior. Presented at the Organization for Human Brain Mapping 2021 Annual Meeting; virtual.
- Flannery JS, Riedel MC, Salo T, Poudel R, Laird AR, Gonzalez R, & Sutherland MT. (2021). Reduced Error-Related Default Mode Network Deactivations Linked with HIV and Poor Medication Management. Presented at the Organization for Human Brain Mapping 2021 Annual Meeting; virtual.
- 3. Bottenhorn KL, **Salo T**, Riedel MC, Musser ED, Robinson JL, Sutherland MT, & Laird AR. (2021). Denoising physiological data collected during multi-band, multi-echo EPI sequences. Presented at the Organization for Human Brain Mapping 2021 Annual Meeting; virtual.
- 4. Bottenhorn KL, Salo T, Bartley JE, Flannery JS, Sutherland MT, & Laird AR. (2021). IDConn: A Python pipeline for investigating individual differences in functional brain connectivity. Presented at the Organization for Human Brain Mapping 2021 Annual Meeting; virtual.
- Salo T, Yarkoni T, Nichols TE, Bottenhorn KL, Gorgolewski KJ, Riedel MC, Kent JD, Glerean E, Bilgel M, Wright J, Reeders P, Nielson DN, Yanes JA, Perez A, Sutherland MT, & Laird AR. (2020). NiMARE: A Neuroimaging Meta-Analysis Research Environment. Presented at the Organization for Human Brain Mapping 2020 Annual Meeting; virtual.
- 6. Bottenhorn KL, Bartley JE, Riedel MC, **Salo T**, Bravo EI, Odean R, Nazareth A, Laird RW, Pruden SM, Sutherland MT, Brewe E, & Laird AR. (2020). Intelligence and academic performance: Is it all in your head? Presented at the Organization for Human Brain Mapping 2020 Annual Meeting; virtual.
- 7. Salo T, Yarkoni T, Kent JD, Gorgolewski KJ, Glerean E, Bottenhorn KL, Bilgel M, Wright J, Reeders P, Nielson DN, Nichols TE, Riedel MC, Sutherland MT, & Laird AR. (2019). NiMARE: A Neuroimaging Meta-Analysis Research Environment. Presented at the 25th annual meeting of the Organization for Human Brain Mapping (Rome, Italy). More information here.
- 8. Poudel R, Riedel MC, **Salo T**, Flannery JS, Hill LD, Laird AR, & Sutherland MT. (2019). Common and distinct brain regions associated with risky- and ambiguous decision-making. Presented at the SANS annual meeting (Miami, Florida). More information here.
- 9. **Salo T**, Bottenhorn KL, Nichols TE, Riedel MC, Sutherland MT, Yarkoni T, & Laird AR. (2018). NiMARE: A Neuroimaging Meta-Analysis Research Environment. Presented at INCF Neuroinformatics 2018 (Montreal, Quebec) and at the annual Brain Initiative Principal Investigators Meeting (Washington D.C.). More information here.
- 10. Bottenhorn KL, **Salo T**, Sutherland MT, & Laird AR. (2018). Quantitative comparison of functional decoding approaches across meta-analytic frameworks. Presented at INCF Neuroinformatics 2018 (Montreal, Quebec). More information here.
- 11. Riedel MC, Salo T, Hays J, Turner MD, Sutherland MT, Turner JA, & Laird AR. (2018). Automating annotations of the cognitive neuroimaging literature using ATHENA. Presented at INCF Neuroinformatics 2018 (Montreal, Quebec). More information here.
- 12. Yarkoni, T, de la Vega, A, DuPre, E, Esteban, O, Halchenko, YO, Hanke, M, Hayor-Sasson, V, Ivanov, A, Kiar, G, Markiewicz, C, McNamara, Q, Petrov, D, Salo T, Nielson, D, Poline, JB, Poldrack, R, & Gorgolewski, K. (2018). Pybids: Python tools for manipulation and analysis of BIDS datasets. Presented at the 24th annual meeting of the Organization for Human Brain Mapping (Singapore). More information here.
- 13. DuPre, E, Kundu, P, Esteban, O, Markello, R, Whitaker, K, **Salo T**, & Spreng, N. (2018). Introducing a BIDS-compliant multi-echo fMRI preprocessing pipeline. Presented at the 24th annual meeting of the Organization for Human Brain Mapping (Singapore). More information here.

- 14. Kohn, N, Riedel, MC, **Salo T**, Laird, AR, Eickhoff, SB, & Morawetz, C. (2018). Meta-analytic brain networks underlying emotion regulation. Presented at the 24th annual meeting of the Organization for Human Brain Mapping (Singapore). More information here.
- 15. **Salo T**, Riedel, MC, Bartley, JE, Bottenhorn, KL, Yarkoni, T, Turner, MD, Turner, JA, Sutherland, MT, & Laird, AR. (2017). A quantitative evaluation of Neurosynth's annotation methods. Presented at the 23rd annual meeting of the Organization for Human Brain Mapping (Vancouver, British Columbia). More information here.
- 16. Bartley, JE, Riedel, MC, **Salo T**, Boeving, ER, Odean, R, Bravo, E, Laird, RW, Pruden, S, Brewe, E, Sutherland, ME, Laird, AR. (2017). Understanding the neural substrates of physics problem solving: Brain mechanisms and behavior correlates. Presented at the 23rd annual meeting of the Organization for Human Brain Mapping (Vancouver, British Columbia). More information here.
- 17. Poudel, R, Riedel, MC, Hill LD, Flannery, JF, **Salo T**, Laird A.R, Sutherland M.T. (2017). Behavioral decoding of functionally related brain areas consistently linked to drug cue reactivity. Presented at Florida International University's 2017 Graduate Student Scholarly Forum (Miami, Florida). More information here.
- 18. Riedel, MC, Poudel, R, **Salo T**, Eickhoff SB, Fox, PT, Laird, AR, & Sutherland, MT. (2016). Co-activation based parcellation of the human insula. Presented at the 22nd annual meeting of the Organization for Human Brain Mapping (Geneva, Switzerland). More information here.
- 19. Lesh, TA, Maddock, RJ, Salo T, Tanase, C, Ragland, JD, Niendam, TA, Solomon, M, & Carter, CS. (2015). Diffusion Measures of Free Water and 1H-MRS Measures of Glutathione in First Episode Patients with Schizophrenia A Multi-Modal Investigation of an Inflammatory Model for Psychosis. Presented at the 15th biennial meeting of the International Congress on Schizophrenia Research (Colorado Springs, CO) and at the annual meeting of the American College of Neuropsychopharmacology (Phoenix, AZ).
- 20. Phillips, RC, **Salo T**, & Carter, CS. (2014). Default mode network activity precedes attention lapse in healthy subjects. Presented at the 44th annual meeting of the Society for Neuroscience (Washington D.C.) and at the second annual Northern California Consciousness meeting (Davis, CA).

HONORS AND AWARDS

Brain Initiative Principal Investigators Meeting Trainee Travel Award	2019
Organization for Human Brain Mapping Hackathon Travel Award	2017
Organization for Human Brain Mapping Merit Abstract Travel Award	2017

HACKATHONS

NiMARE/Neurosynth 2.0 Coding Sprint	2022
BIDS Schema Coding Sprint	2022
OHBM Hackathon	2021
BrainHack Donostia	2020
OHBM Hackathon	2020
NIH Code Convergence	2019
NIH Tedana Hackathon	2019
OHBM Hackathon	2019
Coastal Coding	2019
FIU Brainconn Hackathon	2018
BrainHack Montreal	2018
Code Rodeo	2018
OHBM Hackathon	2017
Neurohackweek	2016

LAST COMPILED: 2022/05/23