Dr. Lisa Alcock, BSc (Hons), PGDip, PhD, FHEA

QUALIFICATIONS

2022:   AdvanceHE Professional Development Course for External Examiners, Newcastle University, UK
2020:   Fellow of the Higher Education Academy (FHEA)
2008 –2013:   PhD, Musculoskeletal Biomechanics, University of Hull, UK.
2008 –2012:   Postgraduate Diploma in Research Training, University of Hull, UK.
2005 –2008:   BSc. (Hons) Upper Second, Sport and Exercise Science, University of Hull, UK.

EMPLOYMENT HISTORY

2022 – current   Senior Research Associate, Translational and Clinical Research Institute, Newcastle University
2015 – current   Gait Laboratory Manager, Translational and Clinical Research Institute, Newcastle University
2012 – 2022:   Research Associate, Institute of Neuroscience (formerly Institute for Ageing and Health), Newcastle University Institute for Ageing, Newcastle University
2010 – 2011:   Teaching Assistant, Department of Sport, Health and Exercise Science, University of Hull, UK.

FUNDING

1. Professor Taylor (PI), Co-inv: Professor Brooks, **Dr Alcock,** Dr Yarnall, Dr Donaghy, Dr Firbank, Dr Colloby, Dr Schumacher. "CREED PET". Funder: Alzheimer's Research UK, Project duration: 17 months, £264,158.26.
2. Dr Ng (PI), Co-inv: **Dr Alcock,** Dr Newman, Dr Del-Din. "Balance and gait abnormalities in adult patients with mitochondrial disease and spinocerebellar ataxia type 6." Funder: Ataxia UK, Project duration: 12 months, £4,927.60.
3. Dr Barry (PI), Co-Inv: Dr O'Brien, Dr Del Din, **Dr Alcock** & Professor Rochester. "Use of a phone apps to increase activity in people with Parkinson's Disease and older adults: Apps4Activity". Funder: Northumbria internal funding scheme, Project duration: 12 months, £2,730.00.
4. Dr Del Din (PI), Co-inv: Professor Rochester, **Dr Alcock**, Dr Yarnall, Dr Shi, Dr Dodds. "Translating digital healthcare to enhance clinical management: evaluating the effect of medication on mobility in people with PD through remote monitoring tools." Funder: MRC Confidence in Concept, Project duration: 12 months, £80,983.00.
5. Dr Elameer (PI), Co-inv: Dr Pantall, Dr Shafik, **Dr Alcock**. "Development of an MRI protocol to quantify changes of sarcopenia in specific lower limb muscles for the future validation of novel devices for dynamic muscle function monitoring in older adults". Funder: Royal College of Radiologists, Project duration: 6 months, £3,231.55.
6. Professor Rochester (PI), Co-inv: Professor Brooks, Professor Pavese, Dr Firbank, **Dr Alcock**, Dr Pantall. "Developing a dynamic multimodal imaging method to study gait and balance in Parkinson's disease." Funder: PDUK, Project duration: 24 months, £163,513.00.
7. Dr Pantall (PI), Co-inv: Dr Shafik, **Dr Alcock**, Dr Elameer. "Dynamic muscle function monitoring in older adults: development of a novel wearable device to measure muscle function". Funder: ESRC (ISCF Healthy Ageing Catalyst Awards), Project duration: 12 months, £49,301.60.
8. Dr Foster (PI), Collaborators: **Dr Alcock**, Professor Hollands, Dr Yarnall, Professor Rochester, Dr Akpan. "Visual modifications of the home environment to reduce falls in older adults (VISMOD)". Funder: Liverpool Clinical Commissioning Group, Project duration: 6 months, £27,205.00.

SELECTED PUBLICATIONS

1. The AIMM study group; Abouhajar, **Alcock,** Auwerx, Bigirumurame, Bradley, Brown, Campbell, Faitg, Gorman, Lakey, McFarland, Newman, Rochester, Ryan, Smith, Steel, Stefanetti, Su, Taylor, Thomas, Warren & Watson. Acipimox in Mitochondrial Myopathy (AIMM): study protocol for a randomised, double-blinded, placebo-controlled, adaptive design trial of the efficacy of acipimox in patients with mitochondrial myopathy. Trials.
2. Bonci, Salis, Scott, **Alcock,** Bertuletti, Buckley, Caruso, Cereatti, Gazit, Hansen, Schwickert & Mazzà for the Mobilise-D consortium. An algorithm for accurate marker-based detection in healthy and pathological populations during complex motor tasks. Frontiers of Biomedical Engineering and Biomechanics.

3. Rehman, Guan, Shi, **Alcock,** Yarnall, Rochester & Del Din (2022). Investigating the impact of environment and data aggregation by walking bout duration on Parkinson's disease classification using machine learning. Frontiers in Aging Neuroscience.

4. McArdle, Del Din, Morris, **Alcock,** Yarnall, Burn, Rochester & Lawson, and On behalf of the ICICLE-PD study group (2020). Factors influencing habitual activity in Parkinson's disease: considering the psychosocial state and wellbeing of people with Parkinson's and their caregivers. Sensors, 22(3), pp.871.

5. Scott, Bonci, **Alcock,** Hansen, Schwickert, Gazit, Buckley, Cereatti & Mazzà. A quality control check to ensure comparability of stereophotogrammetric data between sessions and systems. Sensors special issue.

6. Mazzà, **Alcock,** Aminian, Becker, Bertuletti, Bonci, Brown, Brozgol, Buckley, Carsin, Causo, Caulfield, Cereatti, Chiari, Chynkiamis, Ciravegna, Del Din, Eskofier, Evers, Garcia Aymerich, Gazit, Hansen, Hausdorff, Helbostad, Hilden, Hume, Paraschiv-Ionescu, Ireson, Keogh, Kirk, Luge, Kock, Küderle, Maetzler, Micó-Amigo, Mueller, Neatrour, Niesson, Palmerini, Pluimgraaff, Reggo, Schwickert, Scott, Sharrack, Sillen, Singleton, Taraldsen, Ullrich, Van Gelder, Vereijken, Vogiatzis, Warmerdam, Yarnall & Rochester (2021). A technical validation protocol for real-world monitoring of gait. *British Medical Journal Open.* 11(12), pp.e050785.

7. Rehman, Zhou, Del Din, **Alcock,** Hansen, Guan, Hortobágyi, Maetzler, Rochester & Lamoth (2021). Gait analysis with wearables can accurately classify fallers from non-fallers: A step towards better management of neurological disorders. *Sensors,* 20(23), pp. 6992.

8. Wilson, Yarnall, Craig, Galna, Lord, Morris, Lawson, **Alcock,** Duncan, Khoo, OBrien, Burn, Taylor, Ray & Rochester (2020). Cholinergic basal forebrain volumes predict gait decline in Parkinson's disease. *Movement Disorders,* 36(3), pp. 611-621.

9. McArdle, Pratt, Buckley, Del Din, Galna, Thomas, Rochester & **Alcock** (2021). Balance impairments as differential markers of dementia disease subtype. *Frontiers in Bioengineering & Biotechnology*, 9, pp. 104.

10. Wilson, **Alcock,** Yarnall, Lord, Morris, Taylor, Burn, Rochester & Galna (2020). Gait progression over six years in Parkinson's disease: effects of age, medication and pathology. Frontiers in Aging Neuroscience, 12: 577435.

11. Rehman, Kloche, Hryniv, Galna, Rochester, Del Din & **Alcock** (2021). Turning detection during gait: Algorithm validation and influence of sensor location and turning characteristics in the classification of Parkinson's disease. *Sensors,* 20(18), pp.5377.

12. Rehman, Buckley, Micó-Amigo, Kirk, Dunne-Willows, Mazzà, Shi, **Alcock,** Rochester & Del Din (2020). Accelerometry based digital gait characteristics for classification of Parkinson's disease: what counts? *IEEE Engineering in Medicine and Biology* (inaugural issue), 1, pp. 65-73.

13. Buckley, **Alcock,** McArdle, Rehman, Del Din, Mazzà, Yarnall & Rochester (2019). The role of movement analysis in diagnosing and monitoring neurodegenerative conditions: Insights from gait and postural control. *Brain Sciences, 9(2),* pp.34.

14. **Alcock,** O'Brien, & Vanicek (2018). Association between somatosensory, visual and vestibular contributions to postural control, reactive balance capacity and healthy ageing in older women. *Healthcare for Women International,* 39(12), pp.1-15.

15. Hunt, Stuart, Nell, Hausdorff, Galna, Rochester & **Alcock** (2018). Do people with Parkinson's disease look at task relevant stimuli when walking? An exploration of eye movements. *Behavioural Brain Research,* 348, pp.82-89.

16. **Alcock,** Galna, Hausdorff, Lord & Rochester, (2018). Gait & Posture Special Issue: Gait adaptations in response to obstacle type in fallers with Parkinson's disease. *Gait & Posture* (61), pp.368-374.

17. **Alcock,** Galna, Perkins, Lord & Rochester, (2018). Step length determines minimum toe clearance in older adults with Parkinson's disease. *Journal of Biomechanics,* 71, pp.30-36.

18. Hickey, Gunn, **Alcock,** Del Din, Godfrey, Rochester, & Galna (2016), Validation of a wearable accelerometer to quantify gait in Spinocerebellar Ataxia Type 6. *Physiological Measurement,* 37(11), pp.N105.

19. **Alcock,** Galna, Lord & Rochester (2016). Characterisation of foot clearance during gait in healthy ageing and people with early Parkinson's disease: Influence of a dual task. *Journal of Biomechanics,* 49(13), pp.2763-2769.

20. **Alcock,** O'Brien & Vanicek, (2015). Biomechanical demands of the transition steps linking level and stair descent gait in older women. *Journal of Biomechanics 48(16),* pp.4191-4197.

21. **Alcock,** O'Brien & Vanicek, (2015). Age-related changes in physical functioning: Correlates between objective and self-reported outcomes. *Physiotherapy,* 101(2), pp.204-213.

22. **Alcock,** O'Brien & Vanicek, (2014). Biomechanical demands differentiate transitioning vs. continuous stair ascent gait in older women. *Clinical Biomechanics*, 29(1), pp.111-118.

23. **Alcock,** Vanicek & O'Brien, (2013). Alterations in gait speed and age do not fully explain the changes in the mechanics of gait associated with older age. *Gait & Posture* 37(4), pp.586-592.