

# NORAH NYANGAU

[nyangau.m.norah@gmail.com](mailto:nyangau.m.norah@gmail.com) | 209-855-0108

## EDUCATION

Doctor of Philosophy, Integrative Physiology  
University of Colorado, Boulder

Expected: May 2028

Bachelor of Science, Biomedical Engineering  
California State University, Long Beach

Dec 2020

## RESEARCH

### NeuroRecovery Lab

Aug 2023 - Current

Andrew Tan, Ph.D.

University of Colorado, Boulder, CO

**Research Lab Mission:** Inducing cortical excitability via exposure to repetitive intermittent hypoxia to enhance lower limb function and promote sensorimotor recovery.

**Gained Experience:** Vicon motion system data collection and analysis, administering Transcranial Magnetic Stimulation, poster and manuscript preparation.

### Clinical Rehabilitation and Biomechanics (CRAB) Lab

Nov 2018 - June 2020

Vennila Krishnan, Ph.D., PT

California State University, Long Beach, CA

**Research Lab Mission:** Gait rehabilitation, cognitive-motor dual-task intervention, fall prevention strategies.

**Gained Experience:** Obtained ground reaction force plate data and calculated dual-task costs. Measured stability changes pre and post fatigue of the peroneus longus muscle.

### Gait Rehabilitation and Research Lab (GRAIL)

May 2019 - Aug 2019

Rahul Soangra, Ph.D.

Chapman University, Irvine, CA

**Research Lab Mission:** Rehabilitation of neurological and musculoskeletal disorders, movement science utilizing electromyograms and wearable sensors.

**Gained Experience:** Investigated mechanics of turning, time performance and stability in stroke survivors.

### Human Performance and Robotics Lab (HPRL)

June 2018 - Nov 2018

Emel Demircan, Ph.D.

California State University, Long Beach, CA

**Research Lab Mission:** Biomechanics, simulation of musculoskeletal systems, assistive devices, virtual reality and haptic feedback.

**Gained Experience:** Data analysis on Qualysis and OpenSim identifying data markers, calculating subject trajectories and simulating motion.

## PUBLICATIONS

Nyangau, N. M., Bogard, A. T., Pollet, A. K., Pellegrino, L. M., & Tan, A. Q. (2024). Motor learning and savings of adaptive mediolateral control during split-belt walking. *BioRxiv*, (PREPRINT). <https://doi.org/10.1101/2024.12.29.630661>

## CONFERENCE ABSTRACTS

**Nyangau, Norah**, Aviva K. Pollet, Alysha T. Bogard, Logan M. Pelligrino, Andrew Smith, and Andrew Q. Tan. (2025). *Repetitive Intermittent Hypoxia Enhances Motor Learning and Savings of Adaptive Mediolateral Control During Split-Belt Walking*. American Society of Neurorehabilitation Annual Meeting, Atlanta, GA.

**Nyangau, Norah**, Aviva K. Pollet, Alysha T. Bogard, Logan M. Pelligrino, Andrew Smith, and Andrew Q. Tan. (2024). *Effects of Acute Intermittent Hypoxia on Frontal Plane Biomechanics during Split-Belt Walking*. Rocky Mountain American Society of Biomechanics Conference, Estes Park, CO.

Kelly, K.R, Mir Norouzi, D., **Nyangau, N.**, Stager, Jr, D.R., Beauchamp, C.L., Giridhar, P. (2023). *Ocular motor function and postural control during static balance in children with amblyopia*. CVR - VISTA Conference, York University, Toronto.

Kelly, K.R, **Nyangau, N.**, Mir Norouzi, D., Cheng-Patel, C.S., Stager, Jr, D.R., Giridhar, P. (2023). *Early literacy skills in children with amblyopia*. CVRS biennial meeting, Bloomsbury, London, UK.

**Nyangau, Norah**, Hoang, Christopher, BS. Songra, Rahul, PhD. Krishnan, Vennila, PhD. (2020). *Kinematics of 360° Turning in Healthy Older Adults and Stroke Survivors*. International Stroke Conference, Los Angeles, CA.

Fok, Jojo. Labbate, Lori. Ghale, Sarah. **Nyangau, Norah**, Krishnan, Vennila, PhD, PT. Soangra, Rahul, PhD. (2020). *Effects of Exercise-Induced Fatigue of Fibularis Longus on Corticospinal Excitability: A Pilot Study*. Combined Sections Meeting, Denver, CO.

**Nyangau, Norah**, Demircan, Emel, PhD. (2018). *Designing of Lower-Limb Athletic Prosthesis Utilizing Secondary Motion Capture and Force Plate Data*. CSULB BUILD Summer Symposium, Long Beach, CA.

## EMPLOYMENT

### Research Assistant

Feb 2022 - Feb 2023

Retina Foundation of the Southwest, Dallas, TX  
Vision and Neurodevelopment Laboratory

- Perform eye movement, reading and motor testing.
- Gain knowledge of new equipment to aid in experiment design.

### Quality Analyst

Apr 2021 - Dec 2021

Abbott Laboratories, Sylmar, CA

- Investigate product performance quality complaints.
- Document and submit thorough allegation reports to the FDA.

### Research Trainee

June 2018 – June 2020

NIH-BUILD Fellowship Program, Long Beach, CA

- Analyze, conceptualize and present data.
- Dedicate efforts to academic development workshops.

## LEADERSHIP

### **Graduate Peer Mentor**

Aug 2024 - May 2025

Department of Graduate School, CU, Boulder, CO

Support and guide incoming graduate students navigate graduate program expectations.

### **Graduate Student Advisor**

Sep 2023 - Dec 2023

Student Support and Advising Services, CU Boulder, CO

Provide resources to engineering students for career exploration and long-term goal planning.

### **Engineering Ambassador**

Feb 2020 – Dec 2020

Engineering Ambassadors Program, CSULB, CA

Engaged middle and high-school students in STEM topics to foster passion in this field.

Created informative presentations on programs and opportunities to study at CSULB.

### **Membership Chairperson**

May 2018 - May 2020

National Society of Black Engineers, CSULB, CA

Executed recruitment events for incoming and current students. Incentivized members utilizing strategies to retain and increase membership of the collegiate organization.

## AWARDS

### **National Society of Black Engineers (NSBE) Fall Regional Conference**

Second Place Award: HackxNSBE

Nov 2020

- Hackathon Competition sponsored by Sledgehammer Games.

### **National Society of Black Engineers (NSBE) Fall Regional Conference**

First Place Presentation Award: Preliminary Track

Nov 2019

- Technical Research Exhibition (TRE) Poster Presentation Competition.

### **Los Angeles Council of Black Professional Engineers (LACBPE)**

Rising Star Award

May 2019

- Honoring the Achievements of Black Women in the Fields of STEM.

## SKILLS

**Software:** MATLAB, R Studio, Python, SPSS, OpenSim, Qualysis.

**Hardware:** Vicon and Qualisys Motion Capture, V3D Motion Analysis, Zeno Walkway, GAITRite, Tobii Eye Tracker.

**Languages:** English (Proficient), Swahili (Native).

## REFERENCES

### **Andrew Tan, Ph.D.**

Principal Investigator, Sensorimotor Recovery and Neuroplasticity Lab

University of Colorado, Boulder, CO

[andrew.tan@colorado.edu](mailto:andrew.tan@colorado.edu)

### **Christina Alston, Ph.D.**

Director, Office of Graduate Access and Retention

University of Colorado, Boulder, CO  
[christina.aslton@colorado.edu](mailto:christina.aslton@colorado.edu)

**Krista Kelly, Ph.D.**

Assistant Professor, School of Optometry and Vision Science  
University of Waterloo, ON  
[krista.kelly@uwaterloo.ca](mailto:krista.kelly@uwaterloo.ca)