### Francesca Morfini

Northeastern University Center for Cognitive and Brain Health Department of Psychology Boston, MA, USA



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Education				
2019 - Present	<b>Ph.D. in Psychology</b> Advisors: Susan Whitfield-Gabrie		Northeastern Universit	ty, USA
2014	M.S. in Clinical Psychology Advisor: Laura Bellodi, M.D.		San Raffaele University, Italy	
2011	B.S. in Psychology and Neuroscience		San Raffaele University, Italy	
Licensure  2016 - Present Licensed Psychologist, Board of Psychologists, Italy (License #18591)				
Honors and Awards				
Society of Biological Psychiatry (SOBP)Travel Award, Pre-Doctoral2024Psychology Department Northeastern UniversityTravel Award2020 -PhD Network Northeastern UniversityTravel Award2020 -			2020 - 2023 2020 - 2023 2020, 2023 2017	

### Research Experience \_\_\_\_\_

2018-19 **Visiting Scholar** 

Harvard University, Cambridge, MA Department of Psychology

Advisor: Jill M. Hooley, Ph.D.

2016-18 **Research Assistant** 

University of California, Los Angeles, CA

Semel Institute for Neuroscience and Human Behavior

Advisor: 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.

#### **Manuscripts in Progress**

- 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. (*under review*). Brain Functional Connectivity Predicts Depression and Anxiety During Childhood and Adolescence: A Connectome-Based Predictive Modeling Approach.
- <u>Morfini, F.</u>, Bauer, C.C.C., Zhang, J., Shinn, A.K., Whitfield-Gabrieli, S., Niznikiewicz, M.A., (*under review*). Real-Time fMRI Neurofeedback from the Superior Temporal Gyrus Modulates Functional Connectivity Related to Self-Referential Processes in Schizophrenia.
- **Morfini, F.**, Whitfield-Gabrieli, S., Auerbach, R.P. (*in preparation*). Clustering paper. Neuro-cognitive maturation subtypes of depression and anxiety in adolescence
- Zhang, J., <u>Morfini, F.</u>, 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.
- 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., Morfini, F., 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.
- Zhang, J.\*, Bloom, P. A.\*, 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. , Whitfield-Gabrieli, S. (*in preparation*). Mindfulness-based Real-time fMRI Neurofeedback for Depressed Adolescents: A Randomized Controlled Dosing Trial.
- Cline, T. L., <u>Morfini, F.</u>, Tinney, E. M., Makarewycz, E., McDonald, K., Olafsson, V., Bauer, C.C.C., Kramer, A.F., Raine, L.B., Gabbard-Durnam, L., Whitfield-Gabrieli, S., Hillman, C. H. (*under review*). Resting-State Functional Connectivity Change in Frontoparietal and Default Mode Networks After Acute Exercise in Youth.

# Peer-Reviewed Publications \_\_\_\_\_\_

#### **Google Scholar** h-index = 6 (as of Oct 2023)

- [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). doi: 10.1063/5.0161404
- [8] **Morfini, F.**, Whitfield-Gabrieli, S. and Nieto-Castañón, A. (2023) Functional connectivity MRI quality control procedures in CONN. *Frontiers in Neuroscience*. 17:1092125. doi: 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. doi: 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). doi:10.1007/s11682-020-00323-5.
- [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. doi:10.1371/journal.pone.0213974.
- [4] Reggente, N., Moody, T.D., **Morfini, F.**, 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*, [online] 115(9), pp.2222–2227. doi:10.1073/pnas.1716686115.
- [3] Rangaprakash, D., Bohon, C., Lawrence, K.E., Moody, T., **Morfini, F.**, 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. doi:10.3389/fpsyt.2018.00273.
- [2] Moody, T.D., **Morfini, F.**, 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*, [online] 7(9), p.e1230. doi:10.1038/tp.2017.192.
- [1] Tadayonnejad, R., Deshpande, R., Ajilore, O., Moody, T., **Morfini, F.**, 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. doi:10.1038/npp.2017.249.

# Conference Presentations (First Author) \_\_\_\_\_

- [14] **Morfini, F.**, 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 (SOBP)*.
- [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 (rtFIN)*.
- [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 (ICSR)*.
- [11] <u>Morfini, F.</u>, 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 (MYSell)*.
- [10] **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. *Society of Biological Psychiatry (SOBP)*.
- [9] **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. *Harvard Psychiatry Research Day Poster Session and Mysell Lecture (MYSell)*.
- [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 (SIRS)*.
- [7] <u>Morfini, F.</u>, 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 (MGH)*.
- [6] 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. *Research Innovation Scholarship Entrepreneurship (RISE)*.
- [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 (SOBP).
- [4] **Morfini, F.**, 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 (BRI)*.
- [3] **Morfini, F.**, 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 (BRI)*.

- [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 (ACNP)*.
- [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 (ECP)*.

### 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 (SRP)
- [23] Tusuzian, E., Firlie, B., Akoh, N., Zhang, J., Bauer, C.C.C., **Morfini, F.,** 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 (SOBP)*.
- [22] Tusuzian, E., Firlie, B., Akoh, N., Zhang, J., Bauer, C.C.C., **Morfini, F.,** 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 (RISE)*.
- [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 (OHBM)*.
- [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 (ACSM)*.
- [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 (rtFIN)*.
- [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 (rtFIN)*.
- [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 (rtFIN)*.
- [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., **Morfini, F.**, Whitfield-Gabrieli, S. (2022). Connectome-based predictive modeling of spontaneous experiences during resting state fMRI. *Society of Biological Psychiatry (SOBP)*.
- [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 (ACNP)*.

- [13] Zhang, J., Bauer, C.C., Shinn, A. K., **Morfini, F.**, 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 (ACNP)*.
- [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 (SOBP)*.
- [11] Lee, Y., Zhang, J., **Morfini, F.**, 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 (SOBP)*.
- [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 (SOBP)*.
- [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 (SOBP)*.
- [8] Feusner, J.D., Deshpande, R., Bohon, C., Lawrence, K., Moody, T., **Morfini, F.**, 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 (EDRS)*.
- [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 (SOBP)*.
- [6] Cheng, G.K., **Morfini, F.**, Moody, T., Feusner, J.D. (2017). Brain Activation and Connectivity in BDD and Anorexia Nervosa when Viewing Bodies. *International OCD Foundation (IOCDF)*.
- [5] Tadayon-Nejad, R., Deshpande, R., Moody, T., **Morfini, F.**, 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 (SOBP)*.
- [4] Deshpande, R., Moody, T., Ly, R., Sheen, C., Potter, G., Cheng, G.K., **Morfini, F.**, Feusner, J. D. (2017). Dynamics of Visual Processing Abnormalities in Body Dysmorphic Disorder. *Society of Biological Psychiatry (SOBP)*.
- [3] 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. *UCLA Brain Research Institute (BRI)*.
- [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 (ACNP)*.
- [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 (ECP)*.

# 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., <u>Morfini, F.</u>, Kucyi, A., Raya, J., Urban, Z., Ghosh, S., Hinds, O., Auerbach, R. P., Pagliaccio, D., Whitfield-Gabrieli, S. (2022). <u>DOI: dx.doi.org/10.17504/protocols.io.b5afq2bn</u>

Invited Talks		
2022 (July)	Auerbach Lab, <b>Columbia University</b> , 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) DataBlitz, Boston, MA, USA "Multimodal Prediction of Depressive Symptom Improvement in Adolescence"	
2021 (Mar)	Master's Convention, <b>Northeastern University</b> , Boston, MA, USA "Understanding Depressive Symptoms Change in Adolescence"	
2021 (Feb)	Center for Cognitive and Brain Health, <b>Northeastern University</b> , Boston, MA, USA "Understanding Depressive Symptoms Change Over Time in Adolescence"	
2020 (May)	Boston Area Psychology Graduate Symposium, <b>Northeastern University</b> , Boston, MA, USA "Resting-State Connectivity Associated with Changes in Anxiety Symptoms in Adolescence"	
2020 (Mar)	Provost and Board of Directors (with advisor), <b>Northeastern University</b> , Boston, MA, USA "What Northeastern should do next for PhD education and increase success in research. The importance of the matching process between Faculty Mentor and PhD student"	
2020 (Feb)	<b>Northeastern University</b> Research on AdoLescence (NURAL) DataBlitz, Boston, MA, USA "Brain Connectomics Predict Longitudinal Symptom Change in Depression"	
2018 (Nov)	Hooley Lab, <b>Harvard University</b> , Boston, MA, USA "Abnormal Brain Activation and Connectivity in Anorexia Nervosa and Body Dysmorphic When Viewing Images of Bodies"	

# Teaching Experience \_\_\_\_\_\_

### **Teaching Assistant**

(G, graduate level for PhD students; I, international courses open to all levels; TA, teaching assistant; U, undergraduate level courses)

<u>Semester</u>	<u>Role</u>	<u>Institution</u>	Co	<u>urse Level and Title</u>	<u>Professor</u>
2023 (Spring)	TA	Northeastern University	G	Graduate Quantitative Methods II	DeSteno
2022 (Fall)	TA	MGH Martinos Center/Harvard	- 1	CONN for fMRI Connectivity Analysis	Nieto-Castañón
2022 (Fall)	TA	Northeastern University	U	Statistics in Psychological Research	Eidson
2022 (Spring)	TA	Northeastern University	U	Statistics in Psychological Research	Halko
2021 (Fall)	TA	MGH Martinos Center/Harvard	- 1	CONN for fMRI Connectivity Analysis	Nieto-Castañón
2021 (Fall)	TA	Northeastern University	U	Statistics in Psychological Research	Halko
2021 (Spring)	TA	MGH Martinos Center/Harvard	I	CONN for fMRI Connectivity Analysis	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**

2023 (July) "Functional Connectivity MRI Quality Control Procedures in CONN" Part of "Making Quality Control Part of Your Analysis: Learning with the FMRI Open QC Project" Organization for Human Brain Mapping (OHBM), Educational Course, Montreal, Canada **Quality Control for fMRI data** 2022 (Nov) Harvard -MIT Health Sciences and Technology Program, Boston, MA Instructors: Anastasia Yendiki, Jonathan Polimeni 2022 (Oct) **Seed Based Functional Connectivity Analyses** Harvard -MIT Health Sciences and Technology Program, Boston, MA Instructors: Anastasia Yendiki, Jonathan Polimeni 2021 (Aug) Workshop: "Optimization of BIDS-App on High Performance Computing Clusters" **MRI Users Group at Northeastern University** Northeastern University, Boston, MA, USA

# 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	<b>Organizer</b> and <b>Founder</b> (with Dr Davidow), MRI Group Seminar Serie, Northeastern University
2019 - 2020 2020 - present	<b>Organizer</b> , Seminar Series for Center for Cognitive and Brain Health, Northeastern University <b>Mentor</b> (2-3 students/semester), Graduate School Mentoring Program, Northeastern University
2020 - present	<b>Graduate Guide</b> , Prospective PhD Interview Weekend, Northeastern University

#### **Ad Hoc Reviewer**

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

${\bf Outreach}\_$	
2022	Speaker for Grad School Mentoring Program "Degree Programs in Psychology: PhD vs PsyD"
2020	<b>Speaker</b> for <b>ABCT Think Tank on Neuroscience</b> "How Clinicians Can Use Contemporary Neurocognitive Research in the Real World"
2011 - 2019	Fundraiser for Slanciamoci, NPO for Amyotrophic Lateral Sclerosis Research, Italy

Selected Skills	
Programming Languages	Python, MATLAB, R, Unix bash
Magnetic Resonance Imaging (MRI)	<b>Softwares</b> : CONN Toolbox, FSL, SPM, BIDS-App, Murfi system for real-time fMRI neurofeedback, BrainNetViewer, fMRIprep, MRIQC; <b>Python Packages</b> : nipype, nilearn, pandas, other nypy packages
Electroencephalogram (EEG)	HAPPE (Matlab), MNE-Python
Stimuli Preparation and Presentation	PsychoPy (Python), PsychToolbox (Matlab), Presentation NBS, E- Prime, ImageMagick, FantaMorph, ImageJ
Laboratory	Eye-tracking, BIOPAC, BIAS, CANTAB
Reproducible Science	Git/Github, Jupyter Lab, Singularity, SLURM HPC systems
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, pandas, etc.)
Clinical	Licensed clinical psychologist for: diagnostic interviews, psychological and counseling support for individuals and groups, neurocognitive testing, psychological testing
Society Memberships	
Anxiety and Depression Association of Am Flux Society Organization for Human Brain Mapping (	
Languages	
English: Proficient Spanish: Proficient Italian: Native speaker	
References	
Available upon request	