

KRISTEN E. LIPSCOMB, PH.D.

Forensic Biomechanist / Biomechanical Engineer
and
Fully Accredited Traffic Accident Reconstructionist

Lipscomb Forensics, LLC
5938 SW Amberwood Ave.
Corvallis, OR 97333
Phone: 585-314-3725
Email: kel@lipscombforensics.com

Education

B.S., Mechanical Engineering with Honors, University of Delaware, Newark, DE Honors: Cum Laude Focus: Biomedical Engineering Minor: Mathematics	June 2006
M.S. Biomedical Engineering, University of Minnesota, Twin-Cities, Minneapolis, MN Focus: Gait analysis and modeling of the human foot	May 2008
Ph.D. Biomedical Engineering, University of California, Davis, Davis, CA Focus: Computational modeling and spine mechanics	January 2014

Experience

University of Delaware, Newark, DE Undergraduate Researcher Digitized CT & MRI images of the knee	2002-2006
University of Minnesota, Gillette Children's Hospital, Minneapolis, MN Research Assistant Conducted gait and clinical motion analysis	2006-2008
University of California, Davis DynaaTECC Lab, Davis, CA Research Assistant Created computational models of the human spine Mechanical testing of the human cervical spine	2008-2014
Biomechanical Engineer, Hayes & Associates, Inc., Corvallis, OR Consultant in accident reconstruction and injury biomechanics	2014-2024
Coach, Pure Endurance, Philomath, OR	2018-Present
Owner, Lipscomb Forensics, LLC, Corvallis, OR	2024-Present

Professional Affiliations

American Society for Testing Materials (ASTM)
Committee F13 on Pedestrian/Walkway Safety and Footwear
International Society of Biomechanics (ISB)
Accreditation Commission for Traffic Accident Reconstruction

Specialized Training

Institute of Police Technology and Management (IPTM), Portland, OR Advanced Traffic Crash Investigation	Oct 2014
FARO Technologies Laser Scanning Training	July 2015
Excel Tribometers CXL T Certification Program (Slip Resistance Training)	Oct 2016
Institute of Police Technology and Management (IPTM) Pedestrian/Bicycle Crash Investigation – Level I	May 2018
BOT-3000 E Training Certification (Walkway Management Group)	Feb 2020
Advanced Crash Reconstruction Utilizing Human Factors Research (NUCPS)	Aug 2020
AXON Investigate Operator Training	July 2022
AXON Investigate Examiner Training	July 2022
Click3D Photogrammetry (Ai2-3D)	Apr 2024
Advanced Photogrammetry for Collision Reconstruction (Lightpoint Scientific)	Dec 2024
AXON Investigate Operator/Examiner Recertification	Aug 2025
Event Data Recorder Use in Traffic Crash Reconstruction- Level 1 (IPTM)	Oct 2025
2026 Forensic Photography Symposium	Feb 2026

Certifications

Certified Accident Reconstructionist. Accreditation Commission for Traffic Accident
Reconstruction (ACTAR #2896)
Walkway Safety Certification, University of North Texas
CXL T Certification, Excel Tribometers
FARO Focus 3D Scanner Certification Program
Road Runners Club of America (RRCA) Level I Certified Coach
IRONMAN Certified Coach

Positions Held and Services

	2010-2011
Vice President, Biomedical Engineering Student Association. Davis, CA	2011-2013
President, Biomedical Engineering Student Association. Davis, CA	2011-2013
BME Alumni Seminar Series Committee Member. Davis, CA	2013-2017
Volunteer, Perry Initiative. Sacramento, CA, San Francisco, CA, Beaverton, OR	2016
Coach, Girls on the Run Willamette Valley, Corvallis, OR	2018
Industry Advisory Committee, University of Portland, Portland, OR	

Honors and Awards

W. Francis Lindell Award to the Distinguished Junior	2005
Tau Beta Pi, Engineering Honor Society	
Woman of Promise	2005
W. Francis Lindell Award to the Distinguished Senior	2006
Outstanding Teaching Assistant Award for Outstanding Service	2008
TATRC Grand Challenge Finalist, UC Bioengineering Symposium	2010
Outstanding Teaching by a Graduate Student	2011
Floyd and Mary Schwall Dissertation Year Fellowship	2012-2013

Publications

1. Lipscomb, KE, Sarigul-Klijn N, Klineberg E, Mohan V. Biomechanical Effects of Human Lumbar Discography: In-vitro experiments and their finite element validation. JSDT 2014.
2. Lipscomb, KE, Sarigul-Klijn N, Klineberg E. Characterization of Lumbar-Level Spinal Fusion on the Whole Spine Under Vibrations. ASME. ASME International Mechanical

Engineering Congress and Exposition, Volume 3: Biomedical and Biotechnology Engineering:V003T04A084.

3. Power, ED, Lipscomb, KE, Soicher, MA. Chapter 48 – Anthropometric modeling in forensics. In: Digital Human Modeling and Posturography. (eds., S. Scataglini and G. Paul) Academic Press, p. 633-642, 2019.

Patents

1. Roberto, R., Lipscomb, K., Leung, E., Barragan, R. “Method and device for restabilization with axial rotation of the atlantoaxial junction” 2017, US Patent No. 9662142

Invited Presentations

Reliability of a multi-segment foot model. 13 th Annual meeting of the Gait and Clinical Motion Analysis Society (poster) Richmond, VA	April 2008
Reliability of the Subtalar Joint Neutral Position. 13 th Annual meeting of the Gait and Clinical Motion Analysis Society (poster) Richmond, VA	April 2008
Effects of excessive loading conditions on human spine instability and disc damage University of California Systemwide Bioengineering Symposium. Davis, CA	June 2010
Experimentally Validated Computational Simulation of Lumbar Spine Intervertebral Disc Puncture Annual International Mechanical Engineering Congress and Exposition Denver, CO	Nov 2011
Experimentally Validated Computational Simulation of Lumbar Spine Intervertebral Disc Puncture 1 st Annual Biomedical Engineering Graduate Student Conference Davis, CA	May 2012
Simulation of the Whole Human Spine using Finite Elements: p & h Version Convergence American Society of Mechanical Engineers Summer Bioengineering Conference Sunriver, OR	June 2013
Characterization of lumbar-level spinal fusion on the whole human spine under vibrations Annual International Mechanical Engineering Congress and Exposition Phoenix, AZ	Nov 2016
Forensic Engineering and Biomechanics University of Portland, Biomechanics course guest lecturer Portland, OR	Dec 2017

Revised 2/20/26