

CURRICULUM VITAE  
**Désirée Lussier**  
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## EDUCATION

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- 2019      Ph.D. Developmental Psychology, Behavioral and Cognitive Neuroscience (*dual specialization*), University of Florida  
*Dissertation*: Pain and Aging: Brain Structure and the Effects of Oxytocin
- 2018      M.S. Psychology, University of Florida  
*Thesis*: Age-Differential Effects of Intranasal Oxytocin on Resting-State Functional Connectivity in Women
- 2013      B.A. Psychology, Ashford University, *magna cum laude*  
*Thesis*: Biopsychological Model of Posttraumatic Stress Disorder: A Review and Evaluation of Current Treatment Methods

## PROFESSIONAL APPOINTMENTS

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- 2019 -      *Postdoctoral Researcher*, Centre de recherche de l'Institut universitaire de gériatrie 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

## FELLOWSHIPS, HONORS AND AWARDS

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- 2018      *McKnight Brain Institute Training Enhancement Opportunity Travel Award*, University of Florida, \$1850
- 2015 - 2019      *Graduate Fellowship Top Up Award*, University of Florida, College of Liberal Arts and Sciences and Department of Psychology, \$5000 per year

2015 - 2020 *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

## **PUBLICATIONS**

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**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

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

Richards T., Grabowski 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

## **CONFERENCE PRESENTATIONS**

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(\*indicates undergraduate presenter)

\*Myers, E., **Lussier, D.**, Horta, M., Frazier, I., Polk, R., Feifel, D., & Ebner, N. C. (June 2019). *4-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) *Associations 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 9<sup>th</sup> 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, Champéry, 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.

## TALKS AND LECTURES

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| 2018        | <b>Lussier, D.</b> , <i>Brain Structure and Oxytocin in Pain and Aging</i> . Centre de recherche de l'Institut universitaire de gériatrie de Montréal, Université de Montréal, Montreal, QC, CA |
| 2018        | <b>Lussier, D.</b> <i>Brain Structure in Pain and Aging</i> . University of Florida, Language and Brain group, Gainesville, FL, USA   |
| 2018        | <b>Lussier, D.</b> <i>Scripting with Unix Shell</i> . University of Florida, Developmental Colloquium, Gainesville, FL, USA   |
| 2017 & 2016 | <b>Lussier, D.</b> <i>Socioemotional Development in Infancy</i> . University of Florida, Developmental Psychology class, Gainesville, FL, USA   |
| 2014        | <b>Gulliford, D.</b> <i>Updates in Autism: New Research and the DSM</i> . Pierce College Fort Steilacoom, Abnormal Psychology class, Lakewood, WA, USA  |
| 2013        | <b>Gulliford, D.</b> <i>An Introduction to Neuroimaging</i> . Pierce College Fort Steilacoom, Introduction to Psychology class, Lakewood, WA, USA   |
| 2013        | <b>Gulliford, D.</b> <i>Neuroimaging and Developmental Disorders</i> . Pierce College Fort Steilacoom, Abnormal Psychology class, Lakewood, WA, USA   |

- 2013      **Gulliford, D.** *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**

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### *Instruction*

- 2019      *Introduction to Machine Learning for Neuroimaging*. Traintrack workshop for Brainhack Global 2019, Concordia University Conference Centre, Montréal, QC, Canada (Désirée Lussier)
- 2019      Lussier, D. *Principle 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 (Pierre Bellec, Gaël Varoquaux, Désirée Lussier, Alexa Pichet Binette, Alexandre Hutton)

### *Participation*

- 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 (J Bates, S Ghosh, J Grethe, Y Halchenko, C Haselgrove, S Hodge, D Jarecka, D Keator, D Kennedy, M Martone, N Nichols, S Padhy, JB Poline, N Preuss, M Travers)

## **TEACHING EXPERIENCE**

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Spring 2016, 2017, 2019; Fall 2017	Teaching Assistant, <i>Developmental Psychology</i> , University of Florida, (online) undergraduate course (Marina Klimenko)
Fall 2018	Instructor, <i>General Psychology</i> , University of Florida
Spring 2018	Teaching Assistant, <i>General Psychology</i> , University of Florida, (online) undergraduate course (Dorey)
Fall 2015 & 2016	Teaching Assistant, <i>Developmental Psychology</i> , University of Florida, undergraduate course (Natalie Ebner)

## **MENTORSHIP**

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Myers, Elisha, University of Florida, Psychology Undergraduate Thesis: *Effects of Four-Week Intranasal Oxytocin Administration on Insula Volume and Levels of Empathy in Aging*, Summer 2020

Rachna Sannegowda, University of Florida, Biomedical Engineering Undergraduate Thesis: *Cerebellar White Matter Volume and Clinical Pain in Older Individuals*, Spring 2018. (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 (Accepted to Technion Medical School)

## **METHODS AND TECHNOLOGY**

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*Neuroimaging Methods*  
DTI, fMRI, sMRI, MRS

*Software*  
FSL, CONN, Freesurfer, Slicer3D, RStudio, SPM, SPSS, Matlab, Presentation, Eprime

*Programming Languages*  
Unix shell (bash), R, Python, SDL, PCL, html, JavaScript

*Operating Systems*  
Linux (Debian, Ubuntu), Windows (XP, 7, 10)

*Server Experience*  
Ngnix, Apache - Debian 8, Debian 9, Ubuntu 16.04

## **PROFESSIONAL AFFILIATIONS**

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2018-present	American Pain Society (APS), student/trainee member
2018-present	Society for Neuroscience (SfN), student member
2013-present	Organization for Human Brain Mapping (OHBM), junior/student member