# Francesca Morfini

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Education

2019 - Present **Ph.D. in Psychology** (Cognitive Neuroscience) Northeastern University, USA

Advisors: Susan Whitfield-Gabrieli, Randy P. Auerbach, Juliet Y. Davidow

2014 M.S. in Clinical Psychology San Raffaele University, Italy

Advisor: Laura Bellodi

2011 **B.S. in Psychology and Neuroscience** San Raffaele University, Italy

#### **Research interests**

- Anxiety, depression, and internalizing disorders
- Adolescence
- Neuroscience
- Real-time neurofeedback

#### Licensure

2016 - Present Licensed Psychologist, Board of Psychologists, Italy (License #18591)

### Fellowships and awards\_\_\_\_\_

Center for Cognitive and Brain Health	Fellowship (1 year stipend and tuition)	2024/2025
Society of Biological Psychiatry (SOBP)	Travel Award, Pre-Doc	2024
Psychology Department Northeastern University	Travel Award	2020-2024
PhD Network Northeastern University	Travel Award	2020-2023
College of Science Northeastern University	Travel Award	2020, 2023
International OCD Foundation Conference	Scholarship Award	2017
European Union ERASMUS Program	Scholarship	2010

#### Research experience

2019-Present Graduate Student Researcher

Northeastern University, Boston, USA

Department of Psychology

Mentors: Susan Whitfield-Gabrieli, Ph.D. and Juliet Y. Davidow, Ph.D.

2018-19 **Visiting Scholar** 

Harvard University, Cambridge, MA

Department of Psychology Mentor: Jill M. Hooley, Ph.D.

2016-18 Research Assistant

University of California, Los Angeles, CA Semel Institute for Neuroscience and Human Behavior

Mentor: Jamie Feusner, M.D.

## Clinical experience\_

#### 07-08/2016 Clinical Trainee

Cognitive-Behavioral Therapy Training Program

**Anxiety Disorders Clinic** 

University of California, Los Angeles, CA

Supervisor: Jamie Feusner, M.D.

#### 05-07/2016 Clinical Trainee

Health Professional Observer Program

Ronald Reagan Hospital

University of California, Los Angeles, CA

Supervisor: Michael Strober, Ph.D.

#### 2016 - Present Licensed Psychologist

Board of Psychologists of Lombardy, Italy

Licensing number: 18591

#### 2014-15 **Post-Graduate Clinical Intern**

Center for Anxiety and Eating Disorders San Raffaele Hospital, Milan, Italy Supervisor: Laura Bellodi, M.D.

#### **Published manuscripts**

[13] **Morfini, F.**, Bauer, C.C.C., Zhang, J., Whitfield-Gabrieli, S., Shinn<sup>§</sup>, A.K., Niznikiewicz<sup>§</sup>, M.A., (2024). Targeting the superior temporal gyrus with real-time fMRI neurofeedback: a pilot study of the indirect effects on self-referential processes in schizophrenia. *Schizophrenia Research*, 270, 358-365. <a href="https://doi.org/10.1016/j.schres.2024.06.036">https://doi.org/10.1016/j.schres.2024.06.036</a>

[12] Zhang, J.<sup>†</sup>, Bloom, P. A.<sup>†</sup>, Pagliaccio, D., Bauer, C.C.C., Greene, K.D., **Morfini, F.,** Treves, I., Durham, K., Cherner, R., Bajwa, Z., Wool, E., Kyler, M., Kim, N., Simpson, B.H., Auerbach, R.P. <sup>§</sup>, Whitfield-Gabrieli, S. <sup>§</sup> (2024). Mindfulness-based real-time fMRI neurofeedback for depressed adolescents: a randomized controlled dosing trial. <a href="https://doi.org/10.31234/osf.io/sj236">https://doi.org/10.31234/osf.io/sj236</a>

[11] Cline, T. L., <u>Morfini, F.</u>, Tinney, E. M., Makarewycz, E., Lloyd, K., Olafsson, V., Bauer, C.C.C., Kramer, A.F., Raine, L.B., Gabbard-Durnam, L. J., Whitfield-Gabrieli, S., Hillman, C. H. (2024). Resting-state functional connectivity change in frontoparietal and default mode networks after acute exercise in youth. *Brain Plasticity*. <a href="https://doi.org/10.3233/BPL-240003">https://doi.org/10.3233/BPL-240003</a>

[10] Bloom, P. A., Pagliaccio, D., Zhang, J., Bauer, C.C.C., Kyler, M., Greene, K. D., Treves, I., **Morfini**, **F.**, Durham, K., Cherner, R., Bajwa, Z., Wool, E., Olfsson, V., Lee, R. F., Bidmead, F., Cardona, J., Kirshenbaum, J. S., Ghosh, S., Hinds, O., Wighton, P., Galfalvy, H., Simpson, H. B., Whitfield-Gabrieli, S., & Auerbach, R. P. (2023). Mindfulness-based real-time fMRI neurofeedback: a randomized controlled trial to optimize dosing for depressed adolescents. *BMC Psychiatry*. https://doi.org/10.1186/s12888-023-05223-8

- [9] Bauer, C.C.C., Zhang, J., Raya, J., Morfini, F., Pagliaccio, D., Yendiki, A., Auerbach, R.P., Niznikiewicz, M., A., Whitfield-Gabrieli, S. (2023). Rewiring neural circuits: meditation based neurofeedback and its neuroplastic effects on the pathological brain. *AIP Conference Proceedings* (Vol. 2947, No. 1). https://doi.org/10.1063/5.0161404
- [8] <u>Morfini, F.</u>, Whitfield-Gabrieli, S. and Nieto-Castañón, A. (2023) Functional connectivity MRI quality control procedures in CONN. *Frontiers in Neuroscience*. 17:1092125. https://doi.org/10.3389/fnins.2023.1092125
- [7] Zhang, J., Raya, J., Morfini, F., Urban, Z., Pagliaccio, D., Yendiki, A., Auerbach, R.P., Bauer, C.C.C., Whitfield-Gabrieli, S. (2023). Reducing default mode network connectivity with mindfulness-based fMRI neurofeedback: a pilot study among adolescents with affective disorder history. *Molecular Psychiatry*, 1-9. https://doi.org/10.1038/s41380-023-02032-z
- [6] Moody, T.D., Morfini, F., Cheng, G., Sheen, C.L., Kerr, W.T., Strober, M. and Feusner, J.D. (2020). Brain activation and connectivity in anorexia nervosa and body dysmorphic disorder when viewing bodies: relationships to clinical symptoms and perception of appearance. *Brain Imaging and Behavior*, 7(9). <a href="https://doi.org/10.1007/s11682-020-00323-5">https://doi.org/10.1007/s11682-020-00323-5</a>
- [5] Vaughn, D.A., Kerr, W.T., Moody, T.D., Cheng, G.K., **Morfini, F.**, Zhang, A., Leow, A.D., Strober, M.A., Cohen, M.S. and Feusner, J.D. (2019). Differentiating weight-restored anorexia nervosa and body dysmorphic disorder using neuroimaging and psychometric markers. *PLOS ONE*, 14(5), p.e0213974. <a href="https://doi.org/10.1371/journal.pone.0213974">https://doi.org/10.1371/journal.pone.0213974</a>
- [4] Reggente, N., Moody, T.D., <u>Morfini, F.</u>, Sheen, C., Rissman, J., O'Neill, J. and Feusner, J.D. (2018). Multivariate resting-state functional connectivity predicts response to cognitive behavioral therapy in obsessive—compulsive disorder. *Proceedings of the National Academy of Sciences*,115(9), pp.2222–2227. <a href="https://doi.org/10.1073/pnas.1716686115">https://doi.org/10.1073/pnas.1716686115</a>
- [3] Rangaprakash, D., Bohon, C., Lawrence, K.E., Moody, T., <u>Morfini, F.</u>, Khalsa, S.S., Strober, M. and Feusner, J.D. (2018). Aberrant dynamic connectivity for fear processing in anorexia nervosa and body dysmorphic disorder. *Frontiers in Psychiatry*, 9. <a href="https://doi.org/10.3389/fpsyt.2018.00273">https://doi.org/10.3389/fpsyt.2018.00273</a>
- [2] Moody, T.D., <u>Morfini, F.</u>, Cheng, G., Sheen, C., Tadayonnejad, R., Reggente, N., O'Neill, J. and Feusner, J.D. (2017). Mechanisms of cognitive-behavioral therapy for obsessive-compulsive disorder involve robust and extensive increases in brain network connectivity. *Translational Psychiatry*, 7(9), p.e1230. <a href="https://doi.org/10.1038/tp.2017.192">https://doi.org/10.1038/tp.2017.192</a>
- [1] Tadayonnejad, R., Deshpande, R., Ajilore, O., Moody, T., <u>Morfini, F.</u>, Ly, R., O'Neill, J. and Feusner, J.D. (2017). Pregenual anterior cingulate dysfunction associated with depression in OCD: an integrated multimodal fMRI/1H MRS study. *Neuropsychopharmacology*, 43(5), pp.1146–1155. <a href="https://doi.org/10.1038/npp.2017.249">https://doi.org/10.1038/npp.2017.249</a>

# Manuscripts submitted\_

Morfini, F., Kucyi, A., Zhang, J., Bauer, C.C.C., Bloom, P. A., Pagliaccio, D., Hubbard, N., Rosso, I.M., Yendiki, A., Ghosh, S. S., Pizzagalli, D.A., Gabrieli, J.D., Whitfield-Gabrieli, S., Auerbach, R.P. (*in revision*). Brain functional connectivity predicts depression and anxiety during childhood and adolescence: a connectome-based predictive modeling approach.

#### **Manuscripts in preparation**

- <u>Morfini, F.</u>, Whitfield-Gabrieli, S., Davidow, J.Y., Auerbach, R.P. (*in preparation*). Neuro-cognitive maturation subtypes of depression and anxiety in adolescence
- Zhang, J., Morfini, F., Lee, Y.J., Nieto-Castañón, A., Yendiki, A., Hubbard, N., Siless, V., Frosch, I., Goncalves, M., Lo, N., Hofmann, S.G., Auerbach, R.P., Pizzagalli, D.A., Gabrieli, J.D., Whitfield-Gabrieli, S. (*in preparation*). Multimodal Brain Connectomics Predict Longitudinal Symptom Change in Adolescent Depression.
- Zhang, J., Bauer, C.C.C., **Morfini, F.**, Lee, Y., Stone, L. M. D., Awad, A. I., Okano, K., Hwang, M., Shinn, A., Niznikiewicz, M. A., Whitfield-Gabrieli, S. (*in preparation*). Mindfulness-based fMRI neurofeedback reduces default mode network and auditory cortex functional connectivity in schizophrenia.
- Bauer, C.C.C., Zhang, J., <u>Morfini, F.</u>, Shinn, A., Stone, L. M. D., Awad, A. I., Quin, E. Andrikidis, E., Ajunwa, C., Green K., Lee, Y., Nestor, P., Whitfield-Gabrieli, S., Niznikiewicz, M. A. (*in preparation*). Neurofeedback Reduces Auditory Hallucinations and Modulates Associated Brain Activity and Connectivity.
- Bloom, P. A., Pagliaccio, D., Bajwa, Z., Wool, E., Zhang, J., Bauer, C.C.C., Kyler, M., Greene, K.D., Treves,
  - I., <u>Morfini, F.,</u> Durham, K., Kirshenbaum, J.S., Kim, N., Galfalvy, H., Simpson, B.H., Whitfield-Gabrieli, S., Auerbach, R.P. (*in preparation*). Investigating the Impact of Mindfulness-based Real-time fMRI Neurofeedback on Self-Referential Processing in Depressed Adolescents.

#### **Selected conference presentations (first author)**

- [15] <u>Morfini, F.</u>, Auerbach, R.P., Kramer, A. F., Davidow, Y.§, Whitfield-Gabrieli, S.§ (2024). Neurocorrelates of depression and anxiety in adolescents. *Flux International Society for Developmental Cognitive Neuroscience*.
- [14] <u>Morfini, F.</u>, Kucyi, A., Zhang, J., Bauer, C.C.C., Bloom, P.A., Pagliaccio, D., Auerbach, R.P., Whitfield-Gabrieli, S. (2023). Brain Functional Connectivity Predicts Depression and Anxiety During Childhood and Adolescence: A Connectome-based Predictive Modeling Approach. *Society of Biological Psychiatry*.
- [13] Morfini, F., Zhang, J., Bauer, C.C., Stone, L. M. D., Shinn, A. K., Whitfield-Gabrieli, S., Niznikiewicz, M. A. (2022). Real-Time fMRI Neurofeedback from the Superior Temporal Gyrus Modulates Functional Connectivity Related to Self-Referential Processes in Schizophrenia. *Real-Time Functional Imaging and Neurofeedback Meeting*.
- [12] Morfini, F., Zhang, J., Bauer, C.C., Stone, L. M. D., Shinn, A. K., Whitfield-Gabrieli, S., Niznikiewicz, M. A. (2022). Real-Time fMRI Neurofeedback from the Superior Temporal Gyrus Modulates Functional Connectivity Related to Self-Referential Processes in Schizophrenia. *International Consortium for Schizotypy Research*.
- [11] Morfini, F., Zhang, J., Bauer, C.C., Shinn, A. K., Lee, Y., Awad, A. I., Stone, L. M. D., Northoff., G., Niznikiewicz, M. A., Whitfield-Gabrieli, S. (2022). Real-Time fMRI Neurofeedback for Auditory Hallucinations in Schizophrenia Reduces Aberrant Auditory Cortex Activity and Connectivity with the Default Mode Network. *Harvard Psychiatry Research Day Poster Session and Mysell Lecture*.

- [10] <u>Morfini, F.</u>, Bauer, C.C.C., Zhang, J., Lee, Y., Raya, J., Awad, A. I., Stone, L. M. D., Shinn, A. K., Whitfield-Gabrieli, S., Niznikiewicz, M. A. (2021). Real-time fMRI neurofeedback from the superior temporal gyrus modulates self-referential processes in schizophrenia. *Society of Biological Psychiatry*.
- [9] <u>Morfini, F.</u>, Bauer, C.C.C., Zhang, J., Lee, Y., Raya, J., Awad, A. I., Stone, L. M. D., Shinn, A. K., Whitfield-Gabrieli, S., Niznikiewicz, M. A. (2021). Real-time fMRI neurofeedback from the superior temporal gyrus modulates self-referential processes in schizophrenia. *Harvard Psychiatry Research Day Poster Session and Mysell Lecture*.
- [8] Morfini, F., Bauer, C.C.C., Zhang, J., Lee, Y., Raya, J., Awad, A. I., Stone, L. M. D., Shinn, A. K., Whitfield-Gabrieli, S., Niznikiewicz, M. A. (2021). Real-time fMRI neurofeedback from the superior temporal gyrus modulates self-referential processes in schizophrenia. *Schizophrenia International Research Society*.
- [7] Morfini, F., Lee, Y.J., Hirshfeld-Becker, D., Cutting, L., Bunge, S., Biederman J., & Whitfield-Gabrieli, S., (2020). Association of Intrinsic Brain Architecture with Changes in Attentional and Mood Symptoms During Development. *Massachusetts General Hospital Clinical Research Day*.
- [6] <u>Morfini, F.</u>, Zhang, J., Lee, Y.J., Nieto-Castañón, A., Hubbard, N., Siless, V., Goncalves, M., Frosch, I., Lo, N., Hofmann, S.G., Auerbach, R.P., Pizzagalli, D.A., Yendiki, A., Gabrieli, J.D., Whitfield-Gabrieli, S. (2020). Resting State Connectivity Associated with Changes in Anxiety Symptoms in Adolescence over One Year. *Research Innovation Scholarship Entrepreneurship*.
- [5] Morfini, F., Zhang, J., Lee, Y.J., Nieto-Castañón, A., Hubbard, N., Siless, V., Goncalves, M., Frosch, I., Lo, N., Hofmann, S.G., Auerbach, R.P., Pizzagalli, D.A., Yendiki, A., Gabrieli, J.D., Whitfield-Gabrieli, S. (2020). Resting State Connectivity Associated with Changes in Anxiety Symptoms in Adolescence over One Year. *Society of Biological Psychiatry*.
- [4] <u>Morfini, F.</u>, Greco, R., Naman, K., Feusner, J.D., Motivala, S.J. (2017). Cross-sectional and Longitudinal Relationships Between Poor Sleep and Symptom Severity in Obsessive-Compulsive Disorder. *UCLA Brain Research Institute*.
- [3] <u>Morfini, F.</u>, Moody, T., Cheng, G.K., Feusner, J.D. (2017). Brain Activation and Connectivity in Body Dysmorphic Disorder and Anorexia Nervosa when Viewing Bodies. *UCLA Brain Research Institute*.
- [2] <u>Morfini, F.</u>, Moody, T., Cheng, G.K., Strober, M., Feusner, J.D. (2017). Abnormal Brain Activation and Connectivity in Body Dysmorphic Disorder and Anorexia Nervosa When Viewing Bodies. *American College of Neuropsychopharmacology*.
- [1] **Morfini, F.**, Casero, F., Bassetti, E., Galimberti, E., Baud-Bovy, G., Tettamanti, A., Gatti, R. (2015). Body schema and body image in anorexia nervosa patients: action- oriented protocol. *European Congress of Psychology*.

#### **Selected conference presentations (co-authored)**

[24] Cline, T. L., Watrous, J. N. H., Nwakamma, M., Tinney, E. M., McDonald, K. M., <u>Morfini, F.</u>, Raine, L., Gabbard-Durnam, L., Kramer, A. F., Whitfield-Gabrieli, S., Hillman, C. H. (2023). *Acute Effects of a Single Bout of Exercise on Functional Brain Networks in Children*. Society for Prevention Research.

- [23] Tusuzian, E., Firlie, B., Akoh, N., Zhang, J., Bauer, C.C.C., <u>Morfini, F.,</u> Shinn, A.K., Niznikiewicz, M.A., Whitfield-Gabrieli, S., (2023). Cortical Thickness Predictors of Neurofeedback Success in Reducing Auditory Hallucinations in Schizophrenia. *Society of Biological Psychiatry*.
- [22] Tusuzian, E., Firlie, B., Akoh, N., Zhang, J., Bauer, C.C.C., <u>Morfini, F.,</u> Shinn, A.K., Niznikiewicz, M.A., Whitfield-Gabrieli, S., (2023). Cortical Thickness Predictors of Neurofeedback Success in Reducing Auditory Hallucinations in Schizophrenia. *Research Innovation Scholarship Entrepreneurship*.
- [21] Bauer, C.C.C., Zhang, J., **Morfini, F.,** Shinn, A., Stone, L. M. D., Awad, A. I., Quin, E., Andrikidis, E., Lee, Y., Nestor, P., Whitfield-Gabrieli, S. & Niznikiewicz, M. A. (2023). fMRI feedback reduces auditory hallucinations and regulates akin network activation and connectivity. *Organization for Human Brain Mapping*.
- [20] Cline, T. L., Watrous, J. N. H., Tinney, E. M., Nwakamma, M., McDonald, K. M., **Morfini, F.**, Raine, L., Gabbard-Durnam, L., Kramer, A. F., Whitfield-Gabrieli, S., Hillman, C. H. (2023). Multivariate Pattern Analysis of Functional Brain Network Connectivity after Acute-to-Vigorous Physical Activity in Children. *American College of Sports Medicine*.
- [19] Bauer, C.C., Zhang, Shaffer, C., <u>Morfini, F.</u>, Niznikiewicz, M. A., Kucyi, A., Akoh, N., Whitfield-Gabrieli, S. (2022). Mindful or Mind Full? Ask Your Participants. *Real-Time Functional Imaging and Neurofeedback Meeting*.
- [18] Shaffer, C., Zhang, Raya, J., <u>Morfini, F.</u>, Auerbach, R. P., Bauer, C.C., Whitfield-Gabrieli, S. (2022). Baseline Connectivity of Key Self-Reference Nodes Predicts Real-Time Neurofeedback Performance in Adolescents with a History of Affective Disorders. *Real-Time Functional Imaging and Neurofeedback Meeting*.
- [17] Zhang, J., Morfini, F., Lee, Y., Stone, Awad, A. I., L. M. D., Shinn, A. K., Niznikiewicz, M. A., Urban, Z., Raya, J., Kim, M., Jones, R. J., Yendiki, A., Pagliaccio, D., Auerbach, R. P., Ghosh, S., Bauer, C.C., Whitfield-Gabrieli, S. (2022). Mindfulness-Based Real-Time fMRI Neurofeedback Targeting the Default Mode Network in *Schizophrenia* and Depression. *Real-Time Functional Imaging and Neurofeedback Meeting*.
- [16] Zhang, J., Morfini, F., Lee, Y., Stone, Awad, A. I., L. M. D., Shinn, A. K., Niznikiewicz, M. A., Urban, Z., Raya, J., Kim, M., Jones, R. J., Yendiki, A., Pagliaccio, D., Auerbach, R. P., Bauer, C.C., Whitfield-Gabrieli, S. (2022). Mindfulness-Based Real-Time fMRI Neurofeedback Targeting the Default Mode Network in Schizophrenia and Depression. *McGovern Institute Annual Symposium*.
- [15] Kucyi, A., <u>Morfini, F.</u>, Whitfield-Gabrieli, S. (2022). Connectome-based predictive modeling of spontaneous experiences during resting state fMRI. *Society of Biological Psychiatry*.
- [14] Shinn, A. K., Zhang, J., Bauer, C.C., <u>Morfini, F.</u>, Lee, Y., Awad, A. I., Stone, L. M. D., Northoff., G., Niznikiewicz, M. A., Whitfield-Gabrieli, S. (2022). Real-Time fMRI Neurofeedback for Auditory Hallucinations in Schizophrenia Reduces Aberrant Auditory Cortex Activity and Connectivity with the Default Mode Network. *American College of Neuropsychopharmacology*.
- [13] Zhang, J., Bauer, C.C., Shinn, A. K., <u>Morfini, F.</u>, Lee, Stone, L. M. D., Y., Awad, A. I., Northoff., G., Whitfield-Gabrieli, S., Niznikiewicz, M. A. (2021). Real-Time fMRI Neurofeedback for Auditory

- Hallucinations in Schizophrenia Reduces Aberrant Auditory Cortex Activity and Connectivity with the Default Mode Network. *American College of Neuropsychopharmacology*.
- [12] Zhang, J., Bauer, C.C., <u>Morfini, F.</u>, Lee, Y., Awad, A. I., Stone, L. M. D., Northoff., G., Shinn, A. K., Niznikiewicz, M. A., Whitfield-Gabrieli, S. (2021). Baseline functional connectivity between default mode network and auditory cortex predicts improvement in auditory hallucination following real-time neurofeedback in schizophrenia. *Society of Biological Psychiatry*.
- [11] Lee, Y., Zhang, J., <u>Morfini, F.</u>, Raya, J., Hubbard, N., Ghosh, S., Auerbach, R.P., Hofmann, S.G., Henin, A., Yendiki, A., Gabrieli, J.D., Whitfield-Gabrieli, S. (2021). Baseline functional connectivity predicts changes in attentional and mood symptoms in adolescents with depression and/or anxiety. *Society of Biological Psychiatry*.
- [10] Bauer, C.C.C., Zhang, J., <u>Morfini, F.</u>, Lee, Y., Raya, J., Awad, A. I., Stone, L. M. D., Shinn, A. K., Whitfield-Gabrieli, S., Niznikiewicz, M. A. (2021). Baseline functional connectivity between default mode network and auditory cortex predicts improvement in auditory hallucination following real-time neurofeedback in schizophrenia. *Society of Biological Psychiatry*.
- [9] Zhang, J., Morfini, F., Lee, Y.J., Nieto-Castañón, A., Yendiki, A., Hubbard, N., Siless, V., Frosch, I., Goncalves, M., Lo, N., Hofmann, S.G., Auerbach, R.P., Pizzagalli, D.A., Gabrieli, J.D., Whitfield-Gabrieli, S. (2020). Multimodal Brain Connectomics Predict Longitudinal Symptom Change in Adolescent Depression. *Society of Biological Psychiatry*.
- [8] Feusner, J.D., Deshpande, R., Bohon, C., Lawrence, K., Moody, T., <u>Morfini, F.</u>, Khalsa, S., Goldbeck, J., Strober, M., (2018). Aberrant fronto-limbic dynamic connectivity for fear processing in anorexia nervosa and body dysmorphic disorder. *Eating Disorders Research Society*.
- [7] Moody, T., Morfini, F., Deshpande, R., Ly, R., Sheen, C., Feusner, J. D. (2018). Visual Modulation of the Dorsal Visual Stream in Body Dysmorphic Disorder Using Short-Duration Visual Stimuli. *Society of Biological Psychiatry*.
- [6] Cheng, G.K., <u>Morfini, F.</u>, Moody, T., Feusner, J.D. (2017). Brain Activation and Connectivity in BDD and Anorexia Nervosa when Viewing Bodies. *International OCD Foundation*.
- [5] Tadayon-Nejad, R., Deshpande, R., Moody, T., <u>Morfini, F.</u>, Ly, R., O'Neill, J., Feusner, J.D. (2017). Biochemical-connectivity-psychological model of comorbid depression in OCD: an integrated fMRI/1H MRS study. *Society of Biological Psychiatry*.
- [4] Deshpande, R., Moody, T., Ly, R., Sheen, C., Potter, G., Cheng, G.K., <u>Morfini, F.</u>, Feusner, J. D. (2017). Dynamics of Visual Processing Abnormalities in Body Dysmorphic Disorder. *Society of Biological Psychiatry*.
- [3] Feusner, J.D., Reggente, N., Moody, T. D., <u>Morfini, F.</u>, Rissman, J., O'Neil, J. (2016). Prediction of response to cognitive-behavioral therapy in obsessive-compulsive disorder: a multivariate analysis of resting state functional connectivity. *UCLA Brain Research Institute*.
- [2] Feusner, J.D., Reggente, N., Moody, T. D., **Morfini, F.**, Rissman, J., O'Neil, J. (2016). Prediction of response to cognitive-behavioral therapy in obsessive-compulsive disorder: a multivariate analysis of resting state functional connectivity. *American College of Neuropsychopharmacology*.

[1] Martoni, R.M., Rancoita, R., De Filippis, R., <u>Morfini, F.</u>, Cavallini, M.C., Galimberti, E., Bellodi, L. (2015). Risky decision strategies in Healthy Subjects and Obsessive-Compulsive Patients and their interaction with clinical variables. *European Congress of Psychology*.

### **Open science contributions**\_

[Software Manual] Multivariate and Univariate Real-Time Functional Imaging (MURFI) User Manual. A manual for the installation and use of MURFI, a software package for real-time processing of functional brain images for neuroscience applications.

Bauer, C.C.C., Zhang, J., Morfini, F., Kucyi, A., Raya, J., Urban, Z., Ghosh, S., Hinds, O., Auerbach, R. P., Pagliaccio, D., Whitfield-Gabrieli, S. (2022). https://doi.org/10.17504/protocols.io.b5afq2bn

#### **Invited talks**

invited talk	XS
2022 (July)	Columbia University, Dr. Auerbach Lab, New York, NY, USA "Brain Functional Connectivity Predicts Anxiety and Depression in Children and Adolescents: A Machine-Learning Study of Independent Longitudinal Samples"
2021 (June)	<b>Northeastern University</b> , Research on AdoLescence (NURAL), Boston, USA "Multimodal Prediction of Depressive Symptom Improvement in Adolescence"
2021 (Mar)	Northeastern University, Master's Convention, Boston, USA "Understanding Depressive Symptoms Change in Adolescence"
2021 (Feb)	<b>Northeastern University</b> , Center for Cognitive and Brain Health, Boston, USA "Understanding Depressive Symptoms Change Over Time in Adolescence"
2020 (May)	<b>Northeastern University</b> , Boston Psychology Graduate Symposium, Boston, USA "Resting-State Connectivity Associated with Changes in Anxiety Symptoms in Adolescence"
2020 (Mar)	<b>Northeastern University</b> , Provost and Board of Directors (with advisor), Boston, USA "What Northeastern should do next for PhD education and increase success in research. The importance of the matching process between Faculty Mentor and Ph.D. student"
2020 (Feb)	<b>Northeastern University</b> , Research on AdoLescence (NURAL), Boston, USA "Brain Connectomics Predict Longitudinal Symptom Change in Depression"
2018 (Nov)	Harvard University, Dr. Hooley Lab, Cambridge, MA, USA "Abnormal Brain Activation and Connectivity in Anorexia Nervosa and Body Dysmorphic"

#### **Teaching experience**

(TA, teaching assistant. Course levels: G, graduate PhD; I, international all levels; U, undergraduate)

Role	<u>Institution</u>	<u>Co</u>	urse Level and Title	<u>Professor</u>
ТА	Northeastern University	U	Laboratory in Cognition	Eidson
ТА	Northeastern University	G	Graduate Quantitative Methods II	DeSteno
TΑ	MGH/Martinos/Harvard	I	fMRI Connectivity Analysis with CONN	Nieto-Castañón
ТА	Northeastern University	U	Statistics in Psychological Research	Eidson
	ΓΑ ΓΑ ΓΑ	ΓΑ Northeastern University ΓΑ MGH/Martinos/Harvard	ΓΑ Northeastern University U ΓΑ Northeastern University G ΓΑ MGH/Martinos/Harvard I	Course Level and Title  TA Northeastern University U Laboratory in Cognition  TA Northeastern University G Graduate Quantitative Methods II  TA MGH/Martinos/Harvard I fMRI Connectivity Analysis with CONN  TA Northeastern University U Statistics in Psychological Research

2022 (Spring)	TA	Northeastern University	U	Statistics in Psychological Research	Halko
2021 (Fall)	TA	MGH/Martinos/Harvard	I	fMRI Connectivity Analysis with CONN	Nieto-Castañón
2021 (Fall)	TA	Northeastern University	U	Statistics in Psychological Research	Halko
2021 (Spring)	TA	MGH/Martinos/Harvard	I	fMRI Connectivity Analysis with CONN	Nieto-Castañón
2020 (Fall)	TA	Northeastern University	U	Statistics in Psychological Research	Halko
2020 (Spring)	TA	Northeastern University	U	Laboratory in Cognition	Baker

# **Invited lectures**

Invited lec	tures
2024 (Nov)	Harvard -MIT, Health Sciences and Technology Program, Boston, USA Functional Magnetic Resonance Imaging: Data Acquisition and Analysis "Seed Based Functional Connectivity Analyses"  Directors: Anastasia Yendiki, Jonathan Polimeni
2024 (Oct)	Harvard -MIT, Health Sciences and Technology Program, Boston, USA Functional Magnetic Resonance Imaging: Data Acquisition and Analysis "Quality Control for fMRI data"  Directors: Anastasia Yendiki, Jonathan Polimeni
2023 (July)	<b>Organization for Human Brain Mapping</b> , Educational Course, Montreal, Canada Making Quality Control Part of Your Analysis: Learning with the FMRI Open QC Project "Functional Connectivity MRI Quality Control Procedures in CONN"
2022 (Nov)	Harvard -MIT Health Sciences and Technology Program, Boston, USA Functional Magnetic Resonance Imaging: Data Acquisition and Analysis "Quality Control for fMRI data"  Directors: Anastasia Yendiki, Jonathan Polimeni
2022 (Oct)	Harvard -MIT, Health Sciences and Technology Program, Boston, USA Functional Magnetic Resonance Imaging: Data Acquisition and Analysis "Seed Based Functional Connectivity Analyses"  Directors: Anastasia Yendiki, Jonathan Polimeni
2021 (Aug)	Northeastern University, Boston, USA MRI Users Group workshop series

"Optimization of BIDS-App on High Performance Computing Clusters"

# Mentoring experience\_\_\_\_\_

<u>Semester</u>	<u>Name</u>	<u>Institution</u>	Subsequent Position
2021-2022	Tanushka Dewan	Northeastern University	Continued Undergraduate Studies
2021 (Fall)	Chelsea Ajunwa	MIT	PhD in Psychology, Northeastern University
2021 (Fall)	Arjun Valay	Northeastern University	Continued Undergraduate Studies
2021-2022	Emma Tusuzian	Northeastern University	Co-op Student, Northeastern University
2020 (Spring)	Kathryn Margiotta	Northeastern University	Co-op Student, McLean Hospital

#### Leadership and service

2021	Organizer and Founder (with Dr Davidow), MRI Group Seminars, Northeastern University
2019 - 2020	Organizer, Seminars for Center for Cognitive and Brain Health, Northeastern University
2020 - present	Mentor (2-3 students/semester), Graduate Mentoring Program, Northeastern University
2020 - present	Graduate Guide, Prospective PhD Interview Weekend, Northeastern University

#### Ad Hoc reviewer

- Imaging Neuroscience
- Frontiers in Psychology
- Brain Research
- Journal of Psychopathology and Clinical Science (with advisor)
- Journal of Child Psychology and Psychiatry (with advisor)

#### **Professional associations**

Flux Society

Organization for Human Brain Mapping (OHBM)

Anxiety and Depression Association of America (ADAA)

Outreach_	
2024	Presenter at high school lecture series at Northeastern University
	"Introductory demonstration on brain functional connectivity"
2022	Speaker for Grad School Mentoring Program at Northeastern University
	"Degree Programs in Psychology: PhD vs PsyD"
2020	Speaker for ABCT Think Tank on Neuroscience
	"How Clinicians Can Use Contemporary Neurocognitive Research in the Real World"
2011 - 2016	<b>Fundraiser</b> , Center for Scientific Research and Technological Innovation in Neurological Disorders, Italy

Selected skills
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Programming languages	Python, MATLAB, R, Unix bash, HTML
Magnetic resonance imaging (MRI)	Softwares: FSL, CONN Toolbox, SPM, BIDS-App, fMRIprep,
	MRIQC, Murfi system for real-time fMRI neurofeedback,
	BrainNetViewer; <b>Python packages</b> : nipype, nilearn, statsmodels,
	pandas,
Electroencephalogram (EEG)	HAPPE, MNE-Python

Statistics Machine learning: scikit-learn, multivariate pattern analysis (MVPA), connectome-based predictive modelling (CPM);

Bayesian statistics: pyJags, pyStan; Misc: R, SPSS, python-

packages (NumPy, SciPy, ...)

**Reproducible science** Git/Github, JupyterLab, Singularity, SLURM HPC systems **Stimuli preparation** PsychoPy, PsychToolbox, Presentation NBS, E-Prime,

ImageMagick, FantaMorph, ImageJ

Laboratory Eye-tracking, BIOPAC, BIAS, CANTAB

Clinical Licensed clinical psychologist for: diagnostic interviews, psychological and counseling support for individuals and groups, neurocognitive testing, psychological testing

Languages	 	 
English: Proficient		
Spanish: Proficient		
Italian: Native speaker		
References		

Available upon request.