

Carolina Moncion

Department of Biomedical Engineering, Florida International University
cmonc007@fiu.edu • (305) 469-0374 • www.linkedin.com/in/cmoncion

Research Interests

- Biomedical Telemetry
- Implantable Neural Sensors
- Computational Neuroscience
- Neuroimaging

Key Qualities

- Languages: Fluent in English & Spanish
 - Technical Skills
 - o Proficient: MATLAB, SolidWorks
 - o Experienced: HFSS, Minitab, IBM SPSS
-

Education

Florida International University

Doctor of Philosophy in Biomedical Engineering, GPA 3.83/4.00

Miami, Florida

August 2016 - Present

Graduate Research Assistant at Neuronal Mass Dynamics (NMD) Laboratory & RF, Communications & Terahertz (RFCOM) Laboratory

Florida International University

Bachelor of Science in Biomedical Engineering, Cum Laude
Minor in Chemistry

Miami, Florida

August 2012 – May 2016

Publications

Moshkforoush, Arash, Balachandar, Lakshmini, **Moncion, Carolina**, Santana, Josue, & Riera, Jorge J. (2019). **Unraveling ChR2-driven stochastic Ca²⁺ dynamics in astrocytes—A call for new interventional paradigms.** *BioRxiv*, 549469.

Moncion, Carolina, Balachandar, Lakshmini, Bojja-Venkatakrishnan, Satheesh, Riera, Jorge J., & Volakis, John L. (2019). **Fully-Passive Wireless Implant for Neuropotential Acquisition: An In Vivo Validation.** *IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology*.

Selected Conference Proceedings & Presentations

Carolina Moncion, Jordana Borges, Diana Borrego, Lakshmini Balachandar, Satheesh Bojja-Venkatakrishnan, John L. Volakis & Jorge J. Riera (October 2019). **Recording Neural Activity with a Battery-Free Wireless Neurosensor.** *2019 Society for Neuroscience Meeting* (Dynamic Poster – To appear)

Carolina Moncion, Satheesh Bojja-Venkatakrishnan, Jorge J. Riera & John L. Volakis (July 2019). **Recording Critical Epilepsy Indicators using a Fully-Passive Wireless System.** In *2019 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting* (Oral Presentation)

Carolina Moncion, Satheesh Bojja-Venkatakrishnan, Jorge J. Riera & John L. Volakis (July 2019). **Towards Optimization of a Fully-Passive Neurosensor for Recording a Free-Moving Animal: Characterization of Rat Skin Dielectric Properties.** In *2019 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting* (Oral Presentation)

Carolina Moncion, Jordana Borges, Lakshmini Balachandar, Satheesh Bojja-Venkatakrishnan, John L. Volakis & Jorge J. Riera (April 2019). **Fully-Passive Wireless Recording of Neural Activation in Wistar Rats.** *2019 University of Miami Neural Symposium.* (Poster Presentation)

Carolina Moncion, Jordana Borges, Lakshmini Balachandar, Satheesh Bojja-Venkatakrishnan Jorge J. Riera & John L. Volakis (March 2019). **In Vivo Evaluation of a Fully-Passive Wireless Neurosensing System.** In *2019 International Wireless Antenna Technology (iWAT) Meeting* (Poster Presentation, Best Poster Competition Finalist)

Carolina Moncion, Jordana Borges, Lakshmini Balachandar, Satheesh Bojja-Venkatakrishnan, John L. Volakis & Jorge J. Riera (February 2019). **In Vivo Evaluation of a Fully-Passive Wireless Neurosensing System.** *2019 Biomedical Engineering Graduate Research Day.* (Poster Presentation, 1st Place Poster Presentation Winner)

Carolina Moncion, Lakshmini Balachandar, Satheesh Bojja-Venkatakrishnan, Jorge J. Riera & John L. Volakis (January 2019). **In Vivo Recording of Epileptiform Neural Activation using a Novel Fully-Passive Implantable System.** In *2019 National Radio Science Meeting* (Oral Presentation)

Carolina Moncion, Satheesh Bojja-Venkatakrishnan, John L. Volakis, & Jorge J. Diaz (October 2018). **Fully – Passive Wireless Recording of Neural Activation in Wistar Rats.** In *2018 Biomedical Engineering Society (BMES) Meeting* (Poster Presentation)

Carolina Moncion, Satheesh Bojja-Venkatakrishnan, Jorge J. Riera & John L. Volakis (July 2018). **Improved Probes for Fully-Passive Wireless Recording of Neural Activation.** In *2018 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting* (pp. 1129-1130). IEEE. (Oral Presentation, Student Paper Competition – Honorable Mention)

Carolina Moncion, Satheesh Bojja-Venkatakrishnan, Jorge J. Riera & John L. Volakis (June 2018). **Low-Impedance Probes for Wireless Monitoring of Neural Activation.** In *2018 IEEE International Microwave Biomedical Conference (IMBioC)* (pp. 76-78). IEEE. (Oral Presentation)

Carolina Moncion, Satheesh Bojja-Venkatakrishnan, Jorge J. Riera & John L. Volakis (February 2018). **Improved Probes for Fully-Passive Wireless Recording of Neural Activation in Wistar Rats.** *2018 Biomedical Engineering Graduate Research Day.* (Poster Presentation)

Awards & Honors

- 2019 Biomedical Engineering Graduate Research Day 1st Place Poster Presentation
- 2018 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting Student Paper Competition Honorable Mention
- FIU Academic Excellence Scholarship and Florida Medallion Scholars Award

Memberships & Affiliations

- Society for Neuroscience
- IEEE Student Member
- Biomedical Engineering Society
- Alpha Eta Mu Beta Biomedical Engineering Honor Society

Community Involvement

FIU Engineering Expo 2018 & 2019

Miami, Florida

Volunteer Presenter

February 2018 & 2019

- Developed interactive presentation to showcase how RF Engineering can be applied in the medical field and interest middle and high school students in STEM

Nicklaus Children’s Hospital

Miami, Florida

Clinical Engineering Department Volunteer

March – September 2017

- Assisted engineers with medical equipment by updating preventative maintenance protocols

FIU Engineering Expo 2017

Miami, Florida

Volunteer Tour Guide

February 2017

- Escorted 40 middle school students through a series of engaging activities while adhering to safety protocols and time restraints