

Goran Markovic – short CV

2. EDUCATION:

- 1999. Graduated, School of Kinesiology, Zagreb, Croatia.
- 2002. Master of Science, School of Kinesiology, Zagreb, Croatia.
- 2004. PhD, School of Kinesiology, Zagreb, Croatia.
- 2006/2007. Post-doctoral study, Motor Control Lab, Department of Health, Nutrition and Exercise Sciences, University of Delaware, Delaware, USA.

3. PROFESSIONAL CAREER:

- 2002.–2006. Research Assistant, School of Kinesiology, Zagreb, Croatia.
- 2006.–2009. Assistant Professor, School of Kinesiology, Zagreb, Croatia.
- 2009. – today, Associate Professor, School of Kinesiology, Zagreb, Croatia.
- 2008.–2010. Transformational Processes in Kinesiology - Department Chair, School of Kinesiology, Zagreb, Croatia.
- 2009. – today, Founder and Director of the Motor Control and Human Performance Lab, School of Kinesiology, Zagreb, Croatia.
- 2009. – 2011, Vice-dean for Science, School of Kinesiology, Zagreb, Croatia.
- 2009. – 2011. Head of Institute of Kinesiology, School of Kinesiology
- 2007. – 2009. Head of the Department of Kinesiology Transformations

4. MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS:

- 2005. – today, American College of Sports Medicine
- 2004. – today, European College of Sport Science

5. TEACHING:

Dr. Markovic teaches the following courses at the undergraduate and graduate levels: 'Transformational Processes in Kinesiology', 'Fitness & Health', 'Physical Conditioning' and 'Motor Control'. At post-graduate (PhD) level, he teaches the following courses: 'Genetic and neural factors in adaptations of the musculoskeletal system' and 'Programming of transformational processes in kinesiology'. He is also a visiting professor at several Universities in the region.

6. PROFESSIONAL WORK IN SPORTS PRACTICE:

Since 1999, dr. Markovic works as a strength & conditioning coach and/or performance consultant at National and International levels. He worked with (or consulted) numerous National/International-level athletes or teams in several sports including martial arts, soccer, volleyball, basketball, soccer, and tennis. Among the athletes/teams he worked with are medal winners at Summer Olympic games, European and World Championships in Taekwondo, members of the Croatian National Teams, and winners of the National Championship and National Cup in Volleyball (more than 15 medals at European/World/Olympic championships won). Dr. Markovic is also an invited speaker for several National Sports Academies in Croatia and abroad. Dr. Markovic is a founder and CEO of the Sports & Rehabilitation center "Motus Melior" (www.motus-melior.hr) that provides expert professional services to top athletes, sports teams and coaches in Croatia and abroad.

7. CONTINUOUS PROFESSIONAL EDUCATION:

Dr. Markovic finished <30 internationally recognized professional seminars, workshops, and mentorships in the area of physical conditioning, fitness, physical therapy, injury prevention and rehabilitation, and management.

8. MAIN PROFESSIONAL ACHIEVEMENTS:

8.1. Publications:

- Published 55 scientific papers in leading international scientific journals in the area of sports sciences and sports medicine.
- Total number of citations (*Web of Science*): 910.
- Hirsch index (H-index): 15.
- Authors of 2 books on Croatian language (Soccer – integrated physical conditioning' and Physical conditioning exercises with weights').
- Authors of 3 book chapters (invitation of international publisher) published in English language (Trends in Exercise and Health Research and Advances in Strength and Conditioning – Nova Scientific Publications, New York)
- Author of >40 professional papers in the field of strength and conditioning, fitness training, nutrition and recovery, and measurement and evaluation in sports and exercises.

8.2. Patents:

2011. Co-author of one patent.

8.3. Funded research projects (principal investigator):

2006-2007. *Muscle mechanical function during explosive movements*. Research project financed by the Croatian National Science Foundation. Direct costs: 10.000 EUR

2007-2011. *Muscle function during ballistic movements*. Research project financed by the Croatian Ministry of Science, Education and Sport. Direct and indirect costs: 150.000 EUR

2007-2011. Anthropological determinants of successful performance in game sports. Research program financed by the Croatian Ministry of Science, Education and Sport. Direct and indirect costs: 200.000 EUR

2008-2010. *Evaluation of the muscular system function: external loading and mechanical output*. Research project financed by the Unity Through Knowledge Fund (The World Bank). Direct costs: 42.000 EUR

2013-2014. *External loading and human neuromuscular function*. University of Zagreb Research Grant. Direct costs: 20.000 EUR

8.4. Ad hoc reviews:

Research Projects (2007. – today): two research projects of the Croatian Ministry of Science, Education and Sport; one research project for the Serbian Ministry of Science and Technology.

Books and monographs (2008. – today): one university textbook and one professional book.

Research papers (2008. – today): >40 scientific papers for prestigious international journals in the area of sports sciences and sports medicine (e.g. *Sports Medicine, Medicine and Science in Sports & Exercise, Scandinavian Journal of Medicine and Science in Sports, European Journal of Applied Physiology, International Journal of Sports Medicine, Journal of Sports Sciences, Journal of Science and Medicine in Sport, Journal of Sport Science and Medicine, Science and Sports, Research Quarterly for Exercise and Sport, International Journal of Sports Physiology and Performance, Journal of Electromyography and Kinesiology, Pediatric Exercise Science, Isokinetics & Exercise Science, Journal of Strength and Conditioning Research*).

8.5. Lectures and talks at scientific and professional meetings:

2006. – today, Invited speaker at 9 International Scientific Meetings (including ECSS and ACSM).

2002. – today, Invited speaker at >20 domestic and international Professional Meetings and workshops.

2002. – today, presented his scientific work at >35 International Scientific Meetings: Athens (Greece), Belgrade (Serbia), Bled (Slovenia), Paris (France), Amsterdam (Netherlands), Novi Sad (Serbia), Budapest (Hungary), Clermont-Ferrand (France), Cologne (Germany), Opatija (Croatia), Serres (Greece), Newark (USA), Santos (Brazil), State College (USA), Antalya (Turkey) Oslo (Norway), Baltimore (USA), Denver (USA), Seattle (USA), Los Angeles (USA), Amsterdam (Netherlands), Munich (Germany), Beijing (China), Liverpool (UK), Monaco (Monaco), Estoril (Portugal), Lausanne (Switzerland), Munich (Germany) etc.

8.6. Awards:

1996 – 1998. Croatian Ministry of Science and Technology scholarship

2002. Annual award of the Society of University Teachers, Scholars and Other Scientists – Zagreb for the best young scientists in the Republic of Croatia.

2003. Annual award for the best research assistant at the School of Kinesiology, University of Zagreb

2004. Annual award for the best research assistant at the School of Kinesiology, University of Zagreb
2005. Croatian National Science Annual Award for Junior Scientists for the year 2004.
2005. Young investigators award at the International Scientific Conference „Kinesiology – Challenge for the Future“, Opatija, September, 07-11, 2005.
2006. Swiss National Science Foundation scholarship for attending the “11th Annual Congress of the EUROPEAN COLLEGE OF SPORT SCIENCE”, Lausanne, July, 05-08, 2006.
2007. Best poster presentation at the International Scientific Conference „Progress in Motor Control VI“, Santos, Brazil, August 9 - 12, 2007.
2012. Croatian National Science Award for 2011.

8.7. List of scientific papers published in peer-reviewed international publications:

1. Trninić, S., Marković, G., Heimer, S. (2001). Effects of developmental training of basketball cadets realised in the competitive period. *Collegium Antropologicum*, 25(2): 591-604.
2. Metikoš, D., Marković, G., Prot, F., Jukić, I. (2003). Latent structure of agility obtained by a battery of tests. *Kinesiology*, 35(1):14-29.
3. Markovic, G., Jaric, S. (2004). Movement performance and body size: the relationship for different groups of tests. *European Journal of Applied Physiology*, 92(1-2): 139-149.
4. Marković, G., Dizdar, D., Jukić, I., Cardinale, M. (2004). Reliability and validity of squat and countermovement jump tests. *Journal of Strength and Conditioning Research*, 18(3): 551-555.
5. Nevill, A.M., Markovic, G., Vucetic, V., Holder, R. (2004). Can greater muscularity in larger individuals resolve the 3/4 power-law controversy when modelling maximum oxygen uptake? *Annals of Human Biology*, 31(4): 436-445.
6. Marković, G., Jukić, I., Milanović, D., Metikoš, D. (2005). Effects of sprint and plyometric training on morphological characteristics in physically active men. *Kinesiology*, 37(1): 32-39.
7. Jaric, S., Mirkov, D., Marković, G. (2005). Normalizing physical performance tests for body size: a proposal for standardization. *Journal of Strength and Conditioning Research*, 19(2): 467-474.
8. Marković, G., Mišigoj-Duraković, M., Trninić, S. (2005). Fitness profile of elite Croatian taekwondo athletes. *Collegium Antropologicum*, 29(1): 93-99.
9. Marković, G., Mirkov, D., Jaric, S. (2005). Maximum exercise performance and body size: In: *Trends in Exercise and Health Research*. Swan, Rachel L (Ed.). Hauppauge, New York: Nova Science Publishers, Inc, str: 167-186.
10. Marković, G., Jaric, S. (2005). Scaling of muscle power to body size: effect of stretch-shortening cycle. *European Journal of Applied Physiology*, 95(1): 11-19.
11. Sekulić, D., Zenić, N., Marković, G. (2005). Non linear relationships between anthropometric and motor-endurance variables. *Collegium Antropologicum*, 29(2): 733-738.
12. Nevill, A.M., Holder, R., Marković, G. (2006). Scaling maximum oxygen uptake using lower leg muscle volume provides further insight into the pitfalls of whole body-mass power laws. *Journal of Applied Physiology*, 101(3): 1006-1007.
13. Marković, G. (2006). Moderate relationship between isoinertial muscle strength and ballistic movement performance. *Journal of Human Movement Studies*, 50(4): 239-248.
14. Marković, G., Dizdar, D., Jaric, S. (2006). Evaluation of tests of maximum kicking performance. *Journal of Sports Medicine and Physical Fitness* 46(2): 215-220.
15. Harasin, D., Dizdar, D., Marković, G. (2006). High reliability of tests of maximum throwing performance. *Journal of Human Movement Studies*, 51(1): 63-76.
16. Marković, G., Sekulić, D. (2006). Modelling the influence of body size on weightlifting and powerlifting performance. *Collegium Antropologicum*, 30(3): 607-613.
17. Marković, G. (2007). Does plyometric training improve vertical jump height? A meta-analytical review. *British Journal of Sports Medicine*, 41(6): 349-355.
18. Marković, G., Jukić, I., Milanović, D., Metikoš, D. (2007). Effects of sprint and plyometric training on muscle function and athletic performance. *Journal of Strength and Conditioning Research*, 21(2): 543-549.
19. Marković, G., Vučetić, V. Nevill, A.M. (2007). Scaling behaviour of metabolic rate in athletes and untrained individuals. *Annals of Human Biology*, 34(3):315-328.
20. Marković, G., Jarić, S. (2007). Is vertical jump height a body size independent measure of muscle power? *Journal of Sports Sciences*, 25(12): 1355-1363.

21. Marković, G. (2007). Poor relationship between strength and power qualities and agility performance. *Journal of Sports Medicine and Physical Fitness*, 47(3): 276-283.
22. Marković, G., Jarić, S. (2007). Positive and negative loading and mechanical output in maximum vertical jumping. *Medicine and Science in Sports and Exercise*, 39(10): 1757-1764.
23. Marković, G., Sekulić, D., Marković, M. (2007). Is agility related to muscle strength and power? Analysis in latent space. *Collegium Antropologicum*, 31(3): 787-794.
24. Šentija, D., Vučetić, V., Marković, G. (2007). Validity of the modified Conconi running test. *International Journal of Sports Medicine*, 28(12): 1006-1011.
25. de Freitas, P.B., Marković, G., Krishnan, V., Jaric, S. (2008). Force coordination in static manipulation: Discerning the contribution of muscle synergies and cutaneous afferents. *Neuroscience Letters*, 434 (2): 234-239.
26. Marković, G., Vučetić, V., Cardinale, M. (2008). Heart rate and lactate responses to taekwondo fight in elite women performers. *Biology of Sport*, 25 (2): 135-146.
27. Marković, G., Šimek, S., Bradić, A. (2008). Are acute effects of maximal dynamic contractions on upper-body ballistic performance load specific? *Journal of Strength and Conditioning Research*, 22 (6): 1811-1815.
28. Jarić, S., Marković, G. (2009). Leg muscles design: The maximum dynamic output hypothesis. *Medicine and Science in Sports and Exercise*, 41 (4): 780-787.
29. Bradić, A., Bradić, J., Pašalić, E., Marković, G. (2009). Isokinetic leg strength profile of elite male basketball players. *Journal of Strength and Conditioning Research*, 23 (4): 1332-1337.
30. Mikulić, P., Ružić, L., Marković, G. (2009). Evaluation of specific anaerobic power in 12-14-year-old male rowers. *Journal of Science and Medicine in Sport*, 12 (6): 662-666.
31. Marković, G., Mikulić, P. (2009). Plyometric training effects on muscle function and rapid movement performance: A review. In: *Advances in Strength and Conditioning Research*. Duncan, Michael and Lyons, Mark (Eds.). Hauppauge, New York: Nova Science Publishers, Inc, str: 155-179.
32. Šentija, D., Marković, G. (2009). The relationship between gait transition speed and the aerobic thresholds for walking and running. *International Journal of Sports Medicine*, 30 (11): 795-801.
33. Šarabon, N., Mlaker, B., Marković, G. (2010). A novel tool for the assessment of dynamic balance in healthy individuals. *Gait and Posture*, 31 (2): 261-264.
34. Ostojić, S.M., Marković, G., Calleja-Gonzalez, J., Jakovljević, D.G., Vucetić, V., Stojanović, M.D. (2010). Ultra short-term heart rate recovery after maximal exercise in continuous versus intermittent endurance athletes. *European Journal of Applied Physiology*, 108 (5): 1055-1059.
35. Hadžić, V., Sattler, T., Marković, G., Veselko, M., Dervišević, E. (2010). The isokinetic strength profile of quadriceps and hamstrings in elite volleyball players. *Isokinetics and Exercise Science*, 18 (1): 31-37.
36. Marković, G., Mikulić, P. (2010). Neuro-musculoskeletal and performance adaptations to lower-extremity plyometric training. *Sports Medicine*, 40 (10): 859-895.
37. Mikulić, P., Emersić, D., Marković, G. (2010). Reliability and discriminative ability of a modified Wingate rowing test in 12- to 18-year-old rowers. *Journal of Sports Sciences*, 28 (13): 1409-1414.
38. Rošker, J., Marković, G., Šarabon, N. (2011). Effects of vertical center of mass redistribution on body sway parameters during quiet standing. *Gait and Posture*, 33 (3): 452-456.
39. Šalaj, S., Marković, G. (2011). Specificity of jumping, sprinting and quick change-of-direction motor abilities. *Journal of Strength and Conditioning Research*, 25 (5): 1249-1255.
40. Markovic, G., Vuk, S., Jaric, S. (2011). Effects of jump training with negative positive versus positive loading on jumping mechanics. *International Journal of Sports Medicine*, 32(5): 365-372.
41. Mikulić, P., Marković, G. (2011). Age- and gender-associated variation in maximal-intensity exercise performance in adolescent rowers. *International Journal of Sports Medicine*, 32(5): 373-378.
42. Marković, G., Mikulić, P. Discriminative ability of the Yo-Yo intermittent recovery test (level I) in prospective young soccer players. *Journal of Strength and Conditioning Research*, 25(10):2931-2934.
43. Vuk, S., Marković, G., Jarić, S. External loading and maximum dynamic output in vertical jumping: the role of training history. *Human Movement Science*, 31(1):139-151.
44. Sorić, M., Mikulić, P., Misigoj-Duraković, M., Ružić, L., Marković, G. Validation of the Sensewear Armband during recreational in-line skating. *European Journal of Applied Physiology*, 112(3):1183-1188.
45. Fonda, B., Panjan, A., Marković, G., Šarabon, N. (2011). Adjusted saddle position counteracts the modified muscle activation patterns in uphill cycling. *Journal of Electromyography and Kinesiology*, 21(5):854-860.

46. Šarabon, N., Fonda, B., Marković, G. (2011). Change of muscle activation patterns in uphill cycling of varying slope. *European Journal of Applied Physiology*, 112(7): 2615-2623.
47. Mikulić, P., Blažina, T., Nevill, A.M., Marković, G. (2012). Modeling Longitudinal Changes in Maximal-Intensity Exercise Performance in Young Male Rowing Athletes. *Pediatric Exercise Science*, 24: 187-198.
48. Šimić, L., Šarabon, N., Marković, G. (2013). Does pre-exercise static stretching inhibit maximal muscular performance? A meta-analytical review. *Scandinavian Journal of Medicine and Science in Sports*, 23: 131-148.
49. Pažin, N., Berjan, B., Nedeljković, A., Marković, G., Jarić, S. (2013). Power output in vertical jumps: does optimum loading depend on activity profiles? *European Journal of Applied Physiology*, 113: 577-589.
50. Šarabon, N., Marković, G., Mikulić, P., Latash, M.L. (2013). Bilateral synergies in foot force production tasks. *Experimental Brain Research*, 227(1):121-130.
51. Suzović, D., Marković, G., Pašić, M., Jarić, S. (2013). Optimum load in various vertical jumps support the maximum dynamic output hypothesis. *International Journal of Sports Medicine*, 34(11):1007-1014.
52. Jarić, S., Marković, G. (2013). Body mass maximizes power output in human jumping: a strength-independent optimum loading behavior. *European Journal of Applied Physiology*, 113(12):2913-2923.
53. Orepić, P., Mikulić, P., Sorić, M., Ruzić, L., Marković, G. (2014). Acute physiological responses to recreational in-line skating in young adults. *European Journal of Sport Science*, Suppl 1: S25-S31.
54. Marković, G., Mikulić, P., Kern, H., Šarabon, N. (2014). Intra-session reliability of traditional and nonlinear time-series posturographic measures in a semi-tandem stance: A reference to age. *Measurement*, 51(1):214-132.
55. Hadžić, V., Sattler, T., Marković, G., Veselko, M., Dervišević, E. (2014). Strength Asymmetry of the Shoulders in Elite Volleyball Players. *Journal of Athletic Training*, 49(3): 338-344.
56. Marković, G., Fonda, B., Šarabon, N. (2014). Does whole-body cryotherapy affect the recovery process after hamstring damaging exercise: a crossover study. *British Journal of Sports Medicine*, 48(7):633.