



# FND Unit & Research Group Newsletter

Fall/Winter 2022 ~ Volume 1

## FUNCTIONAL NEUROLOGICAL DISORDER (FND): OUR COMMON PURPOSE

FND has come a long way from its early conceptualizations. In the last 25 years, major developments in the field have re-shaped our understanding of this condition and have set a path for a forward-thinking clinical, research, and education agenda for the future.

However, we are keenly aware there is still a lot to do. Specifically, we know that we need to continue to work at the intersection of Neurology, Psychiatry, and Rehabilitation specialties to advance a truly integrated and patient-centered brain-mind-body approach.

Thankfully, 2022 was a productive year for our team. In this inaugural FND Unit & Research Group newsletter, we are pleased to share with you all a range of programmatic and research activities that are setting the stage for our future activities.

Our FND Unit has grown over the past year - including welcoming to our team Sara Finkelstein, MD, MSc (neurologist), Kevin Kyle, MB, BCH, BAO (neurologist), Daniel Millstein, PhD (psychologist), and Caitlin Adams, MD (psychiatrist). Also, we use this opportunity to introduce the latest member of our FND Research Group - Andrew J. Guthrie, BS (clinical research coordinator) - a 2021 graduate of UMass Amherst.

We are also glad to report that FND continues to be a field of interest for people in-training, including having the privilege to work with four excellent fellows: Nathan Praschan, MD, Linda Herrera Santos, MD, Dhara Shah, MD, and Mila Grossman, MD.

That is why, in this first FND Unit and Research Group (FND-U&RG) newsletter, we want to share with you all what we have done and what we are working on towards our three part mission of advancing clinical care, research, and education.

First, we will introduce to you our FND Unit clinical faculty, what we do in the FND Research Group, and what we have done together across of our clinical and research teams. Furthermore, we will share with you a relaxation exercise and some of our next plans.

A special thank you to our patients, whom we have an opportunity to learn from and care for on a daily basis.

David L. Perez, MD, MMSc  
Founder and Director  
FND Unit and Research Group

### Topics Covered:

1. [The FND Unit \(FND-U\)](#)
2. [The FND Research Group \(FND-RG\)](#)
3. [FND-U&RG Academic Highlights](#)
4. [Activity & Alumni Corner](#)
5. [Future Events](#)



# 1. THE FND UNIT Newsletter

## WHO WE ARE



We are a multidisciplinary and interdisciplinary clinical team dedicated to helping patients with Functional Neurological Disorder. Our members include Neurologists, Psychiatrists, Psychologists, Social Workers, Physical Therapists (PT), Occupational Therapists (OT), Speech and Language Pathologists (SLP), Nurses, and Organizational Staff.

Our team also works closely with other experts in movement disorders, epilepsy, and neuropsychology.

[Click here to read more about us.](#)



Caitlin Adams - Psychiatry



Sara Finkelstein - Neuro



Jennifer Freeburn - SLP



Ellen Godena - Social Work



Kevin Kyle - Neuro



Julie MacLean - OT



Julie Maggio - PT



Daniel Millstein - Psychology



David Perez - Neuro



Bruce Price - Neuro



Jessica Ranford - OT



Margaret Tuttle - Psychiatry



Christopher Stephen - Neuro



Aneeta Saxena - Neuro



Mila Grossman - CL Psych



Linda Herrera Santos - CL Psych



Nathan Praschan - BNNP



Dhara Shah - CL Psych

In-training





## 2. THE FND RESEARCH GROUP

# Newsletter

## WHO WE ARE



### DAVID L. PEREZ

With Neurology, Psychiatry, and Neuroscience expertise, Dr. Perez founded the FND Research Group in 2014 to study the underlying neurobiology of FND - with a keen interest in identifying clinically relevant biomarkers. As the Principal Investigator, he is a big proponent of applying an integrated (neuropsychiatric) approach to FND research.



## OUR RESEARCH STEMS FROM CLINICAL INSIGHTS

To keep our research relevant to important clinical issues, part of our FND Unit team has dedicated research time. We are delighted to have the following people in the lab:

- Sara Finkelstein, MD, MSc
- Ellen Godena, EdM, MSW, LICSW
- Julie MacLean, OTR/L
- Julie Maggio, PT, DPT, NCS
- Daniel Millstein, PhD
- Jessica Ranford, MS, OTR/L



### SARA PAREDES ECHEVERRI

Dr. Sara Paredes-Echeverri has been a post-doctoral research fellow in the lab since prior to the pandemic. She is a smart, highly collaborative individual who has been the bedrock of our research team amidst challenging times. Sara has co-authored authoritative systematic reviews, meta-analyses, conceptual papers, and original research studies. She also works side-by-side with many other team members.

### ANDREW J. GUTHRIE

A scientifically curious and motivated person, Andrew J. Guthrie, BS, is a clinical research coordinator in our lab. He is the one reaching out to our study participants, coordinating their visits, running the MRI scans, analyzing data, and co-authoring articles. In other words, Andrew runs the show!



Johannes Jungilligens, PhD, is a collaborator from Germany that did a 6-month post-doctoral fellowship with us.

Wir haben es  
genossen, Sie im  
Labor zu haben!



Science is a team sport! That is why we are grateful to the visionary leadership of our MGH Neurology and Psychiatry chairs - Prof. Merit Cudkowicz and Prof. Maurizio Fava. We are also grateful to Mass General Hospital collaborators (listed below), and colleagues nationally and internationally with whom we collaborate with on a regular basis:

- Brad Dickerson Lab
- Jorge Sepulcre Lab
- Interdisciplinary Affective Science Lab



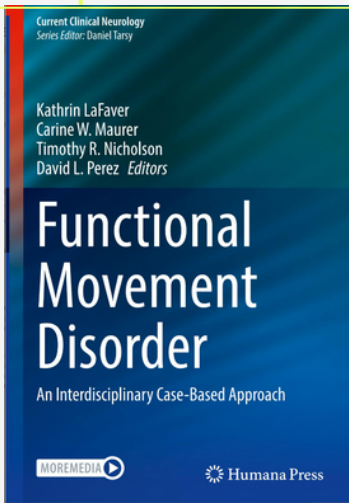
### IBAI DIEZ

Ibai Diez, PhD, is a highly accomplished computational neuroscientist and biomedical engineer who has applied graph-theory and other novel image processing approaches to research in FND. After our participants get scanned, Ibai uses state-of-the-art statistical methods to analyze the brain images so we can draw conclusions from them.

# Newsletter

# ACADEMIC HIGHLIGHTS

This year has been a wonderful success and we want to share a few of those achievements with you. While we are far from the largest research group at our institution, our productivity stems from the passion we all share for the richness and complexity of the questions that we seek to answer. We are also proud that we have a well established track record of finishing the projects that we begin. Here are some of the notable accomplishments of the past year.



Written for practicing healthcare professionals, this 32-chapter case-based textbook comprehensively covers the full spectrum of functional movement disorder (including functional limb weakness and functional speech presentations). A major aim is to disseminate updated clinical practices for patients with functional motor symptoms.

The book includes work from David L. Perez, MD, MMSc, Bruce Price, MD, Caitlin Adams, MD, Julie Maggio, PT, DPT, NCS, and Jennifer Freeburn, MS, CCC-SLP.

[Click here to read.](#)

David L. Perez, MD, MMSc and Aneeta Saxena, MD, are guest editors on the topic "Neuropsychiatry" for the journal *Seminars in Neurology*. An important goal with this issue was to bring a biopsychosocial-informed (neuropsychiatric) perspective to the treatment of patients cared for in neurology. Sara Finkelstein, MD, Caitlin Adams MD, Margaret Tuttle MD, and Sara Paredes-Echeverri MD all contributed as co-authors - in addition to a number of internationally authored articles.



[Click here to read.](#)

## HAVE YOU MET ANDREW?



Research Coordinator  
Andrew J. Guthrie, BS

Andrew leads our recruitment and enrollment efforts - including helping to ensure a great rate of follow-up MRI scan data.

He is kind and easy to talk to, patiently walking people interested in research through screening, informed consent, and other research activities.

Let your MGH FND Unit clinical provider know if you would like to learn more about available research opportunities. Your MGH provider and Andrew can help determine if you are eligible.







# Newsletter

## EVEN MORE

## HIGHLIGHTS



Proto magazine, a Massachusetts General Hospital publication, highlighted our FND Unit in this feature article.

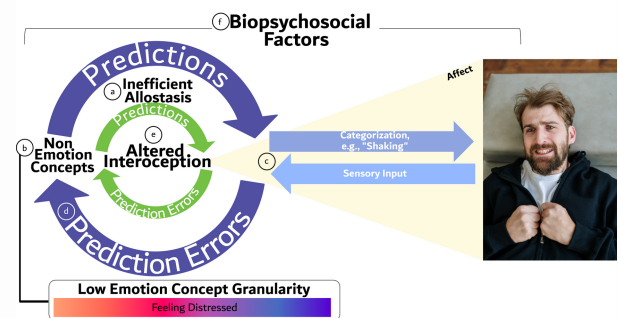
Here, FND is explained through the perspectives offered by two people living with functional neurological symptoms. In one of the patient narratives, the initial uncertainty of how to understand FND is highlighted, including how this condition sits at the borderland between Neurology and Psychiatry. An updated modern day clinical neuroscience approach is emphasized, with a goal of improving awareness, decreasing stigma, and providing patient-centered care.

[Click here to read.](#)

proto MASSACHUSETTS GENERAL HOSPITAL



## A new science of emotion: implications for functional neurological disorder



The role of emotion in FND has long been debated. However, what are emotions in the first place? Led by two post-doctoral fellows, Johannes Jungilligens, PhD and Sara-Paredes-Echeverri, MD, we detailed how a new science of emotion - one that embraces the predictive and constructive abilities of the human brain - can be a useful framework to understand the development and maintenance of FND in some people. This paper benefited from the collective insights of Dr. Lisa Feldman Barrett, PhD, Stoyan Popkirov, MD, and David L. Perez MD, MMSc.

[Click here to learn more about Lisa Feldman Barrett's Theory of Constructed Emotion.](#)

[Click here to read.](#)

## Lessons Learned in Outpatient Physical Therapy for Motor Functional Neurological Disorder

Julie Maggio, PT, DPT, NCS, Kevin Kyle MB BCH, Christopher D. Stephen MB ChB, MS, David L. Perez MD, MMSc

Email: [jmaggio@mgh.harvard.edu](mailto:jmaggio@mgh.harvard.edu)  
Twitter: [@JMaggio\\_neuroPT](https://twitter.com/JMaggio_neuroPT)



Julie Maggio, PT, DPT, NCS, Kevin Kyle, MB, BCH, BAO, Christopher Stephen, MD, and David L. Perez, MD, MMSc, outlined some of the challenges and opportunities physical therapists experience when treating patients with FND. They also discussed how understanding the biological substrate and context of those challenges can expand the therapist's toolkit to optimize recovery.

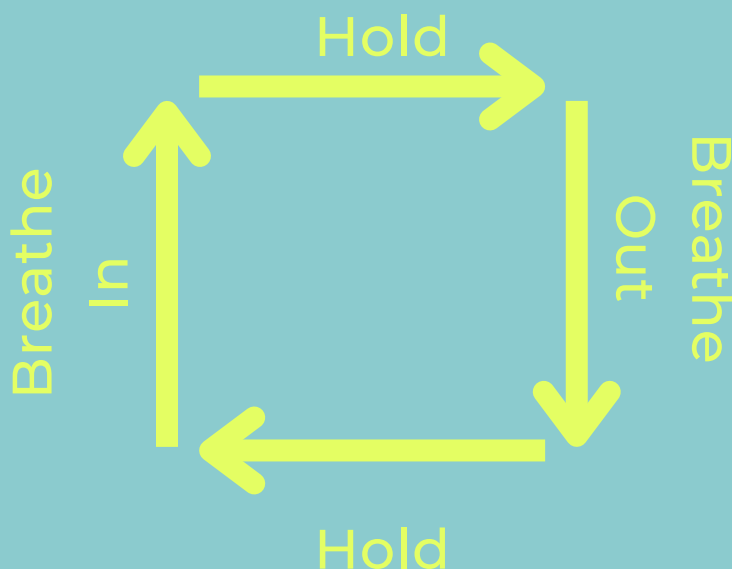
With a published article and a video abstract, Julie Maggio, PT, DPT, NCS pulls from her experience to guide physical therapists to not only know what to do next, but understand *why* they should do it.

[Click here to read.](#) [Click here to watch the video.](#)





### Box Breathing with **Sara Finkelstein MD MSc & Ellen Godena EdM MSW LICSW**



#### HOW TO DO BOX BREATHING

1. Breathe in through your nose for 4 seconds.
2. Hold your breath for about 4 seconds.
3. Breathe out through your mouth for 4 seconds.
4. Hold your breath again for about 4 seconds.
5. Repeat this cycle for 3 - 5 rounds.

#### WHEN TO DO IT?

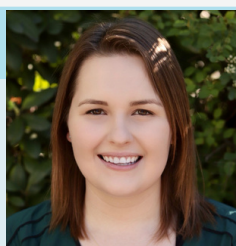
Box breathing can be done anywhere and at any time. It's good to practice the technique when you are feeling well and, for some, it can also be helpful to practice when you are feeling symptomatic from your FND or otherwise overloaded.

#### DID YOU KNOW?

Navy SEALs practice Box Breathing as part of their rigorous training program!

#### WHAT ARE THE BENEFITS OF BOX BREATHING?

1. Box breathing is an easy-to-remember technique that takes just one minute or less.
2. Box breathing can help lower your heart rate, blood pressure, and body temperature.
3. Box breathing prompts your body's relaxation response by increasing parasympathetic activity.
4. Box breathing helps to promote focus and concentration in the moment.



**ANNA  
LARSON**

Anna Larson, BS, MS is a third year Clinical Psychology PhD graduate student at Suffolk University. She recently completed her master's project titled, *"The Weight of Stigma: Stereotypes, Mental Healthcare Utilization, and Identity Disclosure Among Gender and Sexual Minoritized Individuals"*. As part of her clinical training, she is a student clinician at the New England Center for OCD and Anxiety and looks forward to working with folks with functional neurological symptoms.

### ALUMNI CORNER



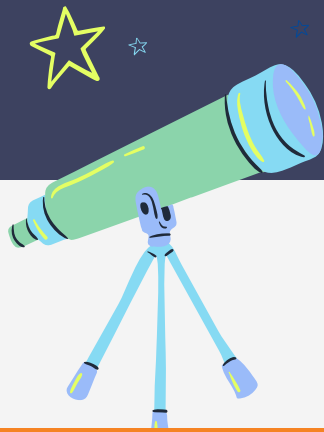
**PRIYANKA  
ALLURI**

Priyanka Alluri, BA, is a third year Doctoral student and Psychology Extern at the Queens College Clinical Psychology PhD Program. She has a particular interest in clinical neuropsychology. In terms of current research, her Master's thesis explores early cognitive development and its influence by multilingual environment and socioeconomic background.



## 5. FUTURE EVENTS

# Newsletter



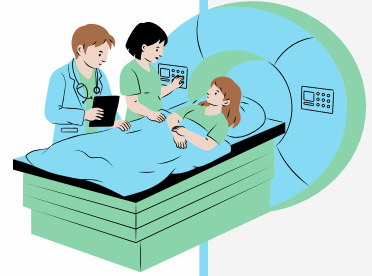
## Look out for Future Events

### Neurologic Clinics

Sara Finkelstein, MD, MSc, and David L. Perez, MD, MMSc, will be editors of the FND issue in *Neurologic Clinics* - including a Q & A type article on an FND educational curriculum. There will also be contributions from Jessica Ranford, MS, OTR/L, Julie MacLean, OTR/L, Jennifer Freeburn, MS, CCC-SLP, Ellen Godena LICSW, Dan Millstein PhD, and others!



In 2023, we will continue to recruit individuals with FND from our MGH FND Unit who are eligible and interested in participating in brain imaging research. Let your MGH FND Unit provider know if you are interested in learning more!



### Massachusetts Eye and Ear

In 2023, we look forward to working with Glenn Bunting, MS, CCC-SLP, and Cody Sullivan, MS, CCC-SLP, from Mass Eye and Ear to optimize referral pathways for patients with functional voice symptoms. We are also in the early stages of working on a functional vision treatment pathway.

## HOW TO SUPPORT US

In collaboration with the Mass General Development Office, we are working to put together a webinar open to all of our FND Unit patients, their friends, and family. Our guest speakers will include several members of our FND Unit, as well as an opportunity to highlight the patient perspective.

**Date: March 28, 2023**

**Time: 12:00 - 1:00 PM**

**Location: Zoom**

**RSVP by Clicking Here**

In the webinar, we hope to showcase what our team is doing behind the scenes to continue growing and innovating. If interested, you can support our work by sending a gift/donation to the FND-U&RG. Your gift will go directly to clinical and research development in FND.

[Click here to send a donation/gift.](#)

