

Daniela Leizaola – Curriculum Vitae

Undergraduate Research Assistant
Optical Imaging Laboratory
Dept. of Biomedical Engineering
Florida International University
Miami, FL

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RESEARCH INTERESTS

Near-infrared optical imaging technologies and related clinical applications in biomedical engineering

EDUCATION

Florida International University, Miami, FL **August 2021**

Ph.D. in Biomedical Engineering Accepted

Florida International University, Miami, FL **August 2016-Present**

B.S. in Biomedical Engineering (Honors) Current GPA: 3.45

- *Minor in Chemistry*
- *Honors College – Advanced Research and Creativity in Honors (ARCH) Thesis*
“Monte-Carlo based near-infrared light propagation modeling for
different skin types and melanin concentrations” (Dr. Anuradha Godavarty)

RESEARCH/TEACHING EXPERIENCE

Undergrad Research Assistant, Optical Imaging Laboratory, Spring 2019-Present

- Monte Carlo based simulation studies on MATLAB software of light propagation on a three-layered skin model with varying melanin concentrations.
- Dynamic imaging study of non-contact pulse measurements with three control subjects.
- Optimization/stabilization of the driver of a near-infrared optical scanner for the reduction of instrument white noise.
- Compilation and analysis of experimental and clinical data with MATLAB.

Webmaster, Optical Imaging Laboratory, Spring 2019-Present

- Redesigned website for a user-friendly experience using html language.
- Continuous updating of information regarding recent events, team members, and publications.

Learning Assistant, BME Department-Florida International University, Spring 2021

- BME 3632: Biomedical Engineering Transport

Teaching Assistant, BME Department-Florida International University, Fall 2020

- BME 3632: Biomedical Engineering Transport

College Preparation Tutor, Sapneil Tutoring Inc., October 2016-September 2019

- Created lesson plans for the SAT & ACT department
- Managed schedules, payrolls, and trainings of 15 employees
- Completed recruitment events for new students
- Tutored groups of up to 12 students

Mathematics Tutor (K-12), Mathnasium, February 2016 - August 2016

- Taught 4-6 students at a time with varying levels of mathematics
- Managed lesson plans and inventories for students to be instructed

AWARDS

1. Third place in BME Undergraduate Research Day Poster at FIU (\$50), Fall 2020
2. Norman R Weldon Biomedical Engineering Undergraduate Student Summer Research Internship (\$1000), Summer 2020
3. Norman R Weldon Biomedical Engineering Undergraduate Student Summer Research Internship (\$2400), Summer 2019
4. Student Government Association Merit Scholarship (\$500), Spring 2017
5. Florida Bright Futures Medallion Scholarship (\$13,000), August 2016- April 2021
6. Florida International University Gold & Blue Scholarship (\$750/semester), August 2016- April 2021

RESEARCH PRESENTATIONS

Talks

1. **Daniela Leizaola**, Edwin A. Robledo, Anuradha Godavarty, “*Near-infrared Light Propagation Analysis of Fitzpatrick Skin Types Using Monte-Carlo*,” National Conference on Undergraduate Research 2021, (Accepted: April 12-14, 2021)
2. **Daniela Leizaola**, Edwin A. Robledo, Anuradha Godavarty, “*Near-infrared light propagation analysis of Fitzpatrick skin types using Monte-Carlo*,” 2021 Florida Undergraduate Research Conference, Tallahassee, FL, (Accepted: February 26-27, 2021)

Posters

3. **Daniela Leizaola**, Edwin A. Robledo, Anuradha Godavarty, “*Near-infrared light propagation analysis of Fitzpatrick skin types using Monte-Carlo*,” Annual Undergraduate Research at FIU Conference 2021, Sweetwater, FL, (Accepted: March 24, 2021)
4. **Daniela Leizaola**, Edwin A. Robledo, Anuradha Godavarty, “*Monte-Carlo Based Near-Infrared Light Propagation Modeling for Different Skin Types and Melanin Concentrations*,” BMES Annual Meeting Virtual Symposium 2020, Miami, FL, (October 12-15, 2020)
5. **Daniela Leizaola**, Edwin A. Robledo, Anuradha Godavarty, “*Monte-Carlo Based Near-Infrared Light Propagation Modeling For Different Skin Types And Melanin*”

Concentrations,” Undergraduate Research Day, Florida International University, Miami, FL (September 25, 2020)

6. **Daniela Leizaola**, Kevin Leiva, and Anuradha Godavarty, *“Non-contact pulse measurements using a near-infrared optical imager,” Undergraduate Research Day, Florida International University, Miami, FL (October 4, 2019)*

MENTORING

High School Intern Mentorship

- Bhavya Saxena - Radiation induced mucositis: Etiology and Diagnosis, Summer 2020