

Mark Connick, Ph.D.

Research Scientist & Sport Performance Consultant

Contact

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[The Conversation](#)

Professional Overview

Dr Mark Connick is a research scientist with expertise in the sciences that underpin human physical performance. Combining knowledge and experience in computer science and digital/wearable technologies, he develops solutions to understand the biomechanical and physiological mechanisms of sports performance in individual athletes and in team sport athletes. His experience extends to research projects funded by the International Paralympic Committee (IPC), Australian Institute of Sport, Queensland Academy of Sport and Swimming Australia. Mark has provided expert reports to World Athletics on the use of technology in sport and he has been an expert witness at the Court of Arbitration for Sport on the same topic. He has obtained over \$1million of industry, not-for-profit and philanthropic funding since 2014. Mark is also passionate about higher education, aspiring to impactful teaching and impactful research outcomes.

Education

Ph.D. Sports Biomechanics,
University of Birmingham, UK,
(2005-2009)

**B.Sc. (HONS) Applied
Sports Science (First Class),**
University of Salford, UK, (2002-
2005)

**B.Sc. (HONS) Computer
Science,** Manchester Metropolitan
University, UK, (1995-1999)

Experience

Postdoctoral Research Fellow, 2023-present, School of Exercise and Nutrition Sciences, Queensland University of Technology, Kelvin Grove.

Visiting Research Fellow, 2023-present, School of Exercise and Nutrition Sciences, Queensland University of Technology, Kelvin Grove.

Developer, 2022-present, Speed Signature.
Speed Signature is a start-up company comprising a "software as a service" (SaaS) web application that uses team based commercial "GPS" units to describe running gait characteristics.

Lecturer, 2020-2022, School of Human Movement and Nutrition Sciences, University of Queensland, Australia

Research Fellow, 2012-2022, School of Human Movement and Nutrition Sciences, University of Queensland, Australia

Course Coordinator (Developing the Elite Athlete), 2018-2022, School of Human Movement and Nutrition Sciences, University of Queensland, Australia

Course Coordinator (Exercise Physiology), 2021-2022, School of Human Movement and Nutrition Sciences, University of Queensland, Australia

Course Coordinator (Sport Science (Anatomy, Biomechanics, Physiology)), 2020-2022, School of Human Movement and Nutrition Sciences, University of Queensland, Australia

Project Manager (2009-2012), *University of Queensland, Australia*
Data Manager (2009), *Cancer Research UK Clinical Trials Unit, University of Birmingham, UK*
Teaching Assistant, (2005-2009), *School of Sport and Exercise Sciences, University of Birmingham, UK*
Personal Trainer, (2005), *Avecia, Manchester, UK*
Sports Administrator and Football/Athletics Coach, *Salford Sports Development (2002-2005), Salford, UK*
Strength & Conditioning, running coach, (2003-2005), *Fairways Health and Squash Club, Manchester, UK*
Computer and Network Engineer/Developer (2002), *iFone Limited, Manchester, UK*
Computer and Network Engineer, (2000-2001), *State Debt Recovery Office, Sydney, Australia*
I.T. Engineer/Developer, (1999-2000), *Sony Computer Entertainment Europe, Liverpool, UK*

Key Collaborations

- International Paralympic Committee
- World Athletics / IAAF
- Manly Sea Eagles
- Brisbane Broncos
- Australian Institute of Sport
- Paralympics Australia
- Queensland Academy of Sport
- Swimming Australia

Startup Company

Chief Technical Officer at Speed
Signature

Recognition of Impact

External Engagement and Highlights

In addition to forming key academic and research collaborations, over the past ten years I have built and maintained many mutually beneficial external partnerships with local, national and international organisations across the government, industry and community sectors. These include:

World Athletics (WA) / IAAF (2019 – 2021)

- I. Expert report: Prepared for World Athletics, Re: Application of Blake Leeper Regarding New Protheses (5 April 2021)
- II. CAS expert witness: Leeper v IAAF, Court of Arbitration for Sport (July 2020)
- III. Supplementary Expert Report Re: Application of Blake Leeper (July 2020)
- IV. Expert report: Leeper v IAAF, Court of Arbitration for Sport 2020/A/6807 (1 June 2020)
- V. Scientific advice on rules and regulations for distance running shoes used in IAAF sanctioned running events (2019-2020)

International Paralympic Committee (IPC) (2013 – Present)

- I. Obtained approx. \$1M of grant funding
- II. Development of evidence-based classification systems for physical impairments
- III. The current IPC policy on Maximum Allowable Standing Height (MASH) was developed based on the outcomes of a 2016 paper on which I was the first author.

Manly Sea Eagles (2022-)

- I. Providing consulting services on using cloud computing services for data analysis and application.
- II. Investigating match and training physical demands

Brisbane Broncos (2018 – 2020)

- I. Providing consulting service on using cloud computing services for data analysis and application.
- II. Investigating match and training physical demands

- Recipient of the UQ Partners in Research Excellence Award, 2019
- International Paralympic Committee Research Fellowship, 2014-2020
- First prize for Best Final Year Performance, University of Salford, 2005

- III. Supervision of a PhD student investigating strength and power during the NRL season.

Brisbane community-based partnership with Queensland Academy of Sport, Paralympics Australia, Swimming Australia (2015 – 2022)

- I. Investigating the impact of performance-focused swimming training on health, physical function and impairment in people with cerebral palsy, high support needs
- II. This project requires engagement with local athletes and their families.

Australian Institute of Sport (AIS) (2016 – 2022)

- I. Supervision of a PhD student based at the AIS investigating the impact of hypertonia, ataxia and athetosis on sprint performance in elite athletes.
- II. Outcomes of this project will provide proof-of-concept evidence necessary for developing a classification system.
- III. The project will also provide an understanding of the biomechanical mechanisms that limit sprint performance in this population.

Funding

2017-2021

\$576,000

Tweedy, S.M, Connick, M.J., Beckman, E.M. IPC Classification Research and Development Centre, International Paralympic Committee (IPC).

2017-2019

\$43,900

Tweedy, S., Connick, M., Beckman E., Philips, E., and Beckman, E, Smale, B. Classification of runners with brain impairment - improving the current system and evaluation of new methods . International Paralympic Committee.

2018

\$16,000

Beckman, E., Tweedy, S., Connick., M., Smale, B. and Phillips, E. Towards evidence-based classification for sprinters with neurological impairment in World Para Athletics. ESSA Applied Sport Science Research Grant.

2014-2017

\$387,000

Tweedy, S.M, Connick, M.J., Beckman, E.M. IPC Classification Research and Development Centre, International Paralympic Committee (IPC).

Research Outputs

Book Chapter

1. Connick, M. J., Beckman, E. and Tweedy S. M. (2018). Evolution and development of best practice in Paralympic classification. In Brittain, I., and Beacom, A., (Eds) Palgrave Handbook of Paralympic Studies, Palgrave Publishing Ltd.

Scholarly Publications

2. Weber, J., Rantalainen, T, Hart, N., Connick, M.J. and Newton, R. (Accepted 30.08.2023). Assessment of ground contact time in the field; evaluation of validity and reliability. *Journal of Strength and Conditioning Research*.
3. Southey, B., Willshire, M., Connick, M. J., Austin, D., Spits, D. and Beckman, E. (In press). Reactive Strength Index as a Key Performance Indicator in Different Athlete Populations – A Systematic Review. *Science & Sports*.
4. Connick, M. J., Beckman, E. and Tweedy, S. (2023). Sprinting with bilateral transtibial running-specific prostheses versus biological limbs – are they comparable? Comments on Beck et al. (2022). *Royal Society Open Science*. <https://doi.org/10.1098/rsos.230086>
5. Riveros-Matthey, C. D., Carroll, T. J., Lichtwark, G. A. and Connick, M., J. (2023). The effects of crank power and cadence on muscle fascicle shortening velocity, muscle activation and joint-specific power during cycling. *Journal of Experimental Biology*, 226 (13): jeb245600. <https://doi.org/10.1242/jeb.245600>.
6. Southey, B., Connick, M., Spits, D., Austin, D., & Beckman, E. (2023). Determining Interday & Intraday Reliability of the 10/5 Repeated Jump Test in

2015

\$34,000

Tweedy, S. M. Beckman, E. M., Connick, M. J., Carroll, T., Johnston, L., Fleming, J., Newcombe, P. and Leverett, M. Does a high-volume, performance-focused swimming program elicit meaningful, therapeutic change in people with cerebral palsy? A proof-of-concept study. Funded by Faculty of Health and Behavioural Sciences (HaBS Collaborative Research Seeding Grant), University of Queensland.

2015

\$56,000

Tweedy, S. M. Beckman, E. M., Connick, M. J., Carroll, T., Johnston, L., Fleming, J., Newcombe, P. and Leverett, M. Does a high-volume, performance-focused swimming program elicit meaningful, therapeutic change in people with cerebral palsy? A proof-of-concept study. Funded by Queensland Academy of Sport.

2015

\$5,000

Tweedy, S. M. Beckman, E. M., Connick, M. J., Carroll, T., Johnston, L., Fleming, J., Newcombe, P. and Leverett, M. Does a high-volume, performance-focused swimming program elicit meaningful, therapeutic change in people with cerebral palsy? A proof-of-concept study. Funded by Australian Paralympic Committee.

2015

\$2,500

Tweedy, S. M. Beckman, E. M., Connick, M. J., Carroll, T., Johnston, L., Fleming, J., Newcombe, P. and Leverett, M. Does a high-volume, performance-focused swimming program elicit meaningful, therapeutic change in people with cerebral palsy? A proof-of-concept study. Funded by Swimming Australia.

2014-2015

\$25,000

Reina, R., Connick, M. J., Beckman, E. M., Tweedy, S. M. Improving reliability and validity of current classification methods for athletes in classes FT5-FT8 and T35-T38. Funded by Agitos Foundation/CPISRA.

Elite Australian Footballers. *International Journal of Strength and Conditioning*, 3(1).

7. Hoffman, BW, Raiteri, BJ, Connick, MJ, Beckman, EM, Macaro, A, and Kelly, VG. (2022). Altered countermovement jump force profile and muscle-tendon unit kinematics following combined ballistic training. *Scandinavian journal of medicine & science in sports*, 32 (10), 1464-1476.
8. Redman, KJ., Wade, L, Whitley, R., Connick, MJ, Kelly, VG., and Beckman, EM (2022). The relationship between match tackle outcomes and muscular strength and power in professional Rugby League. *Journal of Strength and Conditioning Research*, 36 (10), 2853-2861.
9. James, LP, Suchomel, TJ, Comfort, P, Haff, GG., and Connick MJ. (2022). Rate of force development adaptations after weightlifting-style training: the influence of power clean ability. *The Journal of Strength & Conditioning Research*, 36 (6), 1560-1567.
10. Simpson, MJ, Jenkins, DG., Connick, MJ, and Kelly VG. (2022). Relationship Between Training Workloads, Match Workloads, and Match Performance in Elite Netball. *International Journal of Sports Physiology and Performance*, 17 (11), 1599-1605.
11. Redman, K., Wade, L., Kelly, V., Connick, M.J., Beckman, E. (2022). Effects of the Off-Season on Muscular Power in Professional Rugby League. *International Journal of Sports Physiology and Performance* 17 (5), 733-738.
12. Redman, K., Connick, M.J., Beckman, E., Kelly, V. (2021). Monitoring Prescribed and Actual Resistance Training Loads in Professional Rugby League. *The Journal of Strength & Conditioning Research* 35 (6), 1604-1610.
13. Wilson, P., Connick, M.J., Dutia, I., Beckman, E., Macaro, A. and Tweedy, S. (2021). Does sports-specific training improve measures of impairment developed for para sport classification? A multiple-baseline, single-case experiment. *Journal of Sports Sciences* 39 (sup1), 81-90.
14. Davids, C., Raastad, T., James, L., Gajanand, T., Smith, E., Connick, M.J., McGorm, H., Keating, S., Coombes, J., Peake, J. and Roberts, L. (2021). Similar morphological and functional training adaptations occur between continuous and intermittent blood flow restriction. *The Journal of Strength & Conditioning Research* 35 (7), 1784-1793.
15. Redman, K., Wade, L., Kelly, V., Connick, M.J., Beckman, E. (2021). Predicting Rugby League Tackle Outcomes Using Strength and Power Principal Components. *International Journal of Sports Physiology and Performance* 17 (2), 278-285.
16. Russell, S., Jenkins, D., Halson, S., Juliff, L., Connick, MJ., Kelly, V. (2021). Mental Fatigue Over 2 Elite Netball Seasons: A Case For Mental Fatigue To Be Included In Athlete Self-Report Measures. *International Journal of Sports Physiology and Performance* 17 (2), 160-169
17. Redman, K., Wade, L., Whitley, R., Connick, M.J., Kelly, V., Beckman, E. (2021). The Relationship Between Match Tackle Outcomes and Muscular Strength and Power in Professional Rugby League. *The Journal of Strength and Conditioning Research* (e-pub ahead of print).
18. James, L., Haycraft, J., Pierobon, A., Suchomel, T., J. and Connick, M.J. (2020). Mixed versus Focused Resistance Training during an Australian Football Pre-Season. *Journal of Functional Morphology and Kinesiology* 5(4):99.

2013-2014

\$42,900

Tweedy, S.M, Connick, M.J., Beckman, E.M. Evaluating the impact of Neuromusculoskeletal Impairment on running performance in Kenyan Athletes, International Paralympic Committee (IPC).

2013-2014

\$9,856

Lichtwark, G., Barber, L., Tweedy, S., Beckman, E., Connick, M. The influence of resistance training on neuromuscular development and athletic performance in young adults with cerebral palsy. UQ Seed Funding Grant.

2013

\$19,908

Connick M.J. UQ ResTeach funding award. ResTeach competitive UQ scheme providing funds to Research Focused academic staff to engage in teaching.

2012

\$18,756

Connick M.J. UQ ResTeach funding award. ResTeach competitive UQ scheme providing funds to Research Focused academic staff to engage in teaching.

2011

\$9,337

Connick M.J. UQ ResTeach funding award. ResTeach competitive UQ scheme providing funds to Research Focused academic staff to engage in teaching.

Keynote/Invited Lectures

Invited workshop

QUEX International Symposium: Fostering Global Sustainability and Wellbeing, The University of Queensland, Australia, July 2019.

Keynote speaker

Paralympic classification: improving decision-making in an evolving system, International Research Forum on Biomechanics of Running-specific Prostheses, AIST, Tokyo, Japan, February 2018.

Invited speaker

19. Paix, E., Tweedy, S., Connick, M.J. and Beckman, E. (In press). Differentiating maximal and submaximal voluntary strength measures for the purposes of medico-legal assessments and para sport classification: A systematic review. *European Journal of Sport Science* (Accepted 7 Oct 2020).
20. Fiorese, B.A., E.M. Beckman, M.J. Connick, A.B. Hunter, and S.M. Tweedy. (2020) Biomechanics of starting, sprinting and submaximal running in athletes with brain impairment: a systematic review. *Journal of Science and Medicine in Sport* (e-pub ahead of print)
21. Enright, E., Beckman, E., Connick, M.J., Dutia, I., Macaro, A., Wilson, P., O'Sullivan, J., Lavalliere, J-M., Block, T., Johnston, L.M., Panagoda, G. and Tweedy, S. (2020). Competitive sport, therapy, and physical education: voices of young people with cerebral palsy who have high support needs. *British Journal of Sports Medicine* 55(10).
22. James, Lachlan P., Connick, Mark, Haff, G. Gregory, Kelly, Vincent G. and Beckman, Emma M. (2020). The countermovement jump mechanics of mixed martial arts competitors. *Journal of Strength and Conditioning Research* 34 (4) 982-987.
23. Dutia, I. M., Connick, M. J., Beckman, E. M., Johnston, L. M., Wilson, P. J., Macaro, A. and Tweedy, S. M. (2019). Evaluating the Effects of Performance-Focused Swimming Training on People with Cerebral Palsy Who Have High Support Needs - A Study Protocol Using Single-Case Experimental Design. *Brain Impairment* 1-18.
24. Wilson, Paula J., Steadman, Peter, Beckman, Emma M., Connick, Mark J., Carty, Christopher P. and Tweedy, Sean M. (2019). Fitness, function, and exercise training responses after limb salvage with a lower limb megaprosthesis: a systematic review. *PM and R* 11 (5) 533-547
25. Hogarth, L., Nicholson, V., Spathis, J., Tweedy, S., Beckman, E., Connick, M., van de Vliet, P., Payton, C., Burkett, B. J. (in press). A battery of strength tests for evidence-based classification in Para swimming. *Journal of Sports Sciences*.
26. Hogarth, L., Peyton, C., Van de Vliet, P., Connick, M. J., Burkett, B. (In press). A novel method to guide classification of para swimmers with limb deficiency. *Scandinavian Journal of Medicine & Science in Sports*. First published online 30.5.2018. <https://doi.org/10.1111/sms.13229>
27. Nicholson, V. P., Spathis, J.G., Hogarth, L W., Connick, M. J., Beckman, E. M., Tweedy, S. M., Payton, C. J., Burkett, B. (In press). Establishing the reliability of a novel battery of range of motion tests to enable evidence-based classification in Para Swimming. *Physical Therapy*. Accepted 30.4.2018).
28. Macaro, A., Connick, M. J., Beckman, E., Tweedy, S.M. (2018). Using machine learning techniques and wearable inertial measurement units to predict front crawl elbow joint angle: a pilot study. *ISBS 2018, Auckland*.
29. Tweedy, S.M., Connick, M. J., Beckman, E. (In press). Applying scientific principles to enhance Paralympic classification now and in the future – a research primer for rehabilitation specialists. *Physical Medicine & Rehabilitation Clinics of North America* (Accepted 17.1.2018).
30. Tweedy, S.M., Beckman, E.M., Connick, M.J., Geraghty, T.J., Theisen, D., Perret, C., Thompson, W.R. and Vanlandewijck, Y.C. (In press). Correspondence re: "Evidence-based scientific exercise guidelines for adults

Assessing coordination and a method for detecting intentional misrepresentation, IPC Classification Research Forum, Bonn, Germany, February 2017.

Course Coordinator and Lecturer

Semester 1, 2022

- Exercise Physiology Flexible Delivery [Phyl2730]
Enrolment Of 210
Undergraduate Students
- Exercise Physiology External [Phyl2730]
Enrolment Of 30
Undergraduate Students
- Sport Science (Anatomy, Biomechanics, Physiology) [Phyl6000]
Enrolment Of 30
Undergraduate Students

Semester 2, 2021

- Developing the Elite Athlete [SPCG3343]

Semester 1, 2021

- Exercise Physiology Flexible Delivery [Phyl2730]
Enrolment Of 210
Undergraduate Students
- Exercise Physiology External [Phyl2730]
Enrolment Of 30
Undergraduate Students
- Sport Science (Anatomy, Biomechanics, Physiology) [Phyl6000]
Enrolment Of 30
Undergraduate Students

Semester 2, 2020

- Developing the Elite Athlete [SPCG3343]

Semester 1, 2020

- Sport Science (Anatomy, Biomechanics, Physiology) [PHYL6000]
Enrolment of 25
undergraduate students
Teaching evaluation scores: 5

Semester 2, 2019

with spinal cord injury: an update and new guideline". *Spinal Cord* (Accepted 27.11.2017) <https://doi.org/10.1038/s41393-017-0052-0>.

31. Connick, M. J., Beckman, E., Vanlandewijck, Y., Malone, L., Blomqvist, S. and Tweedy S. M. (2019). Novel isometric strength measures produce a valid and evidence-based classification structure for wheelchair track racing: A cluster analysis. *British Journal of Sports Medicine* (Accepted 31.10.2017). <https://doi:10.1136/bjsports-2017-097558>.
32. James, L., Haff, G., Kelly, V., Connick, M.J, Beckman, E. (2017) The impact of strength level on adaptations to combined weightlifting, plyometric and ballistic training. *Scandinavian Journal of Medicine and Science in Sports*. Accepted 6/11/17.
33. Burkett, B., Connick., M. J., Sayers, M., Hogarth, L., Stevens, T., Tweedy, S. (2017). Kinematic analyses of seated throwing activities with and without an assistive pole. Submitted to *Sports Engineering*. 20(2) 163–170.
34. Hyde, A., Hogarth, L., Sayers, M., Beckman, E., Connick, M.J., Tweedy, S.M., and Burkett, B., (2016) The Impact of an Assistive Pole, Seat Configuration and Strength in Paralympic Seated Throwing. *International Journal of Sports Physiology and Performance*, 12(7), 977-983.
35. Beckman, E. M., Connick, M. J. and Tweedy, S. M. (2016). Assessing Muscle Strength for the purpose of Classification in Paralympic Athletics: a review and recommendations. *Journal of Science and Medicine in Sport*. 20(4) 391-396.
36. Connick, M.J., Beckman, E.M., Deuble, R., Tweedy, S.M. (2016) Developing tests of impaired coordination for Paralympic classification: normative values and test-retest reliability. *Sports Engineering*. 19(3) 147-154.
37. Tweedy, S. M., Beckman, E.M., Johnston, L., Connick, M.J. (2016). Performance-focused sport – an avenue to gold-medal clinical outcomes for people with neurological impairments? *Brain Impairment*. 17(1) 99-110.
38. Beckman, E., Connick, M. J., MacNamee, M., Parnell, R. and Tweedy, S. (2016). Should Markus Rehm be permitted to compete in the long jump at the Olympic Games? *British Journal of Sports Medicine*, 51(14): 1048-1049.
39. Beckman, E. M., Connick, M. J. and Tweedy, S. M. (2016). How much does lower body strength impact Paralympic running performance? *European Journal of Sport Science*, 16(6) 669-76.
40. Connick, M.J., Beckman, E.M., Ibusuki, T., Malone, L., Tweedy, S.M. (2016). Evaluation of methods for calculating maximal allowable standing height in amputees competing in Paralympic athletics. *Scandinavian Journal of Science and Medicine in Sport* 26(11) 1353-1359.
41. Deuble, R.L., Connick, M.J., Beckman, E.M., Abernethy, B., Tweedy, S.M. (2016) Using Fitts Law' to detect intentional misrepresentation. *Journal of Motor Behavior*, 48(2) 164-71.
42. Connick, M.J., Beckman, E.M. and Tweedy, S.M. (2015) Relative age affects marathon performance in male and female athletes. *Journal of Sports Science and Medicine*, 14(3): 669-674.
43. Connick, M. J., Beckman, E., Spathis, J. G., Deuble, R, Tweedy, S.M. (2015). How Much Do Range of Movement and Coordination Affect Paralympic Sprint Performance? *Medicine and Science in Sports and Exercise*, 47(10), 2216-2223.

- Developing the Elite Athlete [SPCG3343]
Enrolment of 52 undergraduate students, 2 lecture hours/week, 6 practical hours/week

Semester 2, 2018

- Developing the Elite Athlete [SPCG3343]
Enrolment of 52 undergraduate students, 2 lecture hours/week, 6 practical hours/week

Semester 2, 2017

- Exercise Prescription and Programming [EXMD2362]
Enrolment of 79 second year undergraduate students, 2 lecture hours/week, 12 practical hours/week
Teaching evaluation scores: 4.7/5 teacher score, 4.4/5 course score
- Exercise Prescription and Programming [EXMD7362]
Enrolment of 7 masters students, 2 lecture hours/week, 3 practical hours/week

Guest Lecturer

Semester 2: 2011 - 2021

- Physical activity for people with motor, sensory, cognitive or behavioural impairments [EXMD7070]
Module on Sport in people with disabilities

Semester 1, 2016

- Biophysical Development, Measurement and Assessment [BIOL1900]
- Exercise prescription for musculoskeletal conditions [EXMD4740]
- Exercise prescription for musculoskeletal conditions [EXMD4740]

School of Sport and Exercise Science, University of Birmingham

Biomechanics teaching assistant and tutor (2005, 2006, 2007, 2008, 2009)

44. Spathis, J. G., Connick, M. J., Beckman, E.M., Newcombe, P.A. Tweedy, S.M. (2015). Reliability and validity of a talent identification test battery for seated and standing Paralympic throws. *Journal of Sports Sciences*, 33(8): 863-871.
45. Connick, M. J. and Li, F-X. (2015). Prolonged cycling alters stride time variability and kinematics of a post-cycle transition run in triathletes. *Journal of Electromyography and Kinesiology*, 25(1), 34-39.
46. Beckman, E.M., Newcombe, P., Vanlandewijck, Y., Connick, M.J., Tweedy, S.M. (2014). A novel strength test battery to permit evidence-based Paralympic classification. *Medicine*. 93(4) 1-8.
47. Tweedy, S.M., Beckman, E.M., Connick, M.J. (2014). Paralympic Classification - conceptual basis, current methods and research update. *PM&R*. 6 (8) s11-s17.
48. Connick, M. J. and Li, F-X. (2014). Changes in timing of muscle activation and running economy with altered stride pattern during running. *Gait and Posture*, 39: 634-637.
49. Connick, M. J. and Li, F-X. (2013). The impact of altered task mechanics on the timing and duration of eccentric bi-articular muscle contractions during cycling. *Journal of Electromyography and Kinesiology*, 23(1):223-229. <http://dx.doi.org/10.1016/j.jelekin.2012.08.012>
50. Tweedy, S. M., Connick, M. J., Burkett, B, Sayers, M., Meyer, C. and Vanlandewijck, Y. C. (2012). What throwing frame configuration should be used to investigate the impact of different impairment types on Paralympic seated throwing? *Sports Technology*, 5; 56-64.
51. Vanlandewijck, Y.C., Verellen, J., Beckman, E., Connick, M. and Tweedy, S.M. (2011). Trunk strength impact on track wheelchair start: implications for classification. *Medicine and Science in Sports and Exercise*, 43(12):2344-2351 <http://dx.doi.org/10.1249/MSS.0b013e318223af14>.
52. Burgess. K., Connick. M., Graham-Smith. P., Pearson. S. (2007). Plyometric vs. isometric training influences on tendon properties and muscle output. *Journal of Strength and Conditioning Research*. Aug; 21(3): 986-989.

Other Publications

1. Connick, M. J. (2018). The science of elite long distance running. *The Conversation*. <http://theconversation.com/the-science-of-elite-long-distance-running-94490>
2. Connick, M. J., Beckman, E., and Tweedy, S. M. (2016). It's not easy keeping the Paralympics a level playing field, but the current system is the best there is. *The Conversation*. <https://theconversation.com/its-not-easy-keeping-the-paralympics-a-level-playing-field-but-the-current-system-is-the-best-there-is-64951>
3. Connick, M. J., Beckman, E., and Tweedy, S. M. (2016). Advancing Paralympic Classification Through Science. <https://www.coachinglife.com.au/article/advancing-paralympic-classification-through-science/>
4. Beckman, E. M., Connick, M. J. and Tweedy, S. M. (2016) The 2016 Paralympic Games: a classification primer. *Palaestra*, 30 3: 16-20.

Research Higher Degree (in progress)

Investigating the neuromotor mechanisms underlying optimal control of bicycling tasks (PhD: Becas-Chile Scholarship), Cristian Riveros Matthey.

Development of methods for monitoring training load in endurance sports (PhD: UQ HDR Research Scholarship), Jennifer O'Sullivan.

Physical and physiological characteristics of elite female water polo players and their influence on performance (PhD: QUT), Mico Olivier.

Service to the School

External Engagement Committee member, School of Human Movement and Nutrition Sciences

Tutor educator, School of Human Movement and Nutrition Sciences, 2018-2021

Research Supervision (Completed)

Redman, Kellyanne (2022). **Developing and maintaining strength and power in profession rugby league**. PhD Thesis, School of Human Movement and Nutrition Sciences, The University of Queensland. (Associate Supervisor).

Smale, Brittany (2022). **Developing evidence-based methods of classification for athletes with cerebral palsy competing in Paralympic running** (PhD: AIS Scholarship) (Associate Supervisor)

Paix, Emily (2022). **Developing and evaluating methods for detecting Intentional Misrepresentation during Paralympic classification strength assessments** (PhD: UQ HDR Research Scholarship) (Associate Supervisor)

Russell, Suzanna (2022). **Mental Fatigue in Elite Sport**. PhD Thesis, School of Human Movement and Nutrition Sciences, The University of Queensland. (Associate Supervisor).

Wilson, Paula Jane (2021). **Para sport classification and exercise training responses in people with neuromusculoskeletal impairment**. PhD Thesis, School of Human Movement and Nutrition Sciences, The University of Queensland.<https://doi.org/10.14264/9d7429c> (Associate Supervisor)

Dutia, Iain Mayank (2020). **The effect of performance-focused swimming training on clinical outcomes in young people with cerebral palsy who have high support needs**. PhD Thesis, School of Human Movement and Nutrition Sciences, The University of Queensland.<https://doi.org/10.14264/uql.2020.777> (Associate Supervisor)

Macaro, Angelo (2020). **Methods for selecting and optimising competitive freestyle swimming technique for people with cerebral palsy who have high support needs**. PhD Thesis, School of Human Movement and Nutrition Sciences, The University of Queensland.<https://doi.org/10.14264/uql.2020.998> (Associate Supervisor)

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- Scandinavian Journal of Science And Medicine In Sports

Library Officer, School of Human Movement and Nutrition Sciences, 2013-2021

I.T. Committee member, School of Human Movement and Nutrition Sciences, 2012-2014

- British Journal of Sports Medicine
- International Journal of Sports Physiology And Performance
- Sports Medicine - Open
- International Journal of Sports Medicine
- Journal Of Sports Sciences
- Journal Of Electromyography and Kinesiology
- Adapted Physical Activity Quarterly
- European Journal of Sport Science
- Plos One
- Brain Impairment
- Journal Of Aging and Physical Activity
- PM&R
- Research In Sports Medicine
- Journal Of International Medical Research
- Journal Of Human Nutrition
- Gait And Posture
- Disability And Rehabilitation
- Spinal Cord
- Sports Engineering
- Open Access Journal Sports Medicine
- Sport Biomechanics
- International Journal of Sport Science And Coaching