

Valentina Dargam

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EDUCATION

- Ph.D. Candidate** *Florida International University* 2018 - Present
Major: Biomedical Engineering
- Bachelor of Science** *Florida International University* May 2018
Major: Biomedical Engineering (Cum Laude)

RESEARCH INTERESTS

I am interested in using AI to develop low-cost diagnostic techniques that can identify early stages of disease and facilitate timely interventions, particularly in underserved populations.

RESEARCH SUPPORT and GRANTS

- Florida Heart Research Foundation Researcher of the Year** ([award link](#)) 2022 – 2024
Project: Correlating Aortic Valve Structure to Heart Sound Characteristics ([award link](#))
- NIH Ruth L. Kirschstein NRSA Individual Predoctoral Fellowship (Parent F31)** 2020 – 2023
Project: Correlating Aortic Valve Structure to Heart Sound Characteristics ([award link](#))
- NSF Innovation Corps Program (I-Corps) - Entrepreneur Lead** 2020 – 2022
Project: AI-based Heart Sound Screening for Early-Stage Heart Disease ([award link](#))
- McNair Graduate Fellowship** 2018 – 2020
Project: Diagnosing Early Aortic Valve Disease: Correlation Between Heart Sounds and Remodeling

JOURNAL PUBLICATIONS

* indicates co-author

- Chaparro D*, **Dargam V***, Alvarez P, Yeung J, Saytashev I, Bustillo J, Loganathan A, Ramella-Roman J, Agarwal A, and Hutcheson J. A Method to Quantify Tensile Biaxial Properties of Mouse Aortic Valve Leaflets. *Journal of Biomechanical Engineering*. 31 August 2020.
- Dargam V***, Ng HH*, Nasim S, Chaparro D, Iansen-Irion C, Rathna Seshadri S, Barreto A, Danziger ZC, Shehadeh LA, and Hutcheson JD. S2 Heart Sound Detects Aortic Valve Calcification Independent of Hemodynamic Changes in Mice. *Frontiers in Cardiovascular Medicine*. 25 May 2022.
- Leiva K, Leizaola D, Gonzalez I, **Dargam V**, Alirezai H, Kaile K, Robledo E, Hucehson J, and Godavarty A. Spatial-Temporal Oxygenation Mapping Using a Near-Infrared Optical Scanner: Towards Peripheral Vascular Imaging. *Manuscript in Review*.

RESEARCH and TECHNICAL EXPERIENCE

- Entrepreneur Lead, National Science Foundation Innovation Corps (I-Corps™)** Fall 2020
Department of Biomedical Engineering, *Florida International University*
- PI*: Joshua D. Hutcheson, PhD
 - Duties*: Responsible to carry-out the customer discovery process for the technology being developed in mt PhD project. Coordinated and conducted over 100 interviews with clinicians and key partners to determine the commercialization potential of the technology.
- Undergraduate Lead Investigator and Research Assistant** 2017 – 2019
Department of Modern Languages and Biomedical Engineering, *Florida International University*
- Mentor*: Melissa Baralt, PhD
 - Research Project*: Executive Functioning in Bilinguals, Monolinguals and Heritage Language Speakers with Limited Oral Proficiency
 - Duties*: Responsible for the preparation, administration, data collection and analysis of project

CONFERENCE PRESENTATIONS & PITCHING COMPETITIONS

Conference Presentations in Graduate School

1. Poster Presentation: Graduate Student Appreciation Week 2019 Scholarly Forum, FIU, Miami, FL
 - Won 2nd place for the College of Engineering and Computing
 - Invitation to present at the Florida Statewide Graduate Student Research Symposium
2. Poster Presentation: Florida Statewide Graduate Student Research Symposium for the 2019 Conference of Florida Graduate Schools, FIU, Miami, FL
 - Won 1st place in the Health and Life Sciences category
3. Oral Presentation: 2019 Biomedical Engineering Society Meeting, Philadelphia, PA
4. Oral Presentation: 2020 Biomedical Engineering Society Meeting, Virtual Meeting
5. Poster Presentation: 2021 AHA Scientific Sessions Meeting, Virtual Meeting
6. Oral Presentation: 2022 International Society of Applied Cardiovascular Biology. Memphis, TN
 - Finalist for the Dr. Allan Callow Young Investigator Award
7. Poster Presentation: 2023 Heart Valve Society Annual Meeting. Malaga, Spain.
 - Poster selected for e-Poster Competition

Pitching Competitions for Cardiacoustics *An AI-based tool that detects and monitors heart disease and aids cardiologists and patients in determining the best course of treatment.*

1. Pitch Competition: 2019 Florida Blue Health Innovation Pitch Competition, Orlando, FL
 - Won 2nd place (\$5,000 award) for the implementation of big data to solve problem in treating and managing of chronic diseases
2. Pitch Competition: 2020 eMerge Americas Pitch Night at StartUP FIU, Miami, FL
 - Winner and selected to be fast-tracked into eMerge Americas 2020 Startup Showcase (postponed)
3. Booth Exhibition: 2020 Synapse Summit, Tampa, FL
4. Pitch Competition: Florida Venture Forum's 2020 Early-Stage Capital Conference, Tampa, FL
5. Pitch Competition: eMerge Americas 2022, Miami, FL
 - Selected as a top 25 finalist in the Startup Showcase

PATENTS

1. Dargam V and Hutcheson JD (2022). *Methods and devices for processing heart sounds*. U.S. Patent No. 11,272,900, filed April 2, 2020, and issued March 15, 2022.
2. Dargam V and Hutcheson JD (2021). *Correlation of Heart Sounds and Pulmonary Hypertension*. U.S. Provisional Patent Application Serial No. 63/266,248, filed December 30, 2021. Patent pending.

HONORS, AWARDS, & SCHOLARSHIPS

2022	Florida Heart Research Foundation "Early Career Stop Heart Disease" Researcher of the Year
2020	National Science Foundation (NSF) Innovation Corps (I-Corps) Award
2020	Biomedical Engineering Society Career Development Award
2019	eMerge Americas Pitch Night at StartUP FIU Winner
2019	2 nd Place in Florida Blue Health Innovation Pitch Competition
2019	Biomedical Engineering Society Career Development Award
2019	1st Place at Florida Statewide Graduate Research Symposium
2019	2nd Place Award at FIU's Graduate Student Appreciation Week 2019 Scholarly Forum
2019	Hispanic Scholarship Fund Scholar
2018	Award for Oral Presentation at Conference for Undergraduate Researchers at FIU (CURFIU)
2018	American Airlines First Generation Scholarship
2017	NACME Scholarship Recipient
2017	Ronald E. McNair Post-Baccalaureate Achievement Program Scholar

ADVISING & TEACHING

Graduate Mentor

2019 – Present

College of Engineering, Florida International University

- Mentored undergraduate students in data collection, analysis, and visualization, and cardiovascular physiology

- Guided students in preparation of presentations and applications to graduate school and funding opportunities
- List of Undergraduate Trainees (Affiliated Research Programs):

2019-2020	Diego Sanchez
2020-2021	Anet Sanchez (Opportunities for Undergraduate Research and Scholarship Program)
2021-2022	Aashiya Kolengaden
2021-Present	Rebekah Arias (PATHS-UP Research Experience and Mentoring Program)
2022-Present	Yency Perez

Undergraduate Learning Assistant, Hybrid Biology I 2016 –2018
Florida International University, Biology Department

- Meet with faculty instructor weekly to plan learning agenda for the week, reflect on strategies that worked or did not work previous week, and work on improvements for the classroom
- Facilitate collaboration among learning teams of up to 18 students by formatively assessing student understanding and asking guiding questions

LEADERSHIP, OUTREACH, and TECHNICAL EXPERIENCE

Newsletter Co-Editor *International Society for Applied Cardiovascular Biology* June 2021 – Present

- Help create and format content via email for the monthly eCirculator Newsletter, which includes member publications, news, events, job postings, announcements, and more

President-Elect *LatinXinBME Organization* Sept. 2022 – Present

- Help president plan yearly activities and assists other chairs plan and execute events and tasks.

Social Chair *LatinXinBME Organization* Sept. 2021 – Sept. 2022

- Help create and organize social events (virtual) to engage organization members.

Symposium Organizer *LatinX BME Symposium* Dec. 2020 – March 2021

- Launched and structured a LatinX BME Symposium that gathers scientist in the field of biomedical engineering from the LatinX community for an event that includes oral presentations, keynote speaker, mental health panel and imposter syndrome discussions

Community Outreach Events Organizer *Family Fun Sundays at The Motivational Edge* 2018 – 2020

- Organized and supervised a once a month event to showcase science activities with lab members to teach kids about the cardiovascular system