# Francesca Morfini

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## Education

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| 2019 - Present | **Ph.D. in Psychology** (Cognitive Neuroscience) | Northeastern University, USA |
| | Advisors: Susan Whitfield-Gabrieli, Randy P. Auerbach (Columbia University), Juliet Y. Davidow | |
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| 2014 | **M.S. in Psychology** (Clinical) | San Raffaele University, Italy |
| | Advisor: Laura Bellodi | |
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| 2011 | **B.S. in Psychology and Neuroscience** | San Raffaele University, Italy |

## Research interests

Anxiety, depression, internalizing disorders, adolescence, neuroscience, neuroimaging, real-time neurofeedback

## Licensure

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

## Fellowships and awards

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|---|---|---|
| Center for Cognitive and Brain Health | Interdisciplinary Graduate Fellowship | 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 | 2020-2024 |
| College of Science Northeastern University | Travel Award | 2020-2024 |
| International OCD Foundation Conference | Travel Award | 2017 |
| European Union ERASMUS Program | Scholarship | 2010 |

## Research experience

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| 2019-Present | **Ph.D. Graduate Student Researcher** |
| | Northeastern University, Boston, USA |
| | Department of Psychology |
| | Mentors: Susan Whitfield-Gabrieli, Ph.D. and Juliet Y. Davidow, Ph.D. |
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| 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.

## Publications

[13] **Morfini, F.**, Bauer, C.C.C., Zhang, J., Whitfield-Gabrieli, S., Shinn[§], A.K., Niznikiewicz[§], 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. https://doi.org/10.1016/j.schres.2024.06.036

[12] 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.[§] (2024). Mindfulness-based real-time fMRI neurofeedback for depressed adolescents: a randomized controlled dosing trial. https://doi.org/10.31234/osf.io/sj236

[11] Cline, T. L., **Morfini, F.**, 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*. https://doi.org/10.3233/BPL-240003

[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] **Morfini, F.**, 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). https://doi.org/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. https://doi.org/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*,115(9), pp.2222–2227. https://doi.org/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. https://doi.org/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*, 7(9), p.e1230. https://doi.org/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. https://doi.org/10.1038/npp.2017.249

## Manuscripts

**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.

**Morfini, F.**, 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., **Morfini, F.**, 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.

Qu, Y.L., Chopra, S., Qu, S., Cocuzza, C.V., Labache, L., Bauer, C.C.C, **Morfini, F.**, Whitfield-Gabrieli, S., Slavich, G.M., Joormann, J., Holmes, A.J. (*in preparation*). Exposure to chronic and intractable stress interacts with brain functioning to predict anxiety and depression trajectories in adolescence.

## Selected conference presentations (first author)_____

[15] **Morfini, F.**, Auerbach, R.P., Kramer, A. F., Davidow, Y., Whitfield-Gabrieli, S. (2024). Neuro-correlates of depression and anxiety in adolescents. *Flux International Society for Developmental Cognitive Neuroscience*.

[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*.

[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] **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*.

[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*.

[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] **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*.

[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] **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*.

[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*.

[2] **Morfini, F.**, 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)

[25] Hennessy, R., **Morfini, F.**, Cohen, A. O., Casey, B. J., Galván, A., Shoham, D., Davidow, J. Y., (2024). Adolescent memory-driven value integration differs by valence. *Flux International Society for Developmental Cognitive Neuroscience.*

[24] Cline, T. L., Watrous, J. N. H., Nwakamma, M., Tinney, E. M., McDonald, K. M., **Morfini, F.**, 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., **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.*

[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.*

[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., **Morfini, F.**, 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., **Morfini, F.**, 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., **Morfini, F.**, 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., **Morfini, F.**, 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., **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*.

[12] Zhang, J., Bauer, C.C., **Morfini, F.**, 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., **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*.

[10] Bauer, C.C.C., Zhang, J., **Morfini, F.**, 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., **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*.

[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., **Morfini, F.**, 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., **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*.

[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*.

[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*.

[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., **Morfini, F.**, 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

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| 2024 (Dec) | **University of Rhode Island**, Dr. Logan Lab, Kingston, RI, USA<br>Scheduled |
| 2024 (Nov) | **Columbia University**, Dr. Auerbach Lab, New York, NY, USA<br>Scheduled |
| 2024 (Oct) | **Massachusetts General Hospital**, Dr. Choi Lab, Boston, MA, USA<br>Scheduled |
| 2022 (July) | **Columbia University**, Dr. Auerbach Lab, New York, NY, USA<br>*"Brain Functional Connectivity Predicts Anxiety and Depression in Children and Adolescents: A Machine-Learning Study of Independent Longitudinal Samples"* |
| 2021 (June) | **Northeastern University**, Research on AdoLescence (NURAL) group, Boston, MA, USA<br>*"Multimodal Prediction of Depressive Symptom Improvement in Adolescence"* |
| 2021 (Mar) | **Northeastern University**, Master's Convention, Boston, MA, USA<br>*"Understanding Depressive Symptoms Change in Adolescence"* |
| 2021 (Feb) | **Northeastern University**, Center for Cognitive and Brain Health, Boston, MA, USA<br>*"Understanding Depressive Symptoms Change Over Time in Adolescence"* |
| 2020 (May) | **Northeastern University**, Boston Psychology Graduate Symposium, Boston, MA, USA<br>*"Resting-State Connectivity Associated with Changes in Anxiety Symptoms in Adolescence"* |
| 2020 (Mar) | **Northeastern University**, Provost and Board of Directors (with advisor), Boston, MA, USA<br>*"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*"
(Canceled due to COVID)

2020 (Feb)      **Northeastern University**, Research on AdoLescence (NURAL) group, Boston, MA, 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

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

| Institution and Semester | Title | Course Level | Professor |
|---|---|---|---|
| Northeastern University | | | |
| 2024 (Spring) | Laboratory in Cognition | U | Eidson |
| 2023 (Spring) | Graduate Quantitative Methods II | G | DeSteno |
| 2022 (Fall) | Statistics in Psychological Research | U | Eidson |
| 2022 (Spring) | Statistics in Psychological Research | U | Halko |
| 2021 (Fall) | Statistics in Psychological Research | U | Halko |
| 2020 (Fall) | Statistics in Psychological Research | U | Halko |
| 2020 (Spring) | Laboratory in Cognition | U | Baker |
| Martinos / Massachusetts General Hospital / Harvard Program | | | |
| 2022 (Fall) | fMRI Connectivity Analysis with CONN | I | Nieto-Castañón |
| 2021 (Fall) | fMRI Connectivity Analysis with CONN | I | Nieto-Castañón |
| 2021 (Spring) | fMRI Connectivity Analysis with CONN | I | Nieto-Castañón |

## Invited lectures

2024, 2022     **Harvard -MIT**, Health Sciences and Technology Program, Boston, MA, USA
Functional Magnetic Resonance Imaging: Data Acquisition and Analysis
Directors: Anastasia Yendiki, Jonathan Polimeni

2023 (July)     **Organization for Human Brain Mapping**, 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"*

2021 (Aug)     **Northeastern University**, Boston, MA, USA
MRI Users Group workshop series
*"Optimization of BIDS-App on High Performance Computing Clusters"*

## Mentoring experience

| Semester | Name | Institution | Subsequent Position |
|---|---|---|---|
| 2021 - 2022 | Tanushka Dewan | Northeastern University | Continued Undergraduate Studies |

| 2021 | Chelsea Ajunwa | MIT | PhD in Psychology, Northeastern University |
|------|----------------|------|---------------------------------------------|
| 2021 | Arjun Valay | Northeastern University | Continued Undergraduate Studies |
| 2021 - 2022 | Emma Tusuzian | Northeastern University | Co-op Student, Northeastern University |
| 2020 | 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   **Fundraiser, Center for Research and Innovation in Neurological Disorders, Italy**

## Selected skills

| | |
|---|---|
| **Programming languages** | Python, MATLAB, R, Unix bash, HTML |
| **Magnetic resonance imaging (MRI)** | **Softwares**: FSL, CONN, SPM, BIDS-App, fMRIprep, MRIQC, Murfi for real-time fMRI neurofeedback, BrainNetViewer; **Python packages**: 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**: Fluent
**Spanish**: Fluent
**Italian**: Native speaker

## References

**Susan Whitfield-Gabrieli, Ph.D.**
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