BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Blake Edwin Perkins

eRA COMMONS USER NAME (credential, e.g., agency login): BPERKINS1

POSITION TITLE: Clinical Assistant Professor, Lead Clinician – Assistive & Adaptive Technology Program

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
Western Kentucky University; Bowling Green, KY	B. S.	5/2014	Exercise Science
Western Kentucky University; Bowling Green, KY	D.P.T.	5/2019	Doctor of Physical Therapy

A. Personal Statement

As a physical therapist, researcher, and individual living with paraplegia, I bring a unique and deeply integrated perspective to the development, provision, and clinical implementation of assistive and rehabilitation technologies. Following a spinal cord injury in 2011, I have spent over a decade as both a clinician and stakeholder in the rehabilitation technology landscape. This dual vantage point informs my commitment to advancing inclusive, evidence-based, and user-informed solutions for individuals with life-altering disabilities.

I serve as Lead Clinician of the Assistive & Adaptive Technology Program and Director of the Adaptive Life Technologies (ALT) Lab at The MetroHealth System. In this role, I developed and now oversee a dynamic clinical model that prioritizes community-collaborative, peer-informed, and funding-agnostic assistive technology provision for individuals with spinal cord injury and related conditions. I also serve on the interdisciplinary MetroHealth Tetraplegia Management Clinic team, working alongside engineers, physicians, therapists, and researchers to implement cutting-edge strategies to restore upper extremity function and independence.

As a member of the MetroHealth Center for Rehabilitation Research and the Cleveland FES Center, my research portfolio includes both PI-led and collaborative projects spanning autonomous mobility, adaptive computing, and technology-enabled upper extremity rehabilitation. Notably, I was awarded the Craig H. Neilsen Foundation Allied Health Professional Research Award for work addressing delays and disparities in wheelchair repair—a critical area affecting mobility, independence, and quality of life in SCI. I have also contributed to the evaluation of neuroprosthetic systems, advanced mobility technologies, and user-centered outcome measures.

Through my academic appointment at Case Western Reserve University and my leadership in resident and fellow education, I am committed to training the next generation of rehabilitation professionals to approach assistive technology provision with clinical rigor, ethical awareness, and lived-experience insight. My overarching goal is to close the gap between innovation and implementation—ensuring that breakthrough rehabilitation technologies are not only developed but delivered meaningfully and sustainably to those who need them most.

B. Positions, Scientific Appointments, and Honors

Positions and Employment:

- 2025–Present: Clinical Assistant Professor, Case Western Reserve University School of Medicine, Dept. of PM&R
- 2020–Present: Lead Clinician, Assistive & Adaptive Technology Program, The MetroHealth System
- 2020–Present: Research Investigator, MetroHealth Center for Rehabilitation Research
- 2019–2020: Staff Physical Therapist, Sports Rehabilitation Consultants

Scientific & Program Roles:

- Director and Founder – Adaptive Life Technologies Lab, MetroHealth PM&R
- Board Member & Clinical Consultant – Adaptive Technologies (2024–present)
- Consultant – Guidepoint (Complex Rehab Technology) (2024–present)
- Clinical Faculty – MetroHealth Tetraplegia Management Clinic

Honors and Awards:

- ASCIP Innovation Lab Fabrication Award – “Snap and Go” Wheelchair Mount (2024)
- Craig H. Neilsen CO&I Grant Awardee – Adaptive Technology Provision in SCI (2022)
- ASIA Allied Health Professional Research Award – “Reversing the Trend” (2022)
- ASCIP Early Career Interdisciplinary Essay Winner (2021)
- Excellence in Undergraduate Research, Western Kentucky University (2014)

C. Contributions to Science

1. Assistive Technology Access and Innovation

My work focuses on bridging clinical and community spaces to address technology access barriers for people with disabilities. Through initiatives like the ALT Lab and collaborations with nonprofit vendors, I have helped create funding-agnostic care models and award-winning adaptive solutions.

- Chepla KJ, Perkins B, Bryden AM, Keith MW. *Cureus.* 2024 Jan;16(1):e52447. PMID: 38371044; PMCID: PMC10871158.

- Cheng C, Perkins B, Keith M, Bryden A, Chepla KJ. *J Hand Surg Eur Vol.* 2023 Nov. doi:10.1177/17531934231214105.

2. Neurorehabilitation and Upper Limb Restoration

My contributions include evaluation and rehabilitation following nerve transfers, clinical education on UE management in tetraplegia, and participation in studies assessing neuromodulation for upper limb restoration.

- Contributing author, *Flap Neurotization in Reconstructive Surgery* (Springer Nature, 2021)

- Contributor – *MyndMove Neuromodulation Therapy* (2020–2021)

3. Research Translation and Peer-Clinician Models

As a person with lived experience and a clinical provider, I have advocated for inclusion of peer-informed models in clinical research and policy development. My work emphasizes equitable deployment of CRT and policy engagement.

- Perkins B et al. “Periodized Rehabilitation in Home Health” (Submitted, 2025)

- Perkins B, Petrie T et al. “Analyzing Gaps in AT for Tetraplegia” (In preparation, 2025)

D. Ongoing and Recently Completed Research Support

- **PI** – *Reversing the Trend: Clinical Strategy to Mitigate the Incidence & Impact of Wheelchair Repairs in SCI*
  Sponsor: Craig H. Neilsen Foundation Allied Health Professional Research Award (2022–present)

- **PI** – *Clinical Trials for DROVE: Autonomous Navigation System for Power Wheelchairs*
  Sponsor: Control Bionics (IRB approved, 2024–present)

- **Grant Advisor** – *Adaptive Intimacy Project*
  Sponsor: Christopher & Dana Reeve Foundation (2024–present)

- **Coordinator** – *Navigating Care Transitions after SCI*
  PI: Anne Bryden, PhD, OTR/L

- **Research Therapist** – *GRANND (Grasp-Release Assessment of a Networked Neuroprosthesis Device)*
  NCT02329652; PIs: Peckham, Keith, Kilgore, Hoyen

- **Research Therapist (2020–2021)** – *PT-OT Basic Data Set Validation* and *MyndMove Neuromodulation Trial*
  Sponsor: MetroHealth Center for Rehabilitation Research

E. Selected Peer-Reviewed Publications

1. Chepla KJ, Perkins B, Bryden AM, Keith MW. “Paralyzed Nerve Transfer in SCI: Proof of Concept.” *Cureus.* 2024; 16(1):e52447.

2. Cheng C, Perkins B, Keith M, Bryden A, Chepla KJ. “Preoperative Evaluation in SCI Nerve Transfer.” *J Hand Surg Eur Vol.* 2023.

3. Perkins B, Judge L, Hoover D. “Periodized Rehabilitation in Home Health” (Submitted, 2025).

4. Perkins B, Petrie T et al. “Gaps in Assistive Tech for Tetraplegia”(Submitted, 2025).