

954 – 439 - 2952	Davie, FL	Coter027@fiu.edu
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Carlos Otero

BIOMEDICAL ENGINEER
PHD STUDENT

Objective	To leverage my expertise as a Ph.D. biomedical engineer to drive innovation and lead in the development of cutting-edge medical devices and therapies with a focus on bio-signal processing and neuroscience.
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Education	2021-Current	<p>Florida International University PhD Biomedical Engineering</p> <p>Advisor: Dr. Jorge Riera Lab: Neuronal Mass Dynamics Laboratory GPA: 3.8</p>
	2021	<p>Florida International University BS Biomedical Engineering</p> <p>Graduated Cum Laude GPA: 3.6</p>

Honors and awards	2023 - Current	<p>TENS Program Fellow – NIH T32</p> <p>The mission of the TENS program is to provide talented and motivated predoctoral and postdoctoral trainees with rigorous didactic and laboratory training in contemporary environmental health and neuroscience. Funded through NIEH grant T32 ESO33955.</p>
	2021-2023	<p>FIU UtGP Fellow</p> <p>The FIU Undergraduate to Graduate Program (UtGP) will facilitate the recruitment of outstanding FIU undergraduate students who are committed to a specific FIU PhD program by providing support for a research experience with an FIU faculty member during the student's junior or senior year.</p>
	2022	<p>HSF Scholar</p> <p>Founded in 1975, the Hispanic Scholarship Fund (HSF) empowers students and parents with the knowledge and resources to successfully complete a higher education, while providing support services and scholarships to as many exceptional students, Scholars, and Alumni as possible.</p>
	2021	<p>Norman Weldon Scholarship</p> <p>The FIU Biomedical Engineering Department has established an award for undergraduate students to participate in faculty research during the summer. The awards are intended</p>

		to support students with an interest in pursuing a career in research with plans to attend graduate studies in biomedical engineering.
	2021	CURE The Coulter Undergraduate Research Excellence Program (CURE) was developed to pair undergraduate students with a faculty mentor to cultivate and strive for research success.

Research experience	2023 - Current	Neuronal Mass Dynamics Laboratory Advisor: Dr. Jorge Riera <ul style="list-style-type: none"> • Electrophysiology Data Processing • Hippocampus MRI Segmentation • Computational Neuronal Activity Modeling
	2018-2023	Visual Cortical Circuits Laboratory Advisor: Dr. James Schummers <ul style="list-style-type: none"> • Two-Photon Microscopy • Regulated Animal In-Vivo Experimentation

Publications	
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Presentations and invited lectures	2023	Society For Neuroscience 2023 Title: "Detection of Hippocampal Sharp Wave Ripples across three different primate species: the rhesus Macaque, the common Marmoset, and Humans" Authors: C. Otero, D. Buitrago Piza, B. Corrigan, N. Mortazavi, M. Khaki, J. C. Martinez-Trujillo, J. Riera
	2023	GRAD Research Day FIU Title: "Studying the Spatio-temporal aspects of intracellular Astrocyte calcium events during information processing within visual cortex in vivo" Authors: C. Otero, S. Duarte, V. Kellner, M. Lopez Hidalgo, J. Schummers
	2022	MARC Research Symposium Title: "Spatio-temporal characterization of intracellular calcium events within visual cortex astrocytes in vivo" Authors: C. Otero, J. Schummers

	2020	<p align="center">BMES 2020 Conference</p> <p>Title: "Examine the Role of Astrocytes in Cortical Circuits with Novel Spatio-Temporal Event Detection Package"</p> <p>Authors: Tomas Suarez Omedas, Carlos Otero, Gerson Romero, Vered Kellner, Monica Lopez Hidalgo, James Schummers</p>
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Languages	English	Native language
	Spanish	Advanced: listener Novice: speaker, reader, and writer

Skills	Programming Languages	MATLAB, PYTHON
	Platforms	NUERON, Autocad, ImageJ, Microsoft Office, Google, ChatGPT, Slack
	Lab experience	Fluorescent Microscopy, 2-photon Microscopy, FDA Regulated Animal Surgical experience (Ferret), IACUC Protocol and Lab safety Certifications