

Sofía Fernández Lozano

PSYCHOLOGY B.A. · NEUROBIOLOGY M.S.

☎ +1 (438) 506-2094 | ✉ sofia.fernandezlozano@mail.mcgill.ca | 📧 soffiafdz | 🌐 so1.618e

Education

Montreal Neurological Institute & McGill University

PHD IN NEUROSCIENCES

- Project: MRI biomarkers in Alzheimer's disease.
- Supervisor: Louis D. Collins, PhD

Montreal, QC, Canada
IN PROGRESS

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

MASTER OF SCIENCE IN NEUROBIOLOGY; GRADUATED WITH HONORS

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

Ciudad de México, México
Jan 2020

Universidad Autónoma de Baja California (UABC)

BACHELOR OF ARTS WITH HIGHEST HONORS IN PSYCHOLOGY

- Scholar Merit (First in class)

Tijuana, BC, México
Dec 2015

Experience

RESEARCH

Neuroimaging & Surgical Technologies (NIST) Lab

PHD STUDENT RESEARCHER

- Working on developing and improving MRI tools that can improve clinical progression to Alzheimer's disease.
- Developed a Quality Control application that heavily improved the efficiency of our QC processes.

Montreal, QC, Canada
Aug. 2020 - PRESENT

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).

Querétaro, Qro, México
Jul. 2019 - Jan. 2020

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 LGBT+ (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

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

Honours & Grants

FELLOWSHIPS & GRANTS

2019 - SCHOLARSHIP <i>Ciudad de México, México</i>	CONACYT - international (≈\$2,000)
2019 - GRANT <i>Ciudad de México, México</i>	UNAM research visit grant (≈\$1,300)
2017 - FELLOWSHIP <i>Ciudad de México, México</i>	CONACYT grad fellowship (≈\$13,200)

HONOURS & AWARDS

2016 - UNDERGRAD REP. <i>Tijuana, BC, México</i>	Ceremony for Honor Students
2016 - HONOREE <i>Guadalajara, Jal., México</i>	ECEL-CENEVAL Excellence Award

Courses and workshops

Neurohackademy 2019 UNIVERSITY OF WASHINGTON Neuroimaging and Data Science summer school and hackaton.	<i>Seattle, WA, USA</i> <i>Jul. - Aug. 2019</i>
Bayesian Modeling of Brain Imaging Data MICHELE GUINDANI, PHD; MEXICAN ASSOCIATION OF STATISTICS Two-day intro course about Bayesian methods in fMRI analysis	<i>Ciudad de México, México</i> <i>Sep. 2017</i>
International Course of Neuropsychological Evaluation 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	<i>Mexicali, BC, México</i> <i>Oct. 2015</i>
Semester Abroad UNIVERSIDAD DE SALAMANCA Classes of clinical evaluation, education psychology and school counseling	<i>Salamanca, Spain</i> <i>Feb. - Jul. 2014</i>

Skills & Certifications

Operating Systems

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

Programming Languages

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

Markup Languages

- \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)