Curriculum Vitae Andrea Bosio

Current employment

Sport and exercise physiologist and researcher at Mapei Sport, Olgiate Olona (VA) – Italy.

Head of Research, Mapei Sport, Olgiate Olona (VA) – Italy.

Physiological assessment of athletes from different sports. Coaching of runners, cyclists, and both at competitive and recreational level:

- Physical Assessment of US Sassuolo Calcio professional and youth teams, since 2008.
- Physical Assessment of alpine skiers of the Italian Alpine Ski Teams, since 2008.

Education

PhD, Sport and Exercise Physiology, Bangor University, Wales (UK), 2009
Thesis: The Effect of Muscle Fatigue and Damage on Endurance Performance

MSc, Sport Science, Faculty of Sport Science, University of Milan (Italy), 2003
Dissertation: The time course of race-walking average speeds from 1935 to 2002 on the Olympics and non-Olympics distances in males and females.

BSc, Sport Science, Istituto Superiore di Educazione Fisica della Lombardia, Milan, (Italy), 2001
Dissertation: The time course of race-walking average speeds from 1972 to 2004 on the Olympics and non-Olympics distances in males and females

Skills and experience

Athletic consultants for Endurance athletes (marathoners, cyclists, handbikers)**,** since 1998.

Strength and conditioning coach of a soccer team from 2000 to 2003.

Teaching

Lecturer on contract; module Physiology of Elite Performance; Bangor University (UK)
03/02/2012 - 27/04/2012

Lecturer on contract; practical laboratories, Theory and Methodology of Training; Methodology of Endurance Training. Since Academic Year 2015-16.

Research

Physiological and psychobiological bases of muscle fatigue, in particular the effect of decreased muscle force on endurance performance and its response to exercise (from 2005).
Psychobiological factors determining exercise tollerance.

Investigation of pacing strategy in endurance exercise and sports with particular concern to the role of perceived exertion (from 2005).

Physiological bases of endurance sports, in particular Cycling, and Marathon Running.
Physiological and perceptual responses to acute specific training methods (low cadence intervall training).
The effect of special form of warm-up (eccentric cycling) on high intensity endurance performance.
Physiological bases of Soccer and specific players assessment.
Investigation on the effect of muscle fatigue on soccer performance.
Coaching and the study of training methods aimed to achieving peak performance in athletes (even at top level) and health promotion in amateur and recreational athletes (from 2008).

Physiological bases and coaching of disabled endurance athletes (handbiking). The study of training methods, also based mainly on the use of perceived exertion, aimed to achieving peak performance in competitive handbikers and health promotion in amateur and recreational handbikers. (from 2008).

Assessment and seasonal monitoring of the total haemoglobin mass in professional cyclists (2008-2015).

Physiological bases and coaching of Race-Walking athletes also at top level (2003-2004).

Publications [1-46]

1. Signorini, G., et al., *The Perception of Effort as a Basis for Improving Physical Efficacy and Efficiency in Italian Military School Students.* Sports (Basel), 2025. **13**(4).
2. Tommasini, E., et al., *The time course of irisin release after an acute exercise: relevant implications for health and future experimental designs.* Eur J Transl Myol, 2024. **34**(2).
3. Signorini, G., et al., *UP150 Project: A Longitudinal Analysis of Active Lifestyles in the Complex Working System.* Sports (Basel), 2024. **12**(8).

4. Rigon, M., et al., *The "thinking system" in a new school concept: A rhythmic teaching approach in physical education to develop creativity.* PLoS One, 2024. **19**(4): p. e0301858.
5. Signorini, G., et al., *Effects of cognitive load and different exercise intensities on perceived effort in sedentary university students: a follow up of the Cubo Fitness Test validation.* Front Psychol, 2023. **14**: p. 1254767.
6. Martin, M., et al., *Relationships Between Internal and External Load Measures and Fitness Level Changes in Professional Soccer Players.* Res Q Exerc Sport, 2023. **94**(3): p. 760-772.
7. Gallo, G., et al., *Relationships between training dose and record power outputs in professional road cyclists: insights and threats to validity.* Biol Sport, 2023. **40**(2): p. 485-495.
8. Francini, L., et al., *Association between match physical activity and neuromuscular characteristics in youth football.* J Sports Med Phys Fitness, 2023. **63**(1): p. 202-211.
9. Rampinini, E., et al., *Peripheral muscle function during repeated changes of direction in professional soccer players.* Eur J Appl Physiol, 2022. **122**(9): p. 2125-2134.
10. Invernizzi, P.L., et al., *The UP150: A Multifactorial Environmental Intervention to Promote Employee Physical and Mental Well-Being.* Int J Environ Res Public Health, 2022. **19**(3).
11. Invernizzi, P.L., et al., *Promoting Children's Psychomotor Development with Multi-Teaching Didactics.* Int J Environ Res Public Health, 2022. **19**(17).
12. Rampinini, E., et al., *Impact of COVID-19 lockdown on professional soccer players' match physical activities.* Sci Med Footb, 2021. **5**(sup1): p. 44-52.
13. Rampinini, E., et al., *Impact of COVID-19 Lockdown on Serie A Soccer Players' Physical Qualities.* Int J Sports Med, 2021. **42**(10): p. 917-923.
14. Invernizzi, P.L., et al., *Aquatic Physical Literacy: The Effectiveness of Applied Pedagogy on Parents' and Children's Perceptions of Aquatic Motor Competence.* Int J Environ Res Public Health, 2021. **18**(20).
15. Donghi, F., et al., *Morning Priming Exercise Strategy to Enhance Afternoon Performance in Young Elite Soccer Players.* Int J Sports Physiol Perform, 2021. **16**(3): p. 407-414.
16. Petruolo, A., et al., *Physiological profile of elite Bicycle Motocross cyclists and physiological-perceptual demands of a Bicycle Motocross race simulation.* J Sports Med Phys Fitness, 2020. **60**(9): p. 1173-1184.
17. Invernizzi, P.L., et al., *Assessing Rolling Abilities in Primary School Children: Physical Education Specialists vs. Generalists.* Int J Environ Res Public Health, 2020. **17**(23).
18. Ferioli, D., et al., *Match Activities in Basketball Games: Comparison Between Different Competitive Levels.* J Strength Cond Res, 2020. **34**(1): p. 172-182.
19. Ferioli, D., et al., *Seasonal changes in physical capacities of basketball players according to competitive levels and individual responses.* PLoS One, 2020. **15**(3): p. e0230558.
20. Staiano, W., et al., *Kayaking performance is altered in mentally fatigued young elite athletes.* J Sports Med Phys Fitness, 2019. **59**(7): p. 1253-1262.
21. Invernizzi, P.L., et al., *Physiological and technical commitment during a 300-m in-line skating trial in athletes of different age categories.* J Sports Med Phys Fitness, 2019. **59**(1): p. 25-34.
22. Francini, L., et al., *Association Between Match Activity, Endurance Levels and Maturity in Youth Football Players.* Int J Sports Med, 2019. **40**(9): p. 576-584.
23. Ferioli, D., et al., *Peripheral Muscle Function During Repeated Changes of Direction in Basketball.* Int J Sports Physiol Perform, 2019. **14**(6): p. 739–746.
24. Trecroci, A., et al., *Bilateral asymmetry of skin temperature is not related to bilateral asymmetry of crank torque during an incremental cycling exercise to exhaustion.* PeerJ, 2018. **6**: p. e4438.
25. Staiano, W., et al., *The cardinal exercise stopper: Muscle fatigue, muscle pain or perception of effort?* Prog Brain Res, 2018. **240**: p. 175-200.

26. Ferioli, D., et al., *The physical profile of adult male basketball players: Differences between competitive levels and playing positions.* J Sports Sci, 2018. **36**(22): p. 2567-2574.
27. Ferioli, D., et al., *Different Training Loads Partially Influence Physiological Responses to the Preparation Period in Basketball.* J Strength Cond Res, 2018. **32**(3): p. 790-797.
28. Ferioli, D., et al., *The Preparation Period in Basketball: Training Load and Neuromuscular Adaptations.* Int J Sports Physiol Perform, 2018. **13**(8): p. 991-999.
29. Crotti, M., A. Bosio, and P.L. Invernizzi, *Validity and reliability of submaximal fitness tests based on perceptual variables.* J Sports Med Phys Fitness, 2018. **58**(5): p. 555-562.
30. Sanchis-Gomar, F., et al., *Alpha-amylase serum levels in professional soccer players are not related with physical fitness.* J Sports Med Phys Fitness, 2017. **57**(3): p. 214-218.
31. Sartor, F., et al., *A 45-Second Self-Test for Cardiorespiratory Fitness: Heart Rate-Based Estimation in Healthy Individuals.* PLoS One, 2016. **11**(12): p. e0168154.
32. Romagnoli, M., et al., *Changes in muscle damage, inflammation, and fatigue-related parameters in young elite soccer players after a match.* J Sports Med Phys Fitness, 2016. **56**(10): p. 1198-1205.
33. Rampinini, E., et al., *Peripheral neuromuscular fatigue induced by repeated-sprint exercise: cycling vs. running.* J Sports Med Phys Fitness, 2016. **56**(1-2): p. 49-59.
34. Ludwig, N., et al., *Thermography for skin temperature evaluation during dynamic exercise: a case study on an incremental maximal test in elite male cyclists.* Appl Opt, 2016. **55**(34): p. D126-D130.
35. Sanchis-Gomar, F., et al., *Hs-cTnT levels in professional soccer players throughout a season: No evidence of sustained cardiac damage.* Int J Cardiol, 2015. **197**: p. 292-3.
36. Sanchis-Gomar, F., et al., *Adropin and apelin fluctuations throughout a season in professional soccer players: Are they related with performance?* Peptides, 2015. **70**: p. 32-6.
37. Invernizzi, P.L., et al., *INTERPRETATION AND PERCEPTION OF TWO DIFFERENT KUMITE FIGHTING INTENSITIES THROUGH AN INTEGRATED APPROACH TRAINING IN INTERNATIONAL LEVEL KARATEKAS: AN EXPLORATORY STUDY.* Percept Mot Skills, 2015. **121**(2): p. 333-49.
38. Alis, R., et al., *Association between physical fitness and mean platelet volume in professional soccer players.* Clin Chem Lab Med, 2015. **53**(10): p. e249-52.
39. Invernizzi, P.L., et al., *Interpretation and perception of slow, moderate, and fast swimming paces in distance and sprint swimmers.* Percept Mot Skills, 2014. **118**(3): p. 833-49.
40. Menaspà, P., et al., *Physical fitness and performances of an amputee cycling world champion: a case study.* Int J Sports Physiol Perform, 2012. **7**(3): p. 290-4.
41. Menaspa, P., et al., *Physiological and anthropometric characteristics of junior cyclists of different specialties and performance levels.* Scand J Med Sci Sports, 2012. **22**(3): p. 392-8.
42. Sassi, A., et al., *The cost of running on natural grass and artificial turf surfaces.* J Strength Cond Res, 2011. **25**(3): p. 606-11.
43. Rampinini, E., et al., *Match-related fatigue in soccer players.* Med Sci Sports Exerc, 2011. **43**(11): p. 2161-70.
44. Bosio, A., *Reflexes, consciousness, and evolution.* J Appl Physiol (1985), 2010. **108**(2): p. 458-9.
45. Marcora, S.M., A. Bosio, and H.M. de Morree, *Locomotor muscle fatigue increases cardiorespiratory responses and reduces performance during intense cycling exercise independently from metabolic stress.* Am J Physiol Regul Integr Comp Physiol, 2008. **294**(3): p. R874-83.
46. Marcora, S.M. and A. Bosio, *Effect of exercise-induced muscle damage on endurance running performance in humans.* Scand J Med Sci Sports, 2007. **17**(6): p. 662-71.

Conferences

DONGHI, F., FRIGERIO, M., BOSIO, A., SCALISE, G., POLLINI, M., MARTIN, M., RAMPININI, E.; EXPLORING INTER-LIMB ASYMMETRIES RELATIONSHIPS USING ISOKINETIC, JUMP AND CHANGE OF DIRECTION TESTS. In: The Annual Congress of the European College of Sport Science. Rimini, July 2025.

FRIGERIO, M., RAMPININI, E., BOSIO, A., INDUNI, M., DEMOLLI, L., CARLOMAGNO, D., MAFFIULETTI, N.A.; INTER-LIMB ASYMMETRIES IN EVOKED KNEE EXTENSION STRENGTH EXACERBATE MUSCLE FATIGABILITY IN YOUNG AND ADULT PROFESSIONAL SOCCER PLAYERS. In: The Annual Congress of the European College of Sport Science. Rimini, July 2025.

MARTIN, M., BLANCHFIELD, A.W., OWEN, J.A., OLIVER, S.J., RAMPININI, E., BOSIO, A.; LOCOMOTOR EFFICIENCY REDUCES DURING MATCHES IN HIGH LEVEL MALE AND FEMALE SOCCER PLAYERS. In: The Annual Congress of the European College of Sport Science. Rimini, July 2025.

BOSIO, A., TOMMASINI, E., MORELLI, A., MISSAGLIA, S., TAVIAN, D., VAGO, P., PECCI, C., RAMPININI, E.; ENHANCING TRAINING OUTCOMES WITH SUPERIMPOSED ADAPTIVE FUNCTIONAL ELECTRICAL STIMULATION DURING CYCLING: A COMPARISON TO CYCLING ALONE. In: The Annual Congress of the European College of Sport Science. Rimini, July 2025.

TOMMASINI, E., BOSIO, A., MISSAGLIA, S., RAMPININI, E., MORELLI, A., VAGO, P., PECCI, C., TAVIAN, D.; CYCLING USING ADAPTIVE FUNCTIONAL ELECTRICAL STIMULATION: A NEW APPROACH TO SIGNIFICANTLY ENHANCE PLASMA IRISIN CONCENTRATION. In: The Annual Congress of the European College of Sport Science. Rimini, July 2025.

Andrea Bosio et al., The effects of pedaling exercise with superimposed adaptive functional electrical stimulation (AFESK) on the physiological and perceptual responses to exercise and performance in healthy humans: a training study. 2025(Pdm3) Padua Days on Muscle and Mobility Medicine, March 2025 - Euganean Thermae, Padua (Italy).

BOSIO A, BIZZI M, RAMPININI E, RIGGIO M, CONNOLLY D, MARCORA S (2017). PERFORMANCE, PHYSIOLOGICAL AND PSYCHOLOGICAL EFFECTS OF ADDITIONAL COGNITIVE WORKLOAD DURING SMALL-SIDED SOCCER GAMES. In: The Annual Congress of the European College of Sport Science. Essen, Juy 2017

DONGHI F, BOSIO A, RAMPININI E, MORELLI A, INDUNI M, MAFFIULETTI NA (2017). EFFECT OF DIFFERENT MORNING PRIMING EXERCISES ON AFTERNOON PERFORMANCE IN ROAD CYCLISTS. In: The Annual Congress of the European College of Sport Science. Essen, Juy 2017

FERIOLI D, BOSIO A, BILSBOROUGH JC, TORNAGHI M, LA TORRE A, RAMPININI E (2017). THE EFFECT OF TRAINING ON PERIPHERAL NEUROMUSCULAR FATIGUE

INDUCED BY REPEATED CHANGE OF DIRECTION IN BASKETBALL. In: The Annual Congress of the European College of Sport Science. Essen, Juy 2017

BOSIO A, CARLOMAGNO D, TORNAGHI M, MANZONI R, PANZERI A, RAMPININI E (2016). DIFFERENCES IN STRENGTH, POWER AND FATIGUABILITY BETWEEN ALPINE SKIERS OF FIS WORLD CUP AND EUROPEAN CUP. In: The Annual Congress of the European College of Sport Science. Vienna , July 2016

FERIOLI D, BOSIO A, CARLOMAGNO D, AZZOLINI M, LA TORRE A, RAMPININI, E (2016). RELATIONSHIPS BETWEEN TRAINING LOAD AND PHYSICAL FITNESS' CHANGES IN PROFESSIONAL AND SEMI-PROFESSIONAL BASKETBALL PLAYERS. In: The Annual Congress of the European College of Sport Science. Vienna , July 2016

BOSIO A, FERIOLI D, INDUNI M, MORELLI A, MARTIN DT, MENASPA' P, FELL J, RAMPININI E (2015). ECCENTRIC CYCLING WARM-UP AS AN ALTERNATIVE METHOD PRIOR TO A TIME TRIAL. In: The Annual Congress of the European College of Sport Science. Malmo, July 2015

CARLOMAGNO D, BOSIO A, MORELLI A, TORNAGHI M, INDUNI M, RAMPININI, E (2015). AGREEMENT BETWEEN VMAX29 AND THE NEW BREATH-BY-BREATH RESPIRATORY SYSTEM VYNTUS CPX DURING MAXIMAL INCREMENTAL EXERCISE. In: The Annual Congress of the European College of Sport Science. Malmo, July 2015

TORNAGHI M, BOSIO A, FERIOLI D, MORELLI A, MARTIN DT, MENASPA' P, FELL J, RAMPININI E (2015). EXERCISE-INDUCED MUSCLE DAMAGE MARKERS DURING A FAMILIARIZATION PROTOCOL TO ECCENTRIC CYCLING. In: The Annual Congress of the European College of Sport Science. Malmo, July 2015

ARTUSO P, BOSIO A, GUARDASCIONE C, PECCI C, RIGGIO M, RAMPININI E. (2012). HAEMOGLOBIN MASS MEASUREMENTS IN PROFESSIONAL CYCLISTS DURING A LONG STAGE RACE: THE GIRO D'ITALIA. In: The Annual Congress of the European Cpollege of Sport Science 2012. BRUGES, 4-8 LUGLIO 2012

BOSIO A, INDUNI M, MENASPA' P, MORELLI A, TORNAGHI M, CARLOMAGNO D, RAMPININI E. (2012). COMPARISON BETWEEN LOW VS HIGH CADENCE INTERVAL TRAINING SESSIONS. In: The Annual Congress of the European Cpollege of Sport Science 2012. BRUGES, 4-8 LUGLIO 2012

Bosio A, Amin AM, Marcora SM (2012). Cardiorespiratory fitness does not affect pacing during a 30-min running time trial in humans. In: Proc Physiol Soc - The Biomedical Basis of Elite Performance. London, March 2012

Bosio A, de Morree HM, Rampinini E, Marcora SM (2012). Is exercise tolerance limited by muscle fatigue in humans?. In: Proc Physiol Soc - The Biomedical Basis of Elite Performance. London, March 2012

TORNAGHI M, BOSIO A, GUARDASCIONE C, PECCI C, CONNOLLY D, RAMPININI E. (2012). SEASIONAL VARIATION OF HAEMOGLOBIN MASS IN PROFESSIONAL AND UNDER 23 CYCLISTS. In: The Annual Congress of the European Cpollege of Sport Science 2012. Bruges - Belgium, July 2012

Bosio A, Marcora S (2007). The effect of reduced leg strength on whole body exercise capacity. In: Annual Conference of the British Association of Sport and Exercise Sciences. Bath, UK, September 2007

Marcora S, Bosio A (2006). Effect of locomotor muscle fatigue on whole-body exercise tolerance. In: Physiological Society Annual Meeting. London, UK, September

Marcora S, Bosio A (2006). Exercise-induced muscle damage impairs endurance running performance in humans. In: Physiological Society Annual Meeting. London, UK, September

Gervasoni E, Bosio A, Ce' E, Rampichini S, Merati G, La Torre A (2005). Acute effects of passive static stretching on explosive force output of leg extensor muscle. In: 10th Annual Congress of the European College of Sport Science. Belgrade, July 13-16

La Torre A, Rampinini E, Bosio A, Arcelli E, Impellizzeri FM (2005). Physiological correlates of 20-km race in high level race walkers. In: 10th Annual Congress of the European College of Sport Science. Belgrade, July 13-16