Stanford

Blynn L. Shideler III

MD Student with Scholarly Concentration in Bioengineering, expected graduation Spring 2025

Curriculum Vitae available Online

Bio

BIO

Blynn Shideler grew up in Pittsburgh and managed a local Dunkin Donuts before starting college at Washington & Jefferson College. At Washington & Jefferson, he wrestled in the 2015 NCAA D-III national team championships and studied neurological movement disorders as a Magellan Scholar at the University of Paris. Blynn earned a B.A. in physics & French from Washington & Jefferson before enrolling in a dual degree program at Columbia University. At Columbia, Blynn sang for the Columbia Chamber Choir, volunteered in the Mount Sinai St. Luke's Hospital Emergency Department, and developed medical robotics with the Columbia Robotics & Rehabilitation Laboratory while pursuing a B.S. in biomedical engineering. Throughout his undergraduate studies, Blynn spent a summer as a visiting student at McGill University and completed several global research fellowships, including positions at Hangzhou Dianzi University and Victoria University of Melbourne, where he studied medical robotics and developed technologies for pediatric physical disabilities. Blynn is the lead inventor on multiple patent applications for assistive technologies to help children with movement disorders.

After graduating from Columbia in 2019, Blynn spent a year at the NIH Clinical Center's Rehabilitation Medicine Department working on the NIH exoskeleton for pediatric cerebral palsy. During his year at NIH, Blynn also volunteered as the Varsity Wrestling Coach at Rockville High School. At Stanford, Blynn created the Pediatric Rehabilitation Technologies Program, a project funded by the FDA's Pediatric Device Consortium that develops assistive devices for individuals with physical impairments. Through this program, Blynn started a company called BUDI, an Apple Watch technology for remote physical therapy, and directs a clinical study at Stanford Children's Health using electrical stimulation to improve walking biomechanics. Blynn's long-term goal in medicine is to pursue a career in pediatric surgery and continue developing medical devices for children with disabilities. In his free time, he enjoys walking dogs on Wag Walking and live-streaming Runescape on Twitch.

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Member, American Pediatric Surgery Association (APSA) (2023 - present)
- Member, Child Neurology Society (CNS) (2022 - present)
- Member, American Academy of Physical Medicine & Rehabilitation (AAPM&R) (2021 - present)

MEMBERSHIP ORGANIZATIONS

- Phi Beta Kappa, Member
- Tau Beta Pi Engineering Honor Society, Member
- Sigma Pi Sigma Physics Honor Society, Member
- Pi Delta Phi French Honor Society, Member

EDUCATION AND CERTIFICATIONS

- Bachelor of Arts, Washington & Jefferson College (2019)
- Bachelor of Science, Columbia University (2019)
- Visiting Student, McGill University , French (2016)

CLERKSHIPS

- 2023 Spring - SURG 300A Surgery Core Clerkship Surgery
- 2023 Summer - SURG 338W Advanced Surgery Clerkship (Away), Harvard Medical School Surgery
- 2023 Summer - SURG 398W Clinical Elective in Surgery (Away), Columbia - NYP Surgery
- 2023 Summer - SURG 316A Pediatric Surgery Clerkship Surgery
- 2023 Winter - NENS 301A Neurology Core Clerkship Neurology & Neurological Sci
- 2023 Winter - PSYC 300A Psychiatry Core Clerkship Psychiatry
- 2023 Winter - SURG 300A Surgery Core Clerkship Surgery
- 2022 Autumn - ORTHO 304A Physical Medicine and Rehabilitation Clerkship Orthopaedic Surgery
- 2022 Autumn - PEDS 300A Pediatrics Core Clerkship Pediatrics
- 2022 Summer - FAMMED 301A Family Medicine Core Clerkship Family & Community Medicine
- 2022 Summer - MED 300A Internal Medicine Core Clerkship Medicine

SERVICE, VOLUNTEER, AND COMMUNITY WORK

- Emergency Medicine Department Volunteer (October 2017 - May 2019)
- Vaccination Volunteer (2020)

PATENTS

- Blynn Shideler, Simon Taylor, Rezaul Begg. "United States Patent 10,722,149 Real-Time Biofeedback Rehabilitation Tool Guiding and Illustrating Foot Placement for Gait Training", Victoria University, Jul 28, 2020
- Blynn Shideler, Elizabeth Shrout, Katherine Cavanaugh, Rachel Alexander, Maxime Robert. "United States Patent 62890265 Limb Motion Tracking Biofeedback Platform and Method of Rehabilitation Therapy for Patients with Spasticity", The Trustees of Columbia University in the City of New York, Aug 22, 2019

LINKS

- BUDI: Apple Watch Technology for Cerebral Palsy: https://budiapp.webflow.io

Research & Scholarship

CURRENT CLINICAL INTERESTS

- Pediatric Surgery
- Pediatric Rehabilitation
- Child Neurology

LAB AFFILIATIONS

- Emily Kraus, Pediatric Rehabilitation Technologies Program (6/1/2021)
- Scott Delp, Neuromuscular Biomechanics Laboratory (6/1/2021)

Professional

WORK EXPERIENCE

- Biomedical Engineering Research Fellow - University of Paris (May 2015 - August 2015)
- Visiting Student of Research - Hangzhou Dianzi University (May 2016 - July 2016)
- Visiting Research Fellow - Victoria University (May 2017 - August 2017)
- Undergraduate Researcher - Columbia Robotics & Rehabilitation Laboratory (October 2017 - May 2019)
- IRTA Research Fellow - National Institutes of Health (June 2019 - July 2020)

Publications

PUBLICATIONS

- **Toward a hybrid exoskeleton for crouch gait in children with cerebral palsy: neuromuscular electrical stimulation for improved knee extension.** *Journal of neuroengineering and rehabilitation*
  Shideler, B. L., Bulea, T. C., Chen, J., Stanley, C. J., Gravunder, A. J., Damiano, D. L.
  2020; 17 (1): 121
- **Effects of diabetes mellitus on step length and minimum toe clearance adaptation.** *Biomedical engineering online*
  Martin, S., Taylor, S. B., Shideler, B. L., Ogrin, R., Begg, R.
  2023; 22 (1): 43
- **Overground gait training using virtual reality aimed at gait symmetry.** *Human movement science*
  Shideler, B. L., Martelli, D., Prado, A., Agrawal, S. K.
  2021; 76: 102770
- **An open source graphical user interface for wireless communication and operation of wearable robotic technology** *JOURNAL OF REHABILITATION AND ASSISTIVE TECHNOLOGIES ENGINEERING*
  Tucker, L. A., Chen, J., Hammel, L., Damiano, D. L., Bulea, T. C.
  2020; 7: 2055668320964056
- **Age effects on step adaptation during treadmill walking with continuous step length biofeedback** *GAIT & POSTURE*
  Mehdikhani, M., Taylor, S., Shideler, B. L., Ogrin, R., Begg, R.
  2020; 80: 174–77
- **Age effects on step adaptation during treadmill walking with continuous step length biofeedback** *Gait & Posture*
  Mehdikhani, M., Taylor, S., Shideler, B. L., Ogrin, R., Begg, R.
  2020; 80: 174-177
- **A flexible real-time biofeedback tool that trains gait adaptability** *World Congress of the International Society of Biomechanics*
  Mehdikhani, M., Taylor, S., Begg, R., Shideler, B. L., Ogrin, R.
  Research Gate.2019
- **Real-time biofeedback rehabilitation tool guiding and illustrating foot placement for gait training** *United States Patent Application Publication*
  Shideler, B. L., Taylor, S., Begg, R.
  2017
- **An Automated Recording Method in Clinical Consultation to Rate the Limp in Lower Limb Osteoarthritis** *PLOS ONE*
  Barrois, R., Gregory, T., Oudre, L., Moreau, T., Truong, C., Pulini, A., Vienne, A., Labourdette, C., Vayatis, N., Buffat, S., Yelnik, A., de Waele, C., Laporte, et al
  2016; 11 (10): e0164975