Zhenyuan Zhang

Email: Z.Zhang@ljmu.ac.uk | Research Profile: ResearchGate
Nationality: China | Gender: Male
Address: Tom Reilly Building, Byrom Street, Liverpool, L3 3AF, UK

Education

2/2023 – Present **Ph.D. candidate in Sport Biomechanics**
Liverpool John Moores University, Liverpool, UK
Supervisors: Prof. Mark Lake, Dr. Mark Robinson, Dr. Jasper Verhuel
Research scopes: Human movement biomechanics, wearable technology, musculoskeletal modelling.

9/2020 – 11/2021 **Master of Science in Sport and Clinical Biomechanics**
Liverpool John Moores University, Liverpool, UK
Grade: Distinction (72%, GPA equivalent to 3.81/4.0)
Supervisor: Prof. Mark Lake
Master's thesis: The effect of footwear midsole thickness on foot strike patterns and running biomechanics.

9/2016 – 7/2020 **Bachelor of Education in Human Movement Science**
Chengdu Sport University, Chengdu, China
Supervisor: Dr. Guohui Liu
Bachelor's dissertation: A kinematic analysis of basketball breakthrough movement for professional high school basketball players.

Grants and Scholarships

4/2023 **Industrial Research Grant**
Sponsor: SportScientia Ltd, UK
Value: GBP £60,636
Duration: 4 years

4/2023 **Postgraduate Research Scholarship**
Awarder: Research Institute for Sport and Exercise Science (RISES), Liverpool John Moores University, UK
Value: GBP £
Duration: 3 years

9/2020 **Postgraduate International Achievement Scholarship**
Awarder: Liverpool John Moores University, Liverpool, UK
Value: GBP £3,000
Duration: 1 year

Research Experience

3/2022 – 6/2022 **Graduate Research Assistant**
Biomechanics Laboratory, Liverpool John Moores University, UK
& New Balance Athletics, Inc., USA
Principal Investigator: Prof. Mark Lake
Assisted in a commercial project to investigate the effect of systematically modified running footwear with different carbon fiber plates and EVA foam layers inserted at midsole on the stability of human movement.

11/2021 – 3/2022 **Graduate Research Assistant**
Biomechanics Laboratory, Liverpool John Moores University, UK
& SportScientia Ltd., UK
Principal Investigator: Prof. Mark Lake
Assisted in a pilot project to develope a smart footwear insole for athletic shoes and its validation using inertia measurement units (IMUs), optical motion capture and instrumented treadmill.

7/2021 – 11/2021 **Graduate Research Assistant**
Biomechanics Laboratory, Liverpool John Moores University, UK
& New Balance Athletics, Inc., USA
Principal Investigator: Prof. Mark Lake
Assisted in a commercial project in collaboration with New Balance Athletics, USA, investigating the effect of different football boot studs on the performance of football-related tasks.

3/2021 – 9/2021 **Master's Research Project**
Biomechanics Laboratory, Liverpool John Moores University, UK
& New Balance Athletics, Inc., USA
Supervisor: Prof. Mark Lake
Undertook a major research project for the master's thesis focusing on how the footwear with systematically modified midsole thickness affect the human running biomechanics and neuromuscular adaptations in lower limb joint stiffness.

10/2019 – 5/2020 **Undergraduate Internship**
Sport Biomechanics Research Group, Chengdu Sport University, China
Participated in developing a marker-less motion capture program named "3D-Pose" using MATLAB and Python.

Teaching and Mentoring

4/2023 – Present **Research Project Supervisor**
School of Sport and Exercise Science, Liverpool John Moores University, UK

- Alex Reeves (Undergraduate, 2023): The biomechanical effect of carrying weight on soldiers during prolonged running.
- Georgina Gregory (Master, 2023): Effects of fatigue on lower limb injuries, pre and post netball match.

11/2021 – Present **Graduate Teaching Assistant**
School of Sport and Exercise Science, Liverpool John Moores University, UK

- 5103SPOSCI: Biomechanical Principles.
- 6100SPOSCI: Major Project in Sport and Exercise Science.
- 7112SPOSCI: Technical Training in Biomechanics.
- 7116SPOSCI: Clinical Gait Analysis.
- 7111SPOSCI: Current Issues in Biomechanics.

Peer-Reviewed Publications

Journal Articles **Zhang, Z.** and Lake, M. (2022). A re-examination of the measurement of foot strike mechanics during running: the immediate effect of footwear midsole thickness. *Frontiers in Sports and Active Living* 4:824183. DOI: 10.3389/fspor.2022.824183. PMID: 35557980. PMCID: PMC9086850.

Conference Papers **Zhang, Z.** and Lake, M. (2022). A comparison of unmatched and matched filtering approach for knee joint stiffness calculation during running. Oral presentation at *40th conference of International Society of Biomechanics in Sports (ISBS)*, 19 – 23 July 2022, Liverpool, UK. Available at: https://commons.nmu.edu/isbs/vol40/iss1/195.

Zhang, Z. and Lake, M. (2023). Rate of knee flexion at the instant of landing during running can influence initial knee joint stiffness estimates due to running shoe cushioning. *50th congress of International Society of Biomechanics (ISB)*, 31 July – 3 August 2023, Fukuoka, Japan (submitted).

Professional Membership & Certificates

1/2023 – Present	Member of International Society of Biomechanics
1/2023 – Present	Member of International Society of Biomechanics in Sports
9/2021	Certificate of '3is' Training Program for Teaching in Higher Education, Liverpool John Moores University, UK
7/2020	The Awards of Excellent Graduates, Chengdu Sport University, China

Academic References

Mark Lake, Ph.D.
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Liverpool John Moores University
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Mark Robinson, Ph.D.
Assoc. Professor of Biomechanics
Liverpool John Moores University
Email: m.a.robinson@ljmu.ac.uk