# Dr. Matt Brughelli

PhD, MS, BS

**Research specialisation:** Sports biomechanics, injury prevention, sprinting mechanics, eccentric exercise.

**Experience:** 11 years' as an academic. Lecturer and Senior Lecturer in sports biomechanics at AUT University since 2011. Post-doc on eccentric sprint cycling at KU Leuven, Belgium from 2010-2011. PhD on risk factors and eccentric exercise for hamstring muscles completed in 2009. Tutor in sports biomechanics, and strength and conditioning at Edith Cowan University from 2006 to 2009. Received AUT VC Award for Emerging Researcher, 2015. Teaching spans postgraduate and undergraduate courses in sports biomechanics. Former strength and conditioning coach.

**Research overview:** Matt's research primarily focuses on 1) improving athletic performance using sports biomechanics and strength and conditioning, and 2) reducing the risk of sporting injuries by investigating risk factors and injury prevention methods.

**Postgraduate supervision:** 2 PhD students and 6 Masters theses students to completion, and currently supervising 3 PhD students.

**Research publications:** 55 peer reviewed publications. Editorial board member for Frontiers in Physiology. Example publications:


Jiménez-Reyes P, Samozino P, **Brughelli M**, Morin JB. Effectiveness of an Individualized Training Based on Force-Velocity Profiling during Jumping. Front Physiol. 2017 Jan 9;7:677. doi: 10.3389/fphys.2016.00677.

Cross MR, **Brughelli M**, Samozino P, Brown SR, Morin JB. Optimal Loading for Maximising Power During Sled-resisted Sprinting.Int J Sports Physiol Perform. 2017 Jan 4:1-25. doi: 10.1123/ijspp.2016-0362. [Epub ahead of print]

Cross MR, Tinwala F, Lenetsky S, Samozino P, **Brughelli M**, Morin JB. Determining friction and effective loading for sled sprinting. J Sports Sci. 2016 Dec 1:1-6. doi: 10.1080/02640414.2016.1261178. [Epub ahead of print]

Cross MR, **Brughelli M**, Samozino P, Morin JB. Methods of Power-Force-Velocity Profiling During Sprint Running: A Narrative Review. Sports Med. 2016 Nov 28. [Epub ahead of print] Review.

Edouard P, Arnal P, Gimenez P, Samozino P, Jimenez-Reyes P, **Brughelli M**, Mendiguchia J, Morin JB. Athletic injury prevention: Determinants of sprint performance. Ann Phys Rehabil Med. 2016 Sep;59S:e22-e23. doi: 10.1016/j.rehab.2016.07.054.

Brown SR, **Brughelli M**, Cross MR. Profiling Sprint Mechanics by Leg Preference and Position in Rugby Union Athletes. Int J Sports Med. 2016 Oct;37(11):890-7. doi: 10.1055/s-0042-109067.

Morin JB, Gimenez P, Edouard P, Arnal P, Jiménez-Reyes P, Samozino P, **Brughelli M**, Mendiguchia J. Sprint Acceleration Mechanics: The Major Role of Hamstrings in Horizontal Force Production. Front Physiol. 2015 Dec 24;6:404. doi: 10.3389/fphys.2015.00404.

McKenzie CR, **Brughelli M**, Whatman C, Brown SR. The Influence of Optimal Handheld Load on the Technical Ability to Apply Ground Reaction Forces during Horizontal Jumping in Female Netball Players. Int J Sports Med. 2016 Apr;37(4):318-23. doi: 10.1055/s-0035-1565052.

Mendiguchia J, Edouard P, Samozino P, **Brughelli M**, Cross M, Ross A, Gill N, Morin JB. Field monitoring of sprinting power-force-velocity profile before, during and after hamstring injury: two case reports.J Sports Sci. 2016;34(6):535-41. doi: 10.1080/02640414.2015.1122207.

King D, Hume P, Gissane C, **Brughelli M**, Clark T. The Influence of Head Impact Threshold for Reporting Data in Contact and Collision Sports: Systematic Review and Original Data Analysis.Sports Med. 2016 Feb;46(2):151-69. doi: 10.1007/s40279-015-0423-7. Review.



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