

# Sofía Fernández Lozano

PSYCHOLOGY B.A. · NEUROBIOLOGY M.S. (EXPECTED JAN. 2020)

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*"Brain: an apparatus with which we think we think." –Ambrose Bierce, 1911*

## Education

### Universidad Nacional Autónoma de México (UNAM) & Instituto de Neurobiología (INB)

MASTER OF SCIENCE IN NEUROBIOLOGY

- Thesis: Brain Connectivity in Cocaine-addicted Patients after Repetitive Transcranial Magnetic Stimulation Treatment.
- Supervisor: Eduardo Garza-Villarreal PhD

Ciudad de México, México

Expected Jan 2020

### Universidad Autónoma de Baja California (UABC)

BACHELOR OF ARTS WITH HIGHEST HONORS IN PSYCHOLOGY

- Scholar Merit (equivalent to Summa Cum Laude)

Tijuana, BC, México

Dec 2015

## Experience

### RESEARCH

#### Laboratorio Nacional de Imagen por Resonancia Magnética (LANIREM)

MASTER STUDENT RESEARCHER

- Moved over to the new location of the lab and continued the work of the research done in the INPRFM.
- I implemented a Machine Learning Algorithm to classify cocaine-dependence using global metrics of topology (Graph Theory Analysis).
- I am currently analyzing the data of the clinical trail and collaborating on the writing the article.

Querétaro, Qro, México

Jul. 2019 - PRESENT

#### Laboratory of Neuroimaging, National Institute of Alcohol Abuse and Alcoholism (NIAAA)

RESEARCH VISITOR

- I learned about the technique Functional Connectivity Density Mapping (FCDM) developed by Dr. Tomasi and implemented it on my own data.
- I presented my work on the intramural seminar of the NIAAA and NIDA at the NIH.

Bethesda, MD, USA

Mar. - May. 2019

#### Instituto Nacional de Psiquiatría "Ramón de la Fuente Muñiz" (INPRFM)

MASTER STUDENT RESEARCHER

- I collaborated in the *ongoing clinical trial* under the supervision of Eduardo Garza, PhD.
- I administered the TMS sessions to some of the patients in the study. I cleaned the clinical databases and statistically analyzed the clinical data using R. I acquired, organized in BIDS format, preprocessed and analyzed the MRI data using network science techniques.

Ciudad de México, México

Aug. 2017 - June. 2019

#### Yaaj México, A.C.

RESEARCH COORDINATOR

- I coordinated a project in collaboration with United Nations Office on Drugs and Crime (UNODC) to write a guide for professionals of Mental Health against Sexual Orientation and Gender Identity Change Efforts: *"Nada que curar"*.
- I was in charge with science divulgation related to sexual health, gender identity and sexual orientation in youth populations.

Ciudad de México, México

Mar. 2017 - Jul. 2019

#### Colegio de la Frontera Norte (COLEF)

RESEARCH INTERNSHIP

- I was an intern on the research project: Mexican parents' attitudes toward gender equality in family roles and leadership.
- I administered the questionnaires to the parents in three different middle schools and captured the data for its analysis.

Tijuana, BC, México

Feb. - Sep. 2015

### CLINICAL

#### Interpsique

PSYCHOMETRIST

- I administered, scored, and evaluated psychological tests under the supervision of a licensed psychology doctorate.

Tijuana, BC, México

Jan. 2016 - Mar. 2017

#### Hospital de Salud Mental de Tijuana (HSMT)

PSYCHOLOGY INTERN

- 240 supervised clinical hours in the Inpatient Psychiatric Care Unit: Occupational and group therapy, and clinical evaluations.

Tijuana, BC, México

Dec. 2014 - Mar. 2015

## Publications

### CHAPTER AND POSTERS

- FERNÁNDEZ-LOZANO, S. (2019). *Derechos sexuales y reproductivos; reflexiones para terapeutas* (Sexual and reproductive rights; reflections for therapists). In Gómez-Lamont, M.F. & Silva-Aragón, A. (Eds.), *Terapia familiar sistémica y la comunidad* (Systemic family therapy and LGBT community). Ciudad de México, México: Pax & Leed

- Morelos-Santana, E., Garza-Villarreal, E., Alcalá-Lozano, R., Torres-Marcial, A., Villicaña-Muñoz, V., FERNÁNDEZ-LOZANO, S., DÁVALOS-GUZMÁN, A., MARTÍNEZ-GARCÍA, B., GONZÁLEZ-CANTÚ, H., REYES-ZAMORANO, E., GONZÁLEZ-OLVERA, J. (2019, Feb). *Effects of rTMS at 5 Hz over IDLPFC on inhibitory control and craving in cocaine dependent patients*. Poster session presented at the **BRAIN STIMULATION**, Vancouver, Canada.
- FERNÁNDEZ-LOZANO, S., ALCALÁ-LOZANO, R., MORELOS-SANTANA, E.D., VILICAÑA-MUÑOZ, V., GONZÁLEZ-CANTÚ, H., GONZÁLEZ-OLVERA, J.J., GARZA-VILLARREAL, E.A. (2018, Oct). *Análisis de teoría de grafos en redes funcionales después de un tratamiento doble ciego de EMTr en pacientes adictos a cocaína (Graph theory analysis on functional networks after double-blinded rTMS on cocaine-addicts)*. Poster session presented at the **ANNUAL MEETING OF RESEARCHERS OF THE INSTITUTO NACIONAL DE PSIQUIATRÍA "RAMÓN DE LA FUENTE MUÑOZ"**, Ciudad de México, México.
- FERNÁNDEZ-LOZANO, S., ALCALÁ-LOZANO, R., MORELOS-SANTANA, E.D., VILICAÑA-MUÑOZ, V., GONZÁLEZ-CANTÚ, H., GONZÁLEZ-OLVERA, J.J., GARZA-VILLARREAL, E.A. (2018, Oct). *Effects of rTMS on the small-worldness of crack-cocaine addicts' functional connectivity networks*. Poster session presented at the **XX REUNION OF NEUROIMAGE AT THE RESEARCH CENTER IN MATH (CIMAT)**, Guanajuato, México.

## CONFERENCES AND OTHER PROCEEDINGS

Oct 2019 (CONFERENCE)	Classification of cocaine dependence using topology of functional connectivity networks NEUROIMAGE REUNION XXI; CIMAT (Center of research in mathematics)	Guanajuato, México
Aug 2019 (HACKATON)	MRIQception NEUROHACKADEMY 2019; University of Washington	Seattle, WA, USA
May 2019 (HACKATON)	FANI-Pack (Find All New ICDs Package) WOMEN-LED BioDATA SCIENCE HACKATON AT NIH; National Center for Biotechnology Information	Bethesda, MA, USA
May 2019 (CONFERENCE)	Functional connectivity network changes after rTMS treatment in cocaine addiction NIAAA & NIDA INTRAMURAL SEMINAR; National Institutes of Health	Bethesda, MA, USA
Nov 2018 (CONFERENCE)	[Brain connectome: studying the most complex network system] BRAIN WEEK; National High school #9 "Pedro de Alba"	Ciudad de México, México
Oct 2018 (CONFERENCE)	[Conversion therapy: psychology and human rights' perspective] 2ND ENCOUNTER ABOUT SEXUALITIES AND GENDER; UNAM (National Autonomous University of Mexico)	Ciudad de México, México
Jun 2018 (CONVERSATORIOUM)	[The right to an identity of transgender children and adolescents] Supreme Justice Tribunal of Mexico city	Ciudad de México, México
Jun 2018 (TV INTERVIEW)	[Talking intersex] Ciudad Abierta channel	Ciudad de México, México

## Honours & Grants

### FELLOWSHIPS & GRANTS

2019 - SCHOLARSHIP Ciudad de México, México	CONACYT - international (≈\$2,000)
2019 - GRANT Ciudad de México, México	UNAM research visit grant (≈\$1,300)
2017 - FELLOWSHIP Ciudad de México, México	CONACYT grad fellowship (≈\$13,200)
2016 - HONOREE Guadalajara, Jal., México	EGEL-CENEVAL Excellence Award
2011 - SCHOLARSHIP Tijuana, BC, México	Scholarship for outstanding ENLACE scores

### HONOURS & AWARDS

2016 - UNDERGRAD REP. Tijuana, BC, México	Ceremony for Honor Students
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## Courses and workshops

<b>Neurohackademy 2019</b> UNIVERSITY OF WASHINGTON Neuroimaging and Data Science summer school and hackaton.	Seattle, WA, USA Jul. - Aug. 2019
<b>Bayesian Modeling of Brain Imaging Data</b> MICHELE GUINDANI, PHD; MEXICAN ASSOCIATION OF STATISTICS Two-day intro course about Bayesian methods in fMRI analysis	Ciudad de México, México Sep. 2017
<b>Basic Course of Applied Neuroscience</b> AUTONOMOUS UNIVERSITY OF BAJA CALIFORNIA Two-week course of diverse neuroscience conferences and classes for psychology students and recent graduates	Mexicali, BC, México Aug. 2016
<b>International Course of Neuropsychological Evaluation</b> JUAN-CARLOS ARANGO, PHD; SINAPSIS Bases of application and evaluation of neuropsychological tests in cultures and languages other than those in North America and Western Europe	Mexicali, BC, México Oct. 2015
<b>Semester Abroad</b> UNIVERSIDAD DE SALAMANCA Classes of clinical evaluation, education psychology and school counseling	Salamanca, Spain Feb. - Jul. 2014

## Skills & Certifications

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### Operating Systems

- Mac OS
- GNU/LINUX (Debian-based, Arch-based & Void)

### Programming Languages

- R
- Shell (POSIX shell, bash & zsh)
- Python
- Javascript

### Markup Languages

- $\text{\LaTeX}$
- Markdown
- JSON
- HTML

### General Tools

- Git
- Docker
- Vim
- SGE

### Neuroimaging Tools

- FSL
- AFNI
- ANTs
- BIDS
- MRIQC
- FMRIprep
- Mango

### Certifications

- DATA CAMP: - Analyst with R
- Programmer with R

### Languages

- Spanish (Native)
- English (Fluent)