Mia E. Hoffman

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EDUCATION

2021 – Present	**PhD, Mechanical Engineering**, University of Washington, Seattle Advisors: Dr. Kat Steele and Dr. Heather Feldner Research: *Mobility and Accessible Play Technologies for Young Children*
2017 – 2021	**BS, Mechanical Engineering**, University of Notre Dame, Notre Dame, IN Advisor: Maria Holland | Minor: Bioengineering Senior Thesis: *Computational Study on the Mechanics of Growth and Brain Folding of Non-human Primate Brains.*

PUBLICATIONS

[1] **Hoffman, Mia E.**, Katherine M. Steele, Jon E. Froehlich, Kyle N. Winfree, and Heather A. Feldner. "Off to the Park: A Geospatial Investigation of Ride-on Car Usage." *Submitted.*

[2] **Hoffman, Mia E.**, Katherine M. Steele, Kyle N. Winfree, and Heather A. Feldner. "The Impact of the Built Environment on Early Power Mobility Access." UrbanAccess'22 Workshop at ASSETS. https://accessiblecities.github.io/UrbanAccess2022/#accepted-papers

[3] Demirci, Nagehan, **Mia E. Hoffman**, and Maria A. Holland. "Systematic cortical thickness patterns in primates suggest a universal physical law of folding." *Submitted.*

[4] Darayi, Mohsen, **Mia E. Hoffman**, John Sayut, Shuolun Wang, Nagehan Demirci, Jack Consolini, and Maria A. Holland. 2021. "Computational Models of Cortical Folding: A Review of Common Approaches." *Journal of Biomechanics.* 2021. https://doi.org/10.1016/j.jbiomech.2021.110851.

PRESENTATIONS

Oral Presentations

[1] **Hoffman, ME.,** Steele KM., Winfree KN., Feldner HA. "Why Can't I go to the Park?" A Geospatial Analysis of How the Built Environment Impacts Adapted Ride-on Car Use". International Seating Symposium, April 13-15, 2023, Pittsburgh, PA.

[2] **Hoffman, ME.**, Steele KM., Winfree KN., Feldner HA. "A Geospatial Investigation of Adapted Ride-on Car Usage and the Lived Environment". Justys F. Lehmann Symposium, June 2, 2022, Seattle, WA.

[3] **Hoffman, ME.**, Holland, MA. "Analyzing the Cortical Thickness of the Primate Brain using Magnetic Resonance Imaging". WE20, November 2-13, 2020, Virtual Meeting.

Poster Presentations

[1] **Hoffman, ME.**, Campos Zamora D., Froehlich, JE. Steele, KM. Feldner, HA. ""Turn right here": A Quantitative Approach to Testing the Efficacy of Novel Steering Modifications for Adapted Ride-on Cars". International Seating Symposium, April 13-15, 2023, Pittsburgh, PA.

[2] **Hoffman, ME.**, Steele KM., Winfree KN., Feldner HA. ""Watch where I am going": a geospatial investigation of adapted ride-on car usage". AACPDM, September 21-24, 2022, Las Vegas, NV.

[3] **Hoffman, ME.**, Steele KM., Winfree KN., Feldner HA. "A Geospatial Investigation of Adapted Ride-on Car Usage and the Lived Environment". CREATE Community Day & Research Showcase, June 8, 2022, Seattle, WA.

[4] **Hoffman, ME.**, Feldner HA., Steele, KM. "Grab the Wheel: Steering Modifications for Adapted Ride-on Cars". NWBS 2022, May 20-21, 2022, Pullman, WA.

[5] **Hoffman, ME.**, Demirci N., and Holland, MA. "The Relation Between Cortical Thickness and Morphology: A Study of Nonhuman Primate Brains". SB3C 2021, June 14-18, 2021, Virtual Meeting.

[6] **Hoffman, ME.**, Sayut, J., Holland, MA., "Analyzing the Cortical Thickness of Mammalian Species through the Segmentation of Magnetic Resonance Imaging Scans". SB3C 2020, June 17-20, 2020, Virtual Meeting.

[7] **Hoffman, ME.**, Holland, MA., "Analyzing the Cortical Thickness of the Primate Brain through the Segmentation of Magnetic Resonance Imaging". Neurizons 2020, May 26-29, 2020, Virtual Meeting.

[8] **Hoffman, ME.**, Carney, LH., "The Effects of a Precursor Noise on the Intelligibility of Speech Stimuli". Undergraduate Research and Experiential Learning Showcase, November 9, 2020, Notre Dame, IN.

[9] **Hoffman, ME.**, Mehta, AH., Allen, EJ., Oxenham, AJ., "Locating Pitch in the Brain Using Harmonic and Inharmonic Tones". Summer Undergraduate Research Symposium, August 7, 2019, Minneapolis, MN.

[10] **Hoffman, ME.**, Carney, LH., "The Effects of a Precursor Noise on the Intelligibility of Speech Stimuli". Notre Dame Scholars Visit Poster Fair, March 25, 2019, Notre Dame, IN.

[11] **Hoffman, ME.**, Carney, LH., "The Effects of a Precursor Noise on the Intelligibility of Speech Stimuli". Kearns Research Symposium, July 30, 2018, Rochester, NY.

[12] **Hoffman, ME.**, Rumpf, W., Buhimschi, IA., Ray, W., "Using Cluster Analysis to Discover Protein Groupings that Identify Preeclampsia". End of Summer Poster Competition, August 5, 2016, Columbus, OH.

RESEARCH EXPERIENCE

Sep 2021 - present	**Biomechanics & Accessibility** Ability & Innovation Lab, University of Washington Co-advisor: Katherine M. Steele IMPACT Collaboratory, University of Washington Co-advisor: Heather A. Feldner *Mobility and accessible play technology for young children*
Aug 2018 – May 2021	**Medical Imaging & Solid Mechanics** CoMMaND Lab, University of Notre Dame Advisor: Maria Holland *Computational mechanics of the non-human primate brain*
May – Aug 2019	**Auditory Neuroscience & MRI,** NSF Neuroimaging REU Auditory Perception and Cognition Lab, University of Minnesota Advisor: Andrew Oxenham *Identification of "pitch-sensitive regions" of the brain*

May – Aug 2018 **Auditory Neuroscience**, NSF Advancing Human Health, From Nano to Network REU
Carney Lab, University of Rochester, Rochester, NY
Advisor: Laurel H. Carney
Impact of a precursor noise on the efferent auditory system

June – Aug 2016 **Data-Driven Methods**, Future Matters Program
Battelle Center for Mathematical Medicine, Nationwide Children's Hospital
Advisor: William C. Ray
Identification of proteins for the diagnosis of preeclampsia

TEACHING & MENTORING

Winter & Spring 2021 *Mentor* **HuskyADAPT Mechanical Engineering and Bioengineering Capstone** (University of Washington, Seattle, WA)

Spring 2021 *Teaching Assistant* **Introduction to Electrical Engineering and Embedded Systems** (University of Notre Dame, Notre Dame, IN)

- Taught experimental physical computing lab sessions
- Graded 120 lab reports weekly

INVITED TALKS

Nov 2022 Meta Day, University of Washington, Seattle, WA.
Oct 2022 Oregon Health and Science University Seminar Guest Speaker, virtual.

PROFESSIONAL DEVELOPMENT

Skills Development Workshop 2022 NextProf Pathfinder Workshop, Oct 2-4, 2022, San Diego, CA. Link.

HONORS & AWARDS

2022 Honorable Mention for Accessibility, CREATE Accessible and Inclusive Textiles Hackfest
2021 Ron and Wanda Crockett Endowed Fellowship in Mechanical Engineering
2021 University of Notre Dame Bioengineering Outstanding Undergraduate Researcher Award
2021 National Science Foundation Graduate Research Fellowship Link
2019, 2020 Dean's List, University of Notre Dame
2018 Sorin Fellow, University of Notre Dame
2018 Dean's Citation for Broadening Participation in Research, University of Rochester
2017 Glenna R. Joyce Scholarship, Merit Scholarship, University of Notre Dame

SERVICE

HuskyADAPT, University of Washington Link	*Design Chair*	*June 2022 – present*
Mechanical Engineering Graduate Student Association	Social Chair	March 2022 – present
	Member	July 2021 – March 2022

(MEGA), University of Washington		
Enable ND, University of Notre Dame Link	President	2020 - 2021
	Vice-President	2019
	Director of Research and Development	2018 - 2019
Society of Women Engineers, University of Notre Dame	Director of Diversity	2020-2019
	Director of Outreach	2018-2019