

Camille D. Rodriguez

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Education

MASSACHUSETTS INSTITUTE OF TECHNOLOGY M.S. and Ph.D. in Mechanical Engineering Advisor: Dr. Ming Guo	Present GPA: 4.5/5.00
UNIVERSITY OF FLORIDA B.S. in Mechanical Engineering with a minor in Biomechanics	May 2021 GPA: 3.93/4.00
MIAMI DADE COLLEGE A. A. in Chemistry	May 2017 GPA: 4.00/4.00

Research/Professional Experience

TISSUE BIOMECHANICS LAB , <i>Undergraduate Research Assistant</i>	October 2019– June 2021
<ul style="list-style-type: none">Assisting Dr. Sarntinoranont at the University of Florida with simulations in COMSOL Multiphysics about 4 to 10 hours per week.Conducted sensitivity and error analysis on unknown parameters affecting diffusion and reactions regarding glycoproteins in Matrigel that models a tumor cell to enhance drug retention.Assisted in researching the mechanobiology effect shear stress has on sprout vessels. Developed elastic capillary sprout computational model to determine the internal stresses and deformation cause by pressure-driven flow.	
UF'S MECHANICAL ENGINEERING DEPARTMENT , <i>Undergraduate Teaching Assistant</i>	January 2020– May 2021
<ul style="list-style-type: none">Aid in the University of Florida's Mechanics of Materials Laboratory course about 10 hours per week.Work with students to help understand course experiments, lab reports, and troubleshoot issues with LabVIEW.Construct necessary equipment needed to run experiments.Run equipment in the lab, such as an Instron UTM, to provide data for the students.	
VULCAN AUGMETICS , <i>Engineering Intern</i>	June 2019– July 2019
<ul style="list-style-type: none">Researched 3D-printing materials and post-processing to refine style of bionic arms.Manufactured internal components for 4 robotic arms to be fitted by the end of my 2 months.Assisted in modifying waiter module, a job-specific attachment for their bionic arm, to be functional.Created directory of 7 previous designs with specifications, computerized designs, and photographs.	

Involvement/Leadership

GENERATIONAL RELIEF IN PROSTHETICS , <i>Head of Art and PS4 Captain</i>	August 2018– January 2021
<ul style="list-style-type: none">Delegate the artistic customization of assistive devices to a recipient's request.Lead and assist in assembling modified PS4 and SNES controllers to be used by recipients with limb differences or limited mobility.Mentored a female Adaptive Gaming Controller Captain and the next Head of Art for their new positions.Lead volunteers at UF's Adaptathon modifying 4 types of toys to be accessible for the holiday season.Volunteered twice in distributing GRIP's devices to local recipients at Hand Camp and carrying out STEM activities.Volunteered at a Women in STEM event at UF teaching local middle school girls how to build on of our adaptive hands.Taught Florida State University college students to modify a Baby Einstein toy, encouraging them to start their own chapter of GRiP.	

Publications/Conferences

- Piñeiro Llanes J., Rodriguez C.D., Farhadi S.A., Hudalla G.A., Sarntinoranont M., Simmons C.S. "Experimental and Computational Models of Transport of Galectin-3 through Glycosylated Matrix," *Ann Biomed Eng*, in review
- Rodriguez C.D., Piñeiro Llanes J., Farhadi S.A., Hudalla G.A., Simmons C.S., Sarntinoranont M. "Computational Model of Transport of Galectin-3 in Extracellular Matrix," poster presented at the 2020 BMES Annual Meeting, Oct. 14-17, 2020

Awards and Honors

- MIT School of Engineering Lemelson Presidential Fellowship 2021
- Alfred P. Sloan - MIT University Center of Exemplary Mentoring (UCEM) Scholar 2021
- Sung and Yvonne Lu Outstanding Senior Award – UF MAE Department 2021

Skills

Technical: SOLIDWORKS, ImageJ, Manufacturing, Soldering

Simulation: Star CCM+, COMSOL Multiphysics

Programming: MATLAB, LabVIEW