

Jethro Raphael M. Suarez, MSBME

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EDUCATION

Year	Degree	Institution	Location
2022	MSBME	College of Engineering and Computer Science, University of Central Florida	Orlando, FL
2021	BSME	College of Engineering and Computer Science, University of Central Florida	Orlando, FL

EMPLOYMENT

Years	Position	Institution	Location
2023 - Present	Graduate Research Assistant	University of Central Florida, College of Nursing	Orlando, FL
2020 - 2021	Undergraduate Teaching Assistant	University of Central Florida, College of Engineering and Computer Science	Orlando, FL
2019	Undergraduate Research Assistant	University of Central Florida, NanoScience Technology Center	Orlando, FL

AWARDS AND HONORS

Date	Award	Organization/Group
2024	Best-in-Showcase Senior Design Project –Mechanical and Aerospace Engineering Category *(co-advised winning team)	University of Central Florida Department of Mechanical and Aerospace Engineering
2024	Best-in-Session Conference Research Poster Presentation	Sigma Theta Tau International Honor Society of Nursing
2017-2021	Dean’s List	University of Central Florida, College of Engineering and Computer Science
2020	Walt Disney World Co. Design & Engineering Scholarship	University of Central Florida, College of Engineering and Computer Science

RESEARCH AND SCHOLARSHIP

PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES

PUBLISHED

1. **Suarez JRM**, Lafontant K, Blount A, Park JH, Thiamwong L. Recreating Fall Risk Appraisal matrix using R to support fall prevention programs. *JAMIA Open*. Oct 2024;7(3):ooae088. doi:10.1093/jamiaopen/ooae088. PMID:39297152
2. Lafontant K, Blount A, **Suarez JRM**., Fukuda DH, Stout JR, Trahan EM, Lighthall NR, Park JH, Xie R, & Thiamwong L. (2024). Comparing Sensitivity, Specificity, and Accuracy of Fall Risk Assessments in Community-Dwelling Older Adults. *Clinical Interventions in Aging*. 2024;19:581-588. doi:10.2147/CIA.S453966. PMID:38562971
3. Brightman JD, Lafontant K, **Suarez JRM**, Crook JM, Thiamwong L. Comparing sleep quality, duration, and efficiency among low-income community-dwelling older adults with and without physical disabilities. *Journal of Gerontological Nursing*. 2024;50(7):12-18. doi:10.3928/00989134-20240618-03

UNDER REVISION/UNDER REVIEW (*data-based; _ student(s))

1. Tran AA, Nguyen VTH, Voss C, **Suarez JRM**, Park JH. Arm-Leg Interactive Coupling Exosuit (ALICE) assists body propulsion during walking. *IEEE Transactions on Neural Systems & Rehabilitation Engineering*.
2. **Suarez JRM**, Blount A, Lafontant K, Park JH, Xie R, Lighthall LR, Thiamwong L. The Association of Prevention Motivation Orientation with Sedentary Behavior in Older Adults: A Cross-Sectional Study. *I-JMR*.
3. **Suarez JRM**, Lafontant K, Goble DJ, Park JH, Dino MJ, Thiamwong L. Comparison of static balance assessments among community-dwelling older adults: a cross-sectional study. *Journal of Aging Clinical and Experimental Research*.
4. Lafontant K, Brightman J, **Suarez JRM**, Blount A, Fukuda DH, Stout JR, Lighthall NR, Loerzel V, Park JH, Thiamwong L. Subjectively and Objectively Assessed Sleep in Older Adults with and Without Mild Cognitive Impairment. *Journal of Sleep Research*.

IN PROGRESS/IN PREPARATION

1. Tice AL, Lafontant K, Suarez JRM, Blount A, Banarjee C, Fukuda DH, Stout JR, Thiamwong L. Examining Sleep the Night Before a Reported Fall among Low-Income Community-dwelling Older Women: A Case Series. *Journal of Clinical Sleep Medicine*.
2. Banarjee C, **Suarez JRM**, Lafontant K, Xie R, Chen C, Choi H, Thiamwong L. Piloting Ecological Momentary Assessments to Integrate Mobile Applications into Encourage Physical Activity in Older Adults. American Medical Association Interim 2024 Conference. *Poster presentation*.
3. Tice AL, Lafontant K, Gummadavelly R, **Suarez JRM**, Blount A, Banarjee C, Fukuda DH, et al. Sleep the night before a reported fall among low-income community-dwelling older women: a case series. Southeast American College of Sports Medicine Conference. *Poster presentation*.
4. **Suarez JRM**, Blount A, Lafontant K, Lighthall NR, Park JH, Thiamwong L. Depressive Symptoms Affect Postural Sway Area of Older Adults. *BMC Medicine*.

5. **Suarez JRM**, Banarjee C, Park JH, Optimization of ePTFE Conduit Construction for Pediatric Right Ventricle Outflow Tract Reconstruction. *Cardiovascular Engineering and Technology*.
6. **Suarez JRM**, Lafontant K, Blount A, Park JH, Xie R, Thiamwong L. Preliminary Analysis of Physical Activity Levels of Community-Dwelling Older Adults After Physio-feedback and Exercise pRogram (PEER). *JMIR Aging*.
7. Blount A, Lafontant K, **Suarez JRM**, Kim D, Lighthall NR, Xie R, & Thiamwong, L. Investigating self-perceptions of aging and fear of falling in low-income community-dwelling older adult.
8. Lafontant K, **Suarez JRM**, Kim D, Zamarripa E, Fukuda DH, Stout JR, Park J, Xie R, Thiamwong L. Levi's Muscle Index as an Indicator of Physical Function Among Low-Income Community-Dwelling Older Adults. *Journal of Functional Morphology and Kinesiology*.

PUBLISHED ABSTRACTS (*data-based; _student[s])

1. **Suarez JR**, Banarjee C, Park JH, Thiamwong L. Determination of Physical Activity and Sleep Levels from ActiGraph LEAP Using Open-Source R Package. *Innov Aging*. 2024; 8(Supplement_1):1233-1234. doi:10.1093/geroni/igae098.3947 *
2. **Suarez JR**, Blount A, Lafontant K, Lighthall N, Huang H, Park JH, Thiamwong L. Medial-Lateral Postural Sway Increase Among Community-Dwelling Older Adults with Self-Reported Anxiety. *Innov Aging*. 2024; 8(Supplement_1):1258. doi:10.1093/geroni/igae098.4024 *
3. **Suarez JR**, Park JH, Xie R, Lafontant K, Thiamwong L. Effects of Physio-feedback Exercise pRogram (PEER) on Physical Activity Levels in Older Adults. *Innov Aging*. 2024; 8(Supplement_1):1083. doi:10.1093/geroni/igae098.3480 *
4. **Suarez JR**, Blount A, Park JH, Thiamwong L. Associations of Prevention Focus Traits with Sedentary Behavior in Community-Dwelling Older Adults. *Innov Aging*. 2024; 8(Supplement_1):1104. doi:10.1093/geroni/igae098.3545 *
5. Lafontant K, Zamarripa E, Tice A, Blount A, **Suarez JR**, Kim D, Stout J, Thiamwong L. Reactance/Height as a Potential Bioimpedance Indicator of Frailty Among Community-Dwelling Older Adults. *Innov Aging*. 2024; 8(Supplement_1):1270. doi:10.1093/geroni/igae098.4061 *
6. Banarjee C, **Suarez JR**, Choudhury R, Park JH, Xie R, Stout J, Thiamwong L. Low-Intensity Peer-Led Exercise Does Not Change Physical Activity or Balance Measures in Older Adults. *Innov Aging*. 2024; 8(Supplement_1):1327. doi:10.1093/geroni/igae098.4236 *
7. Brightman J, Lafontant K, **Suarez JR**, Crook J, Thiamwong L. Sleep Quality, Duration, and Efficiency in Low-Income Older Adults With and Without Disabilities. *Innov Aging*. 2024; 8(Supplement_1):362-363. doi:10.1093/geroni/igae098.1180 *
8. Banarjee C, Lafontant K, **Suarez JR**, Park JH, Fukuda D, Stout J, Lighthall N, Thiamwong L. Low-Intensity Peer-Led Exercise Results in Improved Sleep Efficiency Without Concurrent Changes in Mood. *Innov Aging*. 2024; 8(Supplement_1):1040. doi: 10.1093/geroni/igae098.3347 *
9. Lafontant K, Brightman J, **Suarez JR**, Blount A, Fukuda D, Stout J, Thiamwong L. Subjectively and Objectively Assessed Sleep in Older Adults With and Without Mild Cognitive Impairment. *Innov Aging*. 2024; 8(Supplement_1):1098. doi:10.1093/geroni/igae098.3527 *
10. Liu C, Thiamwong L, Nguyen T, **Suarez JR**, Park JH, Lou Q, Xie R. A Reinforcement Learning Approach to Enhance Physical Activity and Reduce Fall Risk in Older Adults. *Innov Aging*. 2024; 8(Supplement_1):1081. doi:10.1093/geroni/igae098.3473 *

11. Nguyen T, Thiamwong L, Liu C, **Suarez JR**, Park JH, Xie R. Time-to-Event Analysis in Evaluating the Association of Fall Risk Appraisals and Physical Activity in Older Adults. *Innov Aging*. 2024; 8(Supplement_1):1022. doi:10.1093/geroni/igae098.3292 *
12. **Suarez JR**, Park JH, Choudhury R, Stout J, Banarjee C, Thiamwong L. The Associations of Handgrip Strength and Anthropometric Measurements with Upper Limb Body Fat Mass in Older Adults. Gerontological Society of America Annual Meeting. *Innov Aging*. 2023;7(Suppl 1):1130-1131. doi:10.1093/geroni/igad104.3630. PMID:PMC10737451. *

PRESENTATIONS (*Type—podium, poster, keynote, invited*)

STATE/LOCAL (*data-based; _ student[s]; # Pending)

1. Maldonado PM, Tice A, **Suarez JRM**, Thiamwong L. The Association Between Circadian Rhythm and Cognitive Performance in Older Adults. Theta Epsilon Annual Scholarship Day: Clinical, Education & Research. *Poster presentation*. Apr 1, 2025.*
2. **Suarez JRM**, Banarjee C, Park JH, Thiamwong L. Determination of Physical Activity and Sleep Levels from ActiGraph LEAP Using Open-Source R Package. Gerontological Society of America Annual Meeting. *Poster presentation*. Nov 15, 2024. Seattle, WA. *
3. **Suarez JRM**, Blount A, Lafontant K, Lighthall NR, Huang HJ, Thiamwong L. Medial-Lateral Postural Sway Increase Among Community-Dwelling Older Adults with Self-Reported Anxiety. Gerontological Society of America Annual Meeting. *Poster presentation*. Nov 15, 2024. Seattle, WA.*
4. Lafontant K, Zamarripa E, Tice A, Blount A, **Suarez JRM**, Kim D, Stout JR, Thiamwong L. Reactance/Height as a Potential Bioimpedance Indicator of Frailty Among Community-Dwelling Older Adults. Gerontological Society of America Annual Meeting. *Poster presentation*. Nov 15, 2024. Seattle, WA.*
5. Banarjee C, **Suarez JRM**, Choudhury R, Park JH, Xie R, Stout J, Thiamwong L. Low-Intensity Peer-Led Exercise Does Not Change Physical Activity or Balance Measures in Older Adults. Gerontological Society of America Annual Meeting. *Poster presentation*. Nov 16, 2024. Seattle, WA. *
6. Brightman JD, Lafontant K, **Suarez JRM**, Crook JM, Thiamwong L. Sleep Quality, Duration, and Efficiency in Low-Income Older Adults With and Without Disabilities. Gerontological Society of America Annual Meeting. *Podium presentation*. Nov 15, 2024. Seattle, WA.*
7. Banarjee C, Lafontant K, **Suarez JRM**, Park JH, Fukuda DH, Stout JR, Lighthall NR, Thiamwong L. Peer-Led Exercise Results in Improved Sleep Efficiency Without Concurrent Changes in Mood. Gerontological Society of America Annual Meeting. *Poster presentation*. Nov 16, 2024. Seattle, WA.*
8. Lafontant K, Brightman JD, **Suarez JRM**, Blount A, Fukuda DH, Stout JR, Thiamwong L. Subjectively and Objectively Assessed Sleep in Older Adults With and Without Mild Cognitive Impairment. Gerontological Society of America Annual Meeting. *Poster presentation*. Nov 16, 2024. Seattle, WA.*
9. **Suarez JRM**, Park JH, Xie R, Lafontant K, Thiamwong L. Effects of Physio-feedback Exercise pRogram (PEER) on Physical Activity Levels in Older Adults. Gerontological Society of America Annual Meeting. *Poster presentation*. Nov 16, 2024. Seattle, WA.*
10. **Suarez JRM**, Blount A, Park JH, Thiamwong L. Associations of Prevention Focus Traits with Sedentary Behavior in Community-Dwelling Older Adults. Gerontological Society of America Annual Meeting. *Poster presentation*. Nov 16, 2024. Seattle, WA.*

11. Liu C, Thiamwong L, Nguyen T, **Suarez JRM**, Park JH, Lou Q, Xie R. A Reinforcement Learning Approach to Enhance Physical Activity and Reduce Fall Risk in Older Adults. Gerontological Society of America Annual Meeting. *Poster presentation*. Nov 16, 2024. Seattle, WA.*
12. Nguyen T, Thiamwong L, Liu C, **Suarez JRM**, Park JH, Xie R. Time-to-Event Analysis in Evaluating the Association of Fall Risk Appraisals and Physical Activity in Older Adults. Gerontological Society of America Annual Meeting. *Poster presentation*. Nov 16, 2024. Seattle, WA.*
13. Banarjee C, **Suarez JRM**, Lafontant K, Xie R, Chen C, Choi H, Thiamwong L. Motivation to Engage in Physical Activity in Older Adults: Integration of Ecological Momentary Assessments with Mobile Applications. American Medical Association Interim 2024 Symposium. *Poster presentation*. Nov 8, 2024. Orlando, FL.*
14. Banarjee C, Lafontant K, **Suarez JRM**, Xie R, Stout J, Thiamwong L. Evaluation of Skeletal Muscle Mass in Community-Dwelling Older Adults With and Without Fall History. Florida Society of Physical Medicine and Rehabilitation Conference. *Poster presentation*. Sep 19-22nd, 2024.*
15. Brightman JD, Lafontant K, **Suarez JRM**, Thiamwong L. Comparing sleep quality, duration, and efficiency among low-income community-dwelling older adults with and without physical disabilities. Theta Epsilon Annual Scholarship Day: Clinical, Education & Research. *Podium presentation*. Apr 2, 2024.*
16. **Suarez JRM**, Park JH, Xie R, Lafontant K, Thiamwong L. Preliminary Analysis of Physical Activity Levels of Community-Dwelling Older Adults After Physio-fEedback Exercise pRogram (PEER). Theta Epsilon Annual Scholarship Day: Clinical, Education & Research. *Poster presentation*. Apr 2, 2024.*
17. Lafontant K, Blount A, **Suarez JR**, Fukuda DH, Stout JR, Trahan E, Lighthall NR, Park JH, Xie R, Thiamwong L. Comparing Sensitivity, Specificity, and Accuracy of Fall Risk Assessments in Community-Dwelling Older Adults. University of Central Florida Student Scholar Symposium. *Poster presentation*. Mar 26, 2023. Orlando, FL.*
18. **Suarez JR**, Park JH Device Validation Protocol for Portable Blood Pressure Devices During Rest and Exercise. University of Central Florida Student Scholar Symposium. *Poster presentation*. Mar 26, 2024.
19. Banarjee C, **Suarez JR**, Choudhury R, Park JH, Xie R, Fukuda D, Stout J, Lighthall N, Loerzel V, Thiamwong L. Early Outcomes: Changes in Physical Activity Show No Correlation with Objectively and Subjectively Measured Balance. University of Central Florida FIRE Conference. *Poster presentation*. Feb 16, 2024. Orlando, FL.*
20. **Suarez JR**, Banarjee C, Nelson JS, Frindt K, Kleeman KC, Park JH Parameter Optimization for Laser Cutting Expanded Polytetrafluoroethylene for Right Ventricular Outflow Tract Reconstruction. Academy of Science, Engineering, and Medicine of Florida Annual Meeting. *Poster presentation*. Nov 3, 2023. Orlando, FL.*
21. **Suarez JR**, Park JH, Choudhury R, Stout J, Banarjee C, Thiamwong L. The Associations of Handgrip Strength and Anthropometric Measurements with Upper Limb Body Fat Mass in Older Adults. Gerontological Society of America Annual Meeting. *Poster presented*. Nov 11, 2023. Tampa, FL. *
22. Blount A, Lafontant K, **Suarez JRM**, Thiamwong L. Optimizing a technology-based body and mind intervention to prevent falls and reduce health disparities in low-income populations. One Senior Place (Invited). *Poster presentation*. Oct 20, 2023. Orlando, FL.

SERVICE-RELATED ACTIVITIES

UNIVERSITY SERVICE

WEAR Lab, UCF College of Engineering and Computer Science

May 2024 – Dec 2024

Senior Design Co-advisor

- Co-advised a team of 4 undergraduate mechanical engineering students alongside a faculty member (UCF Assistant Professor) by providing guidance and support through the development and construction of a biomechanical assistive device prototype, leading to a "Best in Class" award at the UCF 2024 College of Engineering Senior Design showcase
- Assisted in overseeing project development by managing timelines and milestones to ensure timely completion of project and adherence to deadlines
- Conducted educational sessions for the team members to enhance their understanding of biomechanical engineering principles, promote effective research habits, and improve presentation/public speaking skills
- Provided constructive feedback throughout the creation of the assistive device prototype and helped troubleshoot any problems that occurred

UCF Graduate Student Advisory Council

Aug 2021 – Aug 2024

Member

- Met monthly with the College of Graduate Studies Vice Provost and Dean to discuss various topics relating to the improvement Graduate Student Life at UCF
- Collaborated with other graduate students from various disciplines, as well as leaders from the Student Government Association of UCF to create a more inclusive and welcoming graduate community
- Assisted in planning and volunteering at social events for graduate students

UCF College of Engineering and Computer Science

April 2024

Engineering Senior Design Alumni Judge

Nov 2022

- Evaluated and scored undergraduate engineering student senior design projects on creativity, methodology, and presentation
- Shared feedback to students of various engineering disciplines regarding their projects
- Engaged in discussion with industry partners, UCF alumni, and UCF faculty

April 2022

UCF STEM

Sep 2019 – Aug 2022

STEM Ambassador

- Represented UCF at local K-12 schools in the Central Florida area by presenting current and past research work, goals, and UCF as a college
- Collaborated with undergraduate and graduate studies of various disciplines to create STEM workshops for students K-12

- Assisted in planning STEM events at UCF (e.g., STEM Day, Regional Competitions)

UCF American Institute of Aeronautics and Astronautics

Sep 2018 – Apr 2019

Social Outreach Co-coordinator

- Collaborated with another co-coordinator to develop outreach strategies to promote the recruitment of members for the AIAA organization at UCF
- Organized a multitude of outreach events for organization members
- Engaged in discussion with various members of the community to investigate outreach opportunities