

# Stanford

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## Rachel Adenekan

Postdoctoral Scholar, Mechanical Engineering

### Bio

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#### BIO

I am passionate about working at the interface of medicine and engineering to develop novel technologies that enable and encourage humans to live healthier lives. During my time at Stanford, I have built and led collaborations between engineers and clinicians, and have led research design, execution, and analysis for the development of multiple mobile health technologies. Currently, I am developing and deploying a high-resolution, reproducible, and accessible (to clinicians and patients) screening method for diabetic peripheral neuropathy (DPN) using a smartphone which can identify individuals at risk for DPN prior to overt clinical manifestation and at a potentially reversible stage. Previously, I developed methods of controlling wearable robotic devices (exoskeletons) to enhance balance ability in older adults.

#### HONORS AND AWARDS

- Stanford Graduate Fellow (SGF), Stanford University (2017)
- NSF-GRFP, National Science Foundation (2019)

#### PROFESSIONAL EDUCATION

- Doctor of Philosophy, Stanford University , ME-PHD (2024)
- Master of Science, Stanford University , ME-MS (2019)
- B.S., Massachusetts Institute of Technology , Mechanical Engineering (2017)

#### STANFORD ADVISORS

- Allison Okamura, Postdoctoral Faculty Sponsor

### Publications

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#### PUBLICATIONS

- **Reliability of Smartphone-Based Vibration Threshold Measurements**  
Adenekan, R. G., Yoshida, K. T., Benyoucef, A., Reyes, A., Adenekan, A. E., Okamura, A. M., Nunez, C. M., Kajimoto, H., Birznieks, Bianchi, M.  
IEEE.2024: 25-32
- **Cognitive and Physical Activities Impair Perception of Smartphone Vibrations.** *IEEE transactions on haptics*  
Yoshida, K. T., Kiernan, J. X., Adenekan, R. A., Trinh, S. H., Lowber, A. J., Okamura, A. M., Nunez, C. M.  
2023; PP
- **Feasibility of Smartphone Vibrations as a Sensory Diagnostic Tool**  
Adenekan, R. G., Lowber, A. J., Huerta, B. N., Okamura, A. M., Yoshida, K. T., Nunez, C. M., Seifi, H., Kappers, A. M., Schneider, O., Drawing, K., Pacchierotti, C., Abbasimoshaei, A., Huisman, et al  
SPRINGER INTERNATIONAL PUBLISHING AG.2022: 337-339

- **Conductive hydrogel films produced by freestanding electrophoretic deposition and polymerization at the interface of immiscible liquids** *COMPOSITES SCIENCE AND TECHNOLOGY*

Joung, Y., Ramirez, R. B., Bailey, E., Adenekan, R., Buie, C. R.  
2017; 153: 128-135