CURRICULUM VITAE

Désirée Lussier
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EDUCATION

2019 Ph.D. Developmental Psychology, Behavioral and Cognitive Neuroscience (*dual specialization*), University of Florida

2018 M.S. Psychology, University of Florida

PROFESSIONAL APPOINTMENTS

2019 - *Postdoctoral Researcher*, Centre de recherche de l'Institut universitaire de gériatrie de Montréal, Université de Montréal, Montréal, QC, Canada

2019 - *Postdoctoral Researcher*, Department of Psychology, Université de Montréal, Montréal, QC, Canada

2015 - 2019 *Graduate Student Research Assistant*, University of Florida, Department of Psychology, Gainesville, FL, USA

2013 - 2015 *Clinical Research Associate*, Seattle Children's Research Institute, Child Health, Behavior and Development, Seattle, WA, USA

2012 – 2015 *Research Assistant*, University of Washington Medical Center, Radiology Department, Integrated Brain Imaging Center, Seattle, WA, USA

PUBLICATIONS

(Last name changed from Gulliford to Lussier in 2017)

Peer reviewed

Lussier, D., Bellec, P. (*in write-up*) Whole-brain dynamic parcellation (Dypac) for multisite resting-state fMRI.

Badhwar A., Collin-Verreault, Y., **Lussier, D.,** Sharmarke, H., Orban, P., Urchs, S., Chouinard, I., Vogel, J., Potvin, O., Duchesne, S., Bellec, P. (2020). A dataset of long-term consistency values of resting-state fMRI connectivity maps in a single individual derived at multiple sites and vendors using the Canadian Dementia Imaging Protocol. *Data in Brief.* 31:105699.

Lussier, D., Cruz-Almeida, Y., Ebner, N.C. (2019) Musculoskeletal pain and brain morphology: oxytocin's potential as a treatment for chronic pain in aging. *Frontiers in Aging Neuroscience.* 11:338. doi: 10.3389/fnagi.2019.00338

Richards T., Grabowksi T., Askren, K., Boord, P.,Yagle, K., Mestre, Z, Robinson, P., Welker, O., **Gulliford, D.**, Nagy, W., Berninger, V. (2015). Contrasting brain patterns of writing-related DTI parameters, fMRI connectivity, and DTI-fMRI connectivity correlations in children with and without dysgraphia or dyslexia. *Neuroimage: Clinical*, 8, 408-421. doi: 10.1016/j.nicl.2015.03.018

Encyclopedia entries

Ebner, N.C., **Gulliford, D.,** Yumusak, S. (2016). Saccadic Eye Movement. *Encyclopedia of Clinical Neuropsychology*. doi: 10.1007/978-3-319-56782-2_1400-2

Thesis/dissertation

Lussier, D. (2019). Pain and Aging: Brain Structure and the Effects of Oxytocin (Doctoral dissertation). *University of Florida.*

Lussier, D. (2018). Age differential effects of oxytocin on resting state functional connectivity in women (Master's thesis). *University of Florida*.

FELLOWSHIPS, HONORS AND AWARDS

2021 *Neuro-AI Excellence Scholarship*, Union Neuroscience et Intelligence Artificielle - Québec (UNIQUE), *$20,000*

2018 *McKnight Brain Institute Training Enhancement Opportunity Travel Award*, University of Florida, *$1,850*

2015 - 2019 *Graduate Fellowship Top-Off Award,* University of Florida, College of Liberal Arts and Sciences and Department of Psychology, *$5,000 per year for 4 years*

2015 - 2019 *Graduate School Fellowship Program Award*, University of Florida, College of Liberal Arts and Sciences and Department of Psychology

2013 *Magna Cum Laude*, Ashford University, Department of Psychology

CONFERENCE PRESENTATIONS

(Last name changed from Gulliford to Lussier in 2017)
(*indicates undergraduate/trainee presenter)

Lussier, D., Badhwar, A., Shamarke, H., Boré, A., Dixon, R., Bellec, P. (October 2020). *Evaluating the embedding quality of whole-brain dynamic parcellation (Dypac) resting-state fMRI on the CCNA and SIMON datasets.* Recorded video poster presentation for the Canadian Consortium on Neurodegeneration in Aging, virtual, Canada

*Myers, E., **Lussier, D.**, Horta, M., Frazier, I., Polk, R., Feifel, D., Ebner, N. C. (June 2019). *Four-week intranasal oxytocin increases insula volume and associated empathy scores in aging*. Poster presented at the Annual Meeting of the Organization for Human Brain Mapping, Rome, Italy.

Lussier, D., Fillingim, R.B., Riley, J.L., Cohen, R., Woods, A., Porges, E., Ebner, N.C., Cruz-Almeida, Y. (April 2019) A*ssociations between pain interference and brain volume in community-dwelling older adults*. Poster presented the *American Pain Society Scientific Meeting*, Milwaukee, WI, USA.

*Myers, E., **Lussier, D.**, Horta, M., Frazier, I., Polk, R., Feifel, D., Ebner, N. C. (January 2019). *Increase in empathy and insula volume after 4-week intranasal oxytocin administration in older adults*. Poster presented at 9th Annual North Central Florida Chapter of the Society for Neuroscience Conference, Gainesville, Florida.

Ebner, N. C., Månsson, K. N. T., Lin, T., **Lussier, D**., Horta, M., Frazier, I., Weir, D., Feifel, D., Fischer, H. (January 2019). *Neuroplasticity and cognitive benefits associated with chronic intranasal oxytocin administration in aging.* Talk at the Alpine Brain Imaging Meeting, Champery, Switzerland.

Lussier, D., Horta, M ., Porges, E., Woods, A., Cohen, R., Ebner, N.C., Cruz-Almeida, Y. (November 2018). *Pain modulation is associated with cingulate morphology in older adults with musculoskeletal pain.* Poster presentation at the Society for Neuroscience Conference, San Francisco, CA, USA.

Lussier, D., *Hayes, R., Horta, M., Lin, T., Frazier, I., Weir, D., Perez, E., Feifel, D., Månsson, K.N.T., Fischer, H., Ebner, N.C. (June 2018). *Four-week intranasal*

oxytocin vs placebo administration modulation of amygdala and accumbens volume. Poster presentation at the Annual Meeting of the Organization for Human Brain Mapping, Singapore.

*Sannegowda, R., **Lussier, D.,** Ebner, N.C., Cruz-Almeida, Y. (June 2018). *Cerebellar white matter volume is associated with clinical and experimental pain in older individuals with musculoskeletal pain.* Poster presentation at the Annual Meeting of the Organization for Human Brain Mapping, Singapore.

Månsson, K. N. T., **Lussier, D.,** Cortes, D. S., Lin, T., Horta, M., Frazier, I., Feifel, D., Fischer, H., Ebner, N. C. (June 2018). *Neuroplasticity after acute and repeated exposure to oxytocin: a multi-site MRI analysis.* Poster presentation at the Annual Meeting of the Organization for Human Brain Mapping, Singapore.

Gulliford, D., Chen, H., Porges, E., Lin, T., Fischer, H., Feifel, D., Cohen, R. A., Ebner, N. C. (June 2017). *Gender-differential effects of intranasal oxytocin on resting-state anterior cingulate activity.* Poster presented at the Annual Meeting of the Organization for Human Brain Mapping, Vancouver, Canada.

Horta, M., Lin, T., **Gulliford, D**., Cohen, R. A., Ebner, N. C. (April 2016). *Dynamic emotion identification: Effects of age and oxytocin.* Poster presented at the Meeting of the Social and Affective Neuroscience Society, New York City, NY, USA.

Conner, L., Dalton, I., Horta, M., **Gulliford, D.**, Frazier, I., Ebner, N. C., Lighthall, N. (March 2017). *Information integration in economic value judgments: Shift from affective to deliberative decision network regions*. Poster presented at the Annual Meeting of the Society for Social and Affective Neuroscience, Los Angeles, CA, USA.

Horta, M., Lin, T., **Gulliford, D.**, Ebner, N. C. (November 2015). *Dynamic emotion identification: Effects of age and oxytocin.* Poster presented at the Gerontological Society of America's 68th Annual Scientific Meeting, Orlando, FL, USA.

*Welker, O. **Gulliford, D**., Aylward, E., Webb, S. (June 2015). *Amygdalar function in emotion processing in adolescent boys and girls.* Poster presented at the Undergraduate Research Symposium, University of Washington, Seattle, WA, USA.

Jack, A., Keifer, C., **Gulliford, D**., Torgerson, C., Aylward, E., Bookheimer, S., Dapretto, M., Gaab, N., Van Horn, J., Pelphrey, K., GENDAAR Working Group (May 2015). *Sex differences in biological motion perception among youth with ASD: an fMRI investigation.* Poster presented at the International Meeting for Autism Research, Salt Lake City, UT, USA.

Richards, T., Grabowski, T., Askren, K. Collins, E., Yagle, K., **Gulliford, D.**, Welker, O., Beringer, V. (March 2014) *Children with dyslexia/dysgraphia and DTI parameter correlations with reading/language scores*. Poster presented at the New Horizons in Human Brain Imaging conference, Oahu, HI, USA.

Richards, T., Grabowski, T., Askren, K., Peter Boord, P., Yagle, K., Mestre, Z., Reitz, F., Welker, O., **Gulliford, D.**, Liza Young, L., Collins, E., Berninger, V. (November 2013) *Functional and structural connectivity across levels of language in children with dysgraphia*. Poster presented at Society for the Neurobiology of Language conference, San Diego, CA, USA.

Richards, T., Grabowski, T., Askren, K. Collins, E., Yagle, K., **Gulliford, D.**, Welker, O., Beringer, V. (June 2013) *Children with dyslexia/dysgraphia and DTI parameter correlations with reading/language scores*. Poster presented at the Organization for Human Brain Mapping conference, Seattle, WA, USA.

INVITED TALKS AND LECTURES

2020 *Resting-state functional MRI as an emergent biomarker in Alzheimer's Disease.* Trainee panel on biomarkers, Canadian Consortium on Neurodegeneration in Aging (CCNA), Canada (virtual)

2018 *Brain structure and oxytocin in pain and aging.* Centre de recherche de l'Institut universitaire de gériatrie de Montréal, Université de Montréal, Montreal, QC, CA

2018 *Brain structure in pain and aging.* University of Florida, Language and Brain group, Gainesville, FL, USA

2018 *Scripting with Unix Shell.* University of Florida, Developmental Colloquium, Gainesville, FL, USA

2017, 2016 *Socioemotional development in infancy.* University of Florida, Developmental Psychology class, Gainesville, FL, USA

2014 *Updates in Autism: New research and the DSM.* Pierce College Fort Steilacoom, Abnormal Psychology class, Lakewood, WA, USA

2013 *An introduction to neuroimaging.* Pierce College Fort Steilacoom, Introduction to Psychology class, Lakewood, WA, USA

2013 *Neuroimaging and developmental disorders. Pierce* College Fort Steilacoom, Abnormal Psychology class, Lakewood, WA, USA

2013 *Posttraumatic stress disorder in combat veterans: A review of treatment methods and experiment proposal.* University of Washington Medical Center, IBIC Lab Meeting, Seattle, WA, US

WORKSHOPS

Organizer

2021 *Brainhack Global 2020ish MTL*, (virtual) Montréal, QC, Canada

2020 *Brainhack School*, Summer 2020, multiple universities (virtual), Montréal, QC, Canada

Instructor

2019 *Introduction to machine learning for neuroimaging*. Traintrack workshop for Brainhack Global 2019, Concordia University Conference Centre, Montréal, QC, Canada

2019 *Principal component analysis and pipelines with Sklearn*. Part of the Machine learning educational workshop for Montreal Artificial Intelligence and Neuroscience conference, Mila: Quebec AI Institute, Montréal, QC, Canada

Participant

2018 *Deep Learning in Neuroimaging and Beyond*, Centre de recherche de l'Institut universitaire de gériatrie de Montréal, Université de Montréal, Montréal, QC, Canada (Dr Andrew Doyle, Dr Joseph Paul Cohen, Thomas Funck)

2018 *The Virtual Brain: Node #7*, Montréal Neurological Institute, McGill University, Montréal, QC, Canada

2017 *Montreal Artificial Intelligence and Neuroscience: Machine Learning with NiLearn and Scikit*, Centre de Recherches Mathématiques, Université de Montréal, Montréal, QC, Canada (Gaël Varoquaux)

2017 *Montreal Artificial Intelligence and Neuroscience: Tensorflow for Deep Learning in Neuroimaging*, Centre de Recherches Mathématiques, Université de Montréal, Montréal, QC, Canada (Robb Brown)

2017 *Reproducible Neuroimaging (Repronim) training*, ReproNim: Center for Reproducible Neuroimaging Computation, Washington, DC, USA

TEACHING EXPERIENCE

Spring 2016, 2017, 2019; Fall 2017 Teaching Assistant, *Developmental Psychology*, University of Florida, (online) undergraduate course (Marina Klimenko)

Fall 2018 Instructor, *General Psychology*, University of Florida

Spring 2018 Teaching Assistant, *General Psychology*, University of Florida, (online) undergraduate course (Nicole Dorey)

Fall 2015, 2016 Teaching Assistant, *Developmental Psychology*, University of Florida, undergraduate course (Natalie C. Ebner)

SERVICE

Committee Memberships

2020- Brain Art Special Interest Group liaison, Technology Taskforce, Organization for Human Brain Mapping

2020- Work Group Chair, Sponsor/Exhibitor/Brain Art Work Group, Technology Taskforce, Organization for Human Brain Mapping

2020- Art Exhibit Manager Elect, Brain Art Special Interest Group, Organization for Human Brain Mapping

Ad-hoc Reviewer

2020 Neural Regeneration Research

2019 Organization for Human Brain Mapping annual meeting 2020

2019 Frontiers in Neuroinformatics

MENTORSHIP

Myers, Elisha, University of Florida, Psychology Undergraduate Thesis: *Effects of Four-Week Intranasal Oxytocin Administration on Insula Volume and Levels of Empathy in Aging*, Spring 2020. PI: Natalie C. Ebner. (Accepted to Florida Atlantic University College of Medicine)

Rachna Sannegowda, University of Florida, Biomedical Engineering Undergraduate Thesis: *Cerebellar White Matter Volume and Clinical Pain in Older Individuals*, Spring 2018. PI: Yenisel Cruz-Almeida. (Accepted to University of Central Florida College of Medicine)

Rita Hayes, University of Florida, Biology Undergraduate Thesis: *The effects of Long-Term Oxytocin Administration on the Cingulate Cortex of Older Adults*, Spring 2018. PI: Natalie C. Ebner. (Accepted to Technion Medical School)

PROFESSIONAL AFFILIATIONS

2018- Society for Neuroscience (SfN), student member

2018-2019 American Pain Society (APS), student/trainee member

2013- Organization for Human Brain Mapping (OHBM), junior/student member

METHODS AND TECHNOLOGY

Neuroimaging Methods
DTI, fMRI, sMRI

Programming Languages
Unix shell (bash), R, Python, JavaScript

Neuroimaging/machine learning/deep learning libraries
Dypac, Nilearn, Scikit-Learn, PyTorch, fMRIprep

Operating Systems
Linux (Debian, Ubuntu), Windows

Spoken/written languages
English (native), French (elementary)