Curriculum of Teaching and Scientific Activity, and List of Publications

Barbara Pellegrini

ORCID ID: http://orcid.org/0000-0002-9626-2632

Scopus Author ID: 7004567281

Education

- Bachelor's Degree in Physics, specialization in Biophysical Physics, with focus on Biophysics, Biochemistry, Atmospheric Physics, and Medical Physics, obtained from the University of Trento with a score of 106/110. Thesis Title: "Spontaneous Oscillations in the Cardiovascular System. Linear and Nonlinear Analysis." Supervisor: Prof. Renzo Antolini. November 1999.
- Doctoral Degree in "Exercise Science and Human Movement Sciences" within the doctoral school of "Translational Biomedical Sciences," a three-year program established at the University of Verona. 24th cycle. Project Title: "Biomechanical and Physiological Characterization of Cross-Country Skiing Techniques. Analysis of Technique Selection." Supervisors: Prof. Federico Schena, Prof. Paola Zamparo. Degree awarded in June 2012.

Professional Experiences

• December 1999 - January 2000: Consultancy assignment for research activities in the field of nonlinear modeling of cardiovascular variability series at the Institute for Scientific and Technological Research (IRST) in Povo (TN).

• February 2000 - July 2000 and September 2000 - March 2001: Research and advanced training scholarship for collaboration in research activities at the Movement Analysis Laboratory of CeBiSM, University of Trento.

• April 2001 - October 2001: Coordinated and Continuous Collaboration Contract at CeBiSM, Center for Biomedical Engineering and Motor Sciences, University of Trento.

• November 2001 - November 2007: Fixed-term contract holder with the title of experienced technician, category D1, technical area, scientific and data processing technician at CeBiSM, Center for Biomedical Engineering and Motor Sciences, University of Trento, University of Trento.

• February 2007 - July 2011: Permanent contract holder with the title of experienced technician, category D1, technical area, scientific and data processing technician at CeBiSM, University of Trento. Starting from July 2009, recognition of Specialist Function status based on the evaluation by the Evaluation Committee of the Office for Evaluation of Research and Organization of the University of Trento, in reference to the technical activity at CeBiSM.

• From July 15, 2011, to July 2, 2013, and from December 20, 2013, to December 20, 2016: Unconfirmed researcher, and from December 20, 2016, confirmed researcher in the disciplinary sector M-EDF/02 – Methods and Teaching of Sports Activities at the University of Verona, Department of Neuroscience, Biomedicine, and Movement.

• From May 1, 2022: Associate Professor in the disciplinary sector M-EDF/02 – Methods and Teaching of Sports Activities at the University of Verona, Department of Neuroscience, Biomedicine, and Movement. From March 1, 2023, same position at the newly established Department of Engineering for Innovative Medicine.

Qualifications

- national scientific qualification for Associate Professor - sector 06/N2 - EXERCISE AND SPORT SCIENCES from 10/04/2017.
- national scientific qualification for Full Professor - sector 06/N2 - EXERCISE AND SPORT SCIENCES from 19/09/2019.

Teaching

Participation in Faculty Boards and Other Organizational Roles

• Member of the Board of the National PhD Program in Motor and Sport Sciences, lead university: University of Verona. From the academic year 2023/2024 to present

• Chair of the Internship and Student Career Committee for the Master's Degree in Sports and Physical Performance Sciences, an inter-university program between the University of Verona and the University of Trento. From the academic year 2018/2019 (first year of activation) to the present.

• Academic Supervisor for research internships for the Master's Degree in Sports and Physical Performance Sciences, an inter-university program between the University of Verona and the University of Trento. From the academic year 2018/2019 (first year of activation) to the present.

• Member of the Didactic Board for the Bachelor's Degree in Motor Sciences - Department of Neuroscience, Biomedicine, and Movement, University of Verona. From the academic year 2012/2013 to the present.

• Member of the Board of the Ph.D. in Neuroscience, Psychological and Psychiatric Sciences, Department of Neuroscience, Biomedicine, and Movement, University of Verona. From April 17, 2015, to the present.

• Member of the Scientific Committee of the First-Level University Master's Degree in National Nordic Walking Coach (Level I), University of Verona. From the academic year 2013/2014 to the academic year 2014/2015.

• Member of the Board for the Ph.D. in Exercise Science and Human Movement, Translational Biomedical Sciences Doctoral School, University of Verona; from October 24, 2012, until the closure of the program, last cycle activated in 2013.

Teaching Activities in Bachelor's Degree Courses

• Instructor for the "General Part" module (3 credits) within the course "Techniques and Methodologies of Outdoor and Mountain Sports," Field of study B; Discipline: M-EDF/02, Master's Degree in Sports and Physical Performance Sciences, an inter-university program between the University of Verona and the University of Trento; from the academic year 2020/2021 to the present.

• Course coordinator for the "Movement Analysis in Mountain Sports" course; 6 credits; Field of study B; Discipline: M-EDF/02, Master's Degree in Sports and Physical Performance Sciences, an inter-university program between the University of Verona and the University of Trento; from the academic year 2018/2019 to the present.

• Course coordinator for the "Technique and Teaching of Nordic Walking" course (3 credits) - Field of study D; Discipline: M-EDF/02, Master's Degree in Preventive and Adaptive Motor Sciences, Department of Neuroscience, Biomedicine, and Movement, University of Verona; from the academic year 2012/2013 to the present.

• Course coordinator for the "Technologies and Methods for Functional Assessment" course (6 credits), Master's Degree in Sports and Physical Performance Sciences, Department of Neuroscience, Biomedicine, and Movement, University of Verona; from the academic year 2014/2015 to the academic year 2017/2018.

• Course coordinator for the "Applied Research in Sports" course (3 credits), Master's Degree in Preventive and Adaptive Motor Sciences, Department of Neuroscience, Biomedicine, and Movement, University of Verona; from the academic year 2013/2014 to the academic year 2016/2017.

Teaching Activities in Master's Degree Courses

• Course coordinator for the module "Methodological Foundations for Functional Assessment: Analysis of Nordic Walking Equipment Characteristics" in the First-Level University Master's Degree in National Nordic Walking Coach (Level I), University of Verona, from the academic year 2013/2014 to the academic year 2014/2015.

• Course coordinator for the module "Biomechanics of Locomotion with Poles" in the First-Level University Master's Degree in National Nordic Walking Coach (Level I), University of Verona, from the academic year 2013/2014 to the academic year 2014/2015.

Supervision of Bachelor's and Master's Theses

• Since the academic year 2012/2013, supervisor of more than 25 Bachelor's theses in Motor and Sports Activity Sciences, Department of Neuroscience, Biomedicine, and Movement, University of Verona.

• Since the academic year 2016/2017, supervisor of more than 30 Master's theses in Sports and Physical Performance Sciences, Department of Neuroscience, Biomedicine, and Movement, University of Verona (starting from the academic year 2018/2019, in the inter-university program between the University of Verona and the University of Trento).

• Since the academic year 2016/2017, supervisor of 10 Master's theses in Preventive and Adaptive Motor Sciences, Department of Neuroscience, Biomedicine, and Movement, University of Verona.

Doctoral Student Mentoring

• Supervisor for a student of the Ph.D. program in Exercise Science and Human Movement (28th cycle, successfully completed): Doctoral Candidate: Andrea Zignoli; Ph.D. Project Title: "Development of integrated tools for biomechanical analysis in sport performance: application to cycling." From 2013 to 2016, Final defense in May 2017.

• Supervisor for a student of the Ph.D. program in Neuroscience, Psychological and Psychiatric Sciences (30th cycle), Department of Neuroscience, Biomedicine, and Movement, University of Verona. Doctoral Candidate: Aldo Savoldelli; Ph.D. Project Title: "Determinants of endurance and ultra-endurance performances in hipoxic conditions." From 2014 to 2017, Final defense in December 2018.

• Currently supervising or co-supervising of two students of the Ph.D. program in Neuroscience, Psychological and Psychiatric Sciences, Department of Neuroscience, Biomedicine, and Movement and of two students of the National PhD Program in Motor and Sport Sciences

Participation in Doctoral Thesis Examination Committees

• Role of "2nd opponent" for the final dissertation defense of the Ph.D. program titled "Energetics and dynamics of double poling cross-country skiing," Candidate: Jørgen Danielsen. Faculty of Medicine and Health Sciences, Department of Neuromedicine and Movement, Norwegian University of Science and Technology (Norway). Supervisor: Gertjan Ettema; Co-supervisor: Øyvind Sandbakk. November 8, 2018, Trondheim, Norway.

• Role of "Reviewer/preliminary examiner" for a doctoral thesis titled "Biomechanics of speed adaptation and functionality of arm swing in cross-country skiing," Ph.D. Candidate: Caroline Göpfert; Doctoral Degree in Natural Sciences at the Paris Lodron University of Salzburg and the University of Jyväskylä. Supervisors: Stefan Lindinger, Erich Müller, University of Salzburg, Vesa Linnamo, University of Jyväskylä. November 2017.

Scientific Activities

Participation in Research Projects with National and International Collaborations

• Participation in research activities in collaboration with external institutions within the project funded by the Fédération Internationale de Football Association (FIFA), aimed at studying the effects of the FIFA 11+ program on warming up and injuries. Responsible for functional assessment of subjects. Scientific Director of the project: Franco Impellizzeri. Collaborating research institutes: FIFA Medical Assessment and Research Centre, Schulthess Klinik, Zurich, Switzerland.

• Participation in research activities for a project focused on the biomechanics of cross-country skiing on snow, with the role of responsible for kinematic evaluations. Implementation period: from spring 2011. Scientific Director of the Project: Prof. Hans-Christer Holmberg. Collaborating research members: Thomas Stöggl, Department of Sport Science and Kinesiology, University of Salzburg, Austria; Øyvind Sandbakk, Department of Human Movement Science, Norwegian University of Science and Technology, Trondheim, Norway. Subsequent involvement in a similar initiative in spring 2016.

• Appointed by the director of CeRiSM, the Research Center of the University of Verona, to conduct scientific studies within the established research line of the center, titled "Nordic Walking: Biomechanical Peculiarities and Well-being Effects" (Attachment C); Collaborative work carried out with national and international collaborations, since 2018, thanks to the scientific responsibility of "Cooperint 2018 - Action 3" invited researcher: Prof. Leonardo Alexandre Peyre-Tartaruga, University of Verona.

Scientific Responsibilities in International Research Projects

• Scientific responsibility for the project titled "Devices for Motor Control Assessment and 'Wearable' Biofeedback: From the Laboratory to Technology," submitted to the "University Joint Projects 2016" Call for Joint Projects with Companies and Entities of the University of Verona. Project approved for funding following scientific evaluations by 2 experts randomly selected from the CINECA database of the Ministry of Education, University, and Research (MIUR).

• Unit leader for the University of Verona in the project submitted to the Call: H2020-ICT-2014-1 Funding scheme: Research and Innovation action Proposal number: 644314 Proposal acronym: ET4IS Duration (months): 36 Proposal title: “Embodied Training for Inclusive Sports.” The project was positively evaluated with a Total score: 11.00 (Threshold: 10.00) but was not funded.

• Principal scientific responsibility for the two-year project "Innovation in Mountain Footwear: Alpine Ski Boot - Comfort, Fatigue, and Performance," submitted to the "Research and Development 2019" Call of the CARITRO Foundation; funded for 98,000 euros.

Organizational Roles in Congresses, Scientific Societies, and Sports Federations

• Member of the "International Biathlon Union Research Grant Working Group" (IBU-RGWG), a body of the International Biathlon Union for evaluating research projects eligible for funding by the federation. From August 2021.

• Member of the Executive Board of ICSS (International College on Science and Skiing). President: Thomas Stöggl, University of Salzburg (AUT); Other members: David Bacharach, Professor Emeritus, St Cloud State University (USA); Hans-Christer Holmberg, Mid Sweden University (SWE); Vesa Linnamo, University of Jyväskylä (FIN); Lisa Steidl-Müller, University of Innsbruck (AUT). From March 3, 2019.

• Member of the Scientific Committee of the "8th International Congress on Science and Skiing," March 11-15, 2019, Vuokatti (FIN). Chair of the Committee: Prof. Stefan Lindinger, University of Gothenburg (SWE), Congress Chair. Prof. Vesa Linnamo, University of Jyväskylä (FIN).

• Co-coordinator, along with Prof. Maria Francesca Piacentini, University of Roma Foro Italico, of the "Sport, Training & Performance" Study Group of SISMES, the Italian Society of Motor and Sports Sciences. Since May 2017.

• Organizing Committee Member of the "6th International Congress of Mountain Sport and Health," Rovereto, December 12-13, 2015. Organized by CeRiSM, University of Verona.

• Affiliation to SISMES, the Italian Society of Motor and Sports Sciences, as an ordinary member following approval by the SISMES Board of Directors and Assembly – since September 27, 2014.

• Organizing Committee Member of the "5th International Congress of Mountain Sport and Health," Rovereto, December 9-10, 2013. Organized by CeRiSM, University of Verona.

Scientific publications

Scopus EXPORT DATE:17 febbraio 2025

H-index: 23

Documents: 100 (Article: 89; Review: 3; Conference Paper: 6; Editorial 1:Letter: 1)

Total citations: 1683 Citations by 1209 documents

Documents list: (Scopus)

1. Bongiorno G, Sisti G, Dal Mas F, Biancuzzi H, Varrecchia T, Chini G, Ranavolo A, Pellegrini B, Bortolan L, Miceli L. The Kinematic and Electromyographic Analysis of Roller Skating at Different Speeds on a Treadmill: A Case Study. Sensors (Basel). 2024 Sep 4;24(17):5738. doi: 10.3390/s24175738. PMID: 39275648; PMCID: PMC11397868.

2. Palumbo M, Modena R, Bortolan L, Skafidas S, Callovini A, Savoldelli A, Gilli F, Fornasiero A, Schena F, Pellegrini B, Zoppirolli C. Effects of a similar amount of regular non-structured or competitive physical activity across late adulthood: a cross-sectional study. Front Sports Act Living. 2024 May 30;6:1416080. doi: 10.3389/fspor.2024.1416080. PMID: 38873229; PMCID:PMC11169712.

3. Biino V, Pellegrini B, Zoppirolli C, Lanza M, Gilli F, Giuriato M, Schena F. Gross motor coordination in relation to weight status: a longitudinal study in children and pre-adolescents. Front Public Health. 2023 Dec 14;11:1242712. doi: 10.3389/fpubh.2023.1242712. PMID: 38235161; PMCID: PMC10792555.

4. Zoppirolli C, Modena R, Bortolan L, Schena F, Pellegrini B. Non-specific and ski-specific performance development in peri-pubertal cross-country skiers. Eur J Appl Physiol. 2024 May;124(5):1461-1474. doi: 10.1007/s00421-023-05372-4. Epub 2023 Dec 19. PMID: 38112794.

5. Fornasiero A, Fornoni S, Callovini A, Todesco B, Savoldelli A, Schena F, Holmberg HC, Pellegrini B, Bortolan L. Analysis of Sprint Ski Mountaineering Performance. Int J Sports Physiol Perform. 2023 Dec 12;19(2):155-163. doi: 10.1123/ijspp.2023-0075. PMID: 38086366.

6. Callovini A, Fornasiero A, Savoldelli A, Decet M, Skafidas S, Pellegrini B, Bortolan L, Schena F. Independent, additive and interactive effects of acute normobaric hypoxia and cold on submaximal and maximal endurance exercise. Eur J Appl Physiol. 2024 Apr;124(4):1185-1200. doi: 10.1007/s00421-023-05343-9. Epub 2023 Nov 14. PMID: 37962573; PMCID: PMC10955012.

7. Giovanelli N, Pellegrini B, Bortolan L, Mari L, Schena F, Lazzer S. Do poles really "save the legs" during uphill pole walking at different intensities? Eur J Appl Physiol. 2023 Dec;123(12):2803-2812. doi: 10.1007/s00421-023-05254-9. Epub 2023 Jul 1. PMID: 37392255.

8. Fornasiero A, Zignoli A, Pellegrini B, Schena F, Doucende G, Mourot L. The effects of a 6-hour ultra-endurance run on postexercise parasympathetic reactivation responses. J Sports Med Phys Fitness. 2023 Jun;63(6):713-721. doi: 10.23736/S0022-4707.23.14734-7. Epub 2023 Mar 8. PMID: 36884124.

9. Fornasiero A, Savoldelli A, Zignoli A, Callovini A, Decet M, Bortolan L, Schena F, Pellegrini B. Eager to set a record in a vertical race? Test your VO_{2max} first! J Sports Sci. 2022 Nov;40(22):2544-2551. doi: 10.1080/02640414.2023.2172801. Epub 2023 Feb 1. PMID: 36725692.

10. Fornasiero A, Zignoli A, Rakobowchuk M, Stella F, Savoldelli A, Skafidas S, Schena F, Pellegrini B, Mourot L. Post-exercise cardiac autonomic and cardiovascular responses to heart rate-matched and work rate-matched hypoxic exercise. Eur J Appl Physiol. 2021 Jul;121(7):2061-2076. doi: 10.1007/s00421-021-04678-5. Epub 2021 Apr 3. PMID: 33811558; PMCID: PMC8192382.

11. Trabucchi, P., Savoldelli, A., Mourot, L., Vacher, P., Pellegrini, B., Schena, F. Relationship Between Cognitive Appraisal of Control and Cardiac Vagal Regulation During an Unsupported Ski Crossing of Greenland. (2022) Frontiers in Physiology,

12. Modena R, Fornasiero A, Callovini A, Savoldelli A, **Pellegrini B**, Schena F, Bortolan L. *Exercising at the time of the COVID-19 pandemic: acute physiological, perceptual and performance responses of wearing face masks during sports activity*. J Sports Med Phys Fitness. 2021 Dec 16.

13. Almqvist, A., Pellegrini, B., Lintzén, N., Emami, N., Holmberg, H.-C., Larsson, R.. A Scientific Perspective on Reducing Ski-Snow Friction to Improve Performance in Olympic Cross-Country Skiing, the Biathlon and Nordic Combined. (2022) Frontiers in Sports and Active Living, 4,

14. Peyré-Tartaruga, L.A., Boccia, G., Feijó Martins, V., Zoppirolli, C., Bortolan, L., Pellegrini, B. Margins of stability and trunk coordination during Nordic walking. (2022) Journal of Biomechanics, 134,

15. Bortolan L, Savoldelli A, **Pellegrini B**, Modena R, Sacchi M, Holmberg HC, Supej M. *Ski Mountaineering: Perspectives on a Novel Sport to Be Introduced at the 2026 Winter Olympic Games*. Front Physiol. 2021 Oct 21;12:737249.

16. Callovini A, Fornasiero A, Savoldelli A, Stella F, Low DA, **Pellegrini B**, Schena F, Bortolan L. *Effects of three-exercise sessions in the heat on endurance cycling performance.* J Therm Biol. 2021 May;98:102925.

17. Fornasiero A, Zignoli A, Rakobowchuk M, Stella F, Savoldelli A, Skafidas S, Schena F, **Pellegrini B**, Mourot L. *Post-exercise cardiac autonomic and cardiovascular responses to heart rate-matched and work rate-matched hypoxic exercise*. Eur J Appl Physiol. 2021 Jul;121(7):2061-2076.

18. Carvalho AR, Coimbra RDS, Thomas EM, Paz MCR, **Pellegrini B**, Peyré-Tartaruga LA. *The Entrainment Frequency of Cardiolocomotor Synchronization in Long-Distance Race Emerges Spontaneously at the Step Frequency*. Front Physiol. 2021 Feb 4;11:583030. doi: 10.3389/fphys.2020.583030.

19. Muollo V, Rossi AP, Milanese C, Zamboni M, Rosa R, Schena F, **Pellegrini B**. *Prolonged unsupervised Nordic walking and walking exercise following six months of supervision in adults with overweight and obesity: A randomised clinical trial.* Nutr Metab Cardiovasc Dis. 2021 Apr 9;31(4):1247-1256. doi: 10.1016/j.numecd.2020.12.012. Epub 2020 Dec 17. PMID: 33549445.

20. Zoppirolli C, Modena R, Fornasiero A, Bortolan L, Skafidas S, Savoldelli A, Schena F, **Pellegrini B**. *Talent Development in Young Cross-Country Skiers: Longitudinal Analysis of Anthropometric and Physiological Characteristics.* Front Sports Act Living. 2020 Oct 19;2:111.

21. Mourot L, Fornasiero A, Rakobowchuk M, Isacco L, Brighenti A, Stella F, Zignoli A, **Pellegrini B**, Tarperi C, Schena F. *Post-Exercise Hypotension and Reduced Cardiac Baroreflex after Half-Marathon Run: In Men, but Not in Women*. Int J Environ Res Public Health. 2020 Aug 31;17(17):6337.

22. Zoppirolli C, Hébert-Losier K, Holmberg HC, **Pellegrini B**. *Biomechanical determinants of cross-country skiing performance: A systematic review*. J Sports Sci. 2020 Sep;38(18):2127-2148.

23. **Pellegrini B**, Zoppirolli C, Stella F, Bortolan L, Holmberg HC, Schena F. *Biomechanical analysis of the "running" vs. "conventional" diagonal stride uphill techniques as performed by elite cross-country skiers*. J Sport Health Sci. 2020 May 18:S2095-2546(20)30058-2.

24. Fornasiero A, Savoldelli A, Stella F, Callovini A, Bortolan L, Zignoli A, Low DA, Mourot L, Schena F, **Pellegrini B**. *Shortening Work-Rest Durations Reduces Physiological and Perceptual Load During Uphill Walking in Simulated Cold High- Altitude Conditions*. High Alt Med Biol. 2020 Sep;21(3):249-257.

25. Zignoli A, Fornasiero A, Ragni M, **Pellegrini B**, Schena F, Biral F, Laursen PB. *Estimating an individual's oxygen uptake during cycling exercise with a recurrent neural network trained from easy-to-obtain inputs: A pilot study*. PLoS One. 2020 Mar 12;15(3):e0229466. doi: 10.1371/journal.pone.0229466.

26. Zoppirolli C, Bortolan L, Schena F, **Pellegrini B**. *Double poling kinematic changes during the course of a long-distance race: effect of performance level*. J Sports Sci. 2020 Apr;38(8):863-872.

27. Gomeñuka, N.A., Oliveira, H.B., da Silva, E.S., Passos-Monteiro, E., da Rosa, R.G., Carvalho, A.R., Costa, R.R., Rodríguez Paz, M.C., Pellegrini, B., Peyré-Tartaruga, L.A. *Nordic walking training in elderly, a randomized clinical trial. Part II: Biomechanical and metabolic adaptations*. Sports Med Open. 2020 Jan 13;6(1):3.

28. Mourot L, Fornasiero A, Rakobowchuk M, Skafidas S, Brighenti A, Stella F, Zignoli A, Savoldelli A, **Pellegrini B**, Danese E, Lippi G, Tarperi C, Schena F. *Similar cardiovascular and autonomic responses in trained type 1 diabetes mellitus and healthy participants in response to half marathon*. Diabetes Res Clin Pract. 2020 Feb;160:107995. doi: 10.1016/j.diabres.2019.107995. Epub 2019

29. Muollo V, Rossi AP, Milanese C, Masciocchi E, Taylor M, Zamboni M, Rosa R, Schena F, **Pellegrini B**. *The effects of exercise and diet program in overweight people - Nordic walking versus walking.* Clin Interv Aging. 2019 Aug 28;14:1555-1565. doi: 10.2147/CIA.S217570.

30. Fornasiero A, Skafidas S, Stella F, Zignoli A, Savoldelli A, Rakobowchuk M, **Pellegrini B**, Schena F, Mourot L. *Cardiac Autonomic and Physiological Responses to Moderate- intensity Exercise in Hypoxia.* Int J Sports Med. 2019 Dec;40(14):886-896. doi: 10.1055/a-1015-0647. Epub 2019 Oct 24.

31. Zignoli, A., Fornasiero, A., Stella, F., **Pellegrini, B.**, Schena, F., Biral, F., Laursen, P.B. *Expert-level classification of ventilatory thresholds from cardiopulmonary exercising test data with recurrent neural networks.* (2019) European Journal of Sport Science, Pages: 1-9 Published: 2019-Mar-18 (Epub 2019 Mar 18) .

32. Gilli, F., Skafidas, S., Zoppirolli, C., **Pellegrini, B.**, Nollo, G., Mantovani, W., Torri, E., Migazzi, M., Schena, F. *Semi-structured physical activity intervention in daily life: a good compromise between effectiveness and feasibility*. (2018) Sport Sciences for Health, 14 (3), pp. 663-671.

33. Boccia, G., Dardanello, D., Brustio, P.R., Tarperi, C., Festa, L., Zoppirolli, C., **Pellegrini, B**., Schena, F., Rainoldi, A. *Neuromuscular fatigue does not impair the rate of force development in ballistic contractions of submaximal amplitudes*. (2018) Frontiers in Physiology, 9 (OCT), art. no. 1503, .

34. Stöggl, T., **Pellegrini, B**., Holmberg, H.-C. *Pacing and predictors of performance during cross-country skiing races: A systematic review.* (2018) Journal of Sport and Health Science, 7 (4), pp. 381-393.

35. Fornasiero, A., Savoldelli, A., Skafidas, S., Stella, F., Bortolan, L., Boccia, G., Zignoli, A., Schena, F., Mourot, L., **Pellegrini, B**. *Delayed parasympathetic reactivation and sympathetic withdrawal following maximal cardiopulmonary exercise testing (CPET) in hypoxia.* (2018) European Journal of Applied Physiology, 118 (10), pp. 2189-2201.

36. Zoppirolli, C., Bortolan, L., Stella, F., Boccia, G., Holmberg, H.-C., Schena, F., **Pellegrini, B**. Following a long-distance classical race the whole-body kinematics of double poling by elite cross-country skiers are altered. (2018) Frontiers in Physiology, 9 (JUL), art. no. 978, .

37. **Pellegrini, B.,** Stöggl, T.L., Holmberg, H.-C. Developments in the biomechanics and equipment of Olympic cross-country skiers. (2018) Frontiers in Physiology, 9 (JUL), art. no. 976

38. Fornasiero, A., Savoldelli, A., Fruet, D., Boccia, G., **Pellegrini, B.**, Schena, F. *Physiological intensity profile, exercise load and performance predictors of a 65-km mountain ultra-marathon.* (2018) Journal of Sports Sciences, 36 (11), pp. 1287-1295.

39. Boccia, G., Dardanello, D., Tarperi, C., Festa, L., La Torre, A., **Pellegrini, B.**, Schena, F., Rainoldi, A. Women show similar central and peripheral fatigue to men after half-marathon. (2018) *European Journal of Sport Science,* 18 (5), pp. 695-704.

40. Fornasiero, A., Savoldelli, A., Modena, R., Boccia, G., **Pellegrini, B.,** Schena, F. *Physiological and anthropometric characteristics of top-level youth cross-country cyclists.* (2018) Journal of Sports Sciences, 36 (8), pp. 901-906.

41. Fornasiero, A., Savoldelli, A., Boccia, G., Zignoli, A., Bortolan, L., Schena, F., **Pellegrini, B**. *Physiological factors associated with ski-mountaineering vertical race performance.* (2018) Sport Sciences for Health, 14 (1), pp. 97-104.

42. **Pellegrini, B.,** Boccia, G., Zoppirolli, C., Rosa, R., Stella, F., Bortolan, L., Rainoldi, A., Schena, F. Muscular and metabolic responses to different nordic walking techniques, when style matters. (2018) PLoS ONE, 13 (4), art. no. e0195438.

43. Boccia, G., Zoppirolli, C., Bortolan, L., Schena, F., **Pellegrini, B**. Shared and task-specific muscle synergies of Nordic walking and conventional walking. (2018) Scandinavian Journal of Medicine and Science in Sports, 28 (3), pp. 905-918.

44. Stöggl, T., Welde, B., Supej, M., Zoppirolli, C., Rolland, C.G., Holmberg, H.-C., **Pellegrini, B**. Impact of incline, sex and level of performance on kinematics during a distance race in classical cross-country skiing (2018) Journal of Sports Science and Medicine, 17 (1), pp. 124-133.

45. **Pellegrini, B**., Zoppirolli, C., Boccia, G., Bortolan, L., Schena, F. Cross-country skiing movement factorization to explore relationships between skiing economy and athletes' skills (2018) Scandinavian Journal of Medicine and Science in Sports, 28 (2), pp. 565-574.

46. Savoldelli, A., Fornasiero, A., Trabucchi, P., Limonta, E., Torre, A.L., Degache, F., **Pellegrini, B**., Millet, G.P., Vernillo, G., Schena, F. The energetics during the world's most challenging mountain Ultra-Marathon-A case study at the Tor des Geants®. (2017) Frontiers in Physiology, 8 (DEC), art. no. 1003, .

47. Zoppirolli, C., Boccia, G., Bortolan, L., Schena, F., **Pellegrini, B.** Functional significance of extent and timing of muscle activation during double poling on-snow with increasing speed.(2017) European Journal of Applied Physiology, 117 (11), pp. 2149-2157.

48. Zoppirolli, C., **Pellegrini, B.,** Modena, R., Savoldelli, A., Bortolan, L., Schena, F. Changes in upper and lower body muscle involvement at increasing double poling velocities: an ecological study. (2017) Scandinavian Journal of Medicine and Science in Sports, 27 (11), pp. 1292-1299.

49. Welde, B., Stöggl, T.L., Mathisen, G.E., Supej, M., Zoppirolli, C., Winther, A.K., **Pellegrini, B**., Holmberg, H.-C. *The pacing strategy and technique of male cross-country skiers with different levels of performance during a 15-km classical race*. (2017) PLoS ONE, 12 (11), art. no. e0187111.

50. Boccia, G., Dardanello, D., Zoppirolli, C., Bortolan, L., Cescon, C., Schneebeli, A., Vernillo, G., Schena, F., Rainoldi, A., **Pellegrini, B.** *Central and peripheral fatigue in knee and elbow extensor muscles after a long-distance cross-country ski race* (2017) Scandinavian Journal of Medicine and Science in Sports, 27 (9), pp. 945-955.

51. Nardello, F., Bombieri, F., Tinazzi, M., Schena, F., **Pellegrini, B**. Metabolic and kinematic parameters during walking with poles in Parkinson's disease (2017) Journal of Neurology, 264 (8), pp. 1785-1790.

52. Zignoli, A., Biral, F., **Pellegrini, B.**, Jinha, A., Herzog, W., Schena, F. An optimal control solution to the predictive dynamics of cycling. (2017) Sport Sciences for Health, 13 (2), pp. 381-393.

53. Boccia, G., Dardanello, D., Tarperi, C., Festa, L., La Torre, A., **Pellegrini, B.,** Schena, F., Rainoldi, A. Fatigue-induced dissociation between rate of force development and maximal force across repeated rapid contractions. (2017) Human Movement Science, 54, pp. 267-275.

54. Bombieri, F., Schena, F., **Pellegrini, B.**, Barone, P., Tinazzi, M., Erro, R. Walking on four limbs: A systematic review of Nordic Walking in Parkinson disease. (2017) Parkinsonism and Related Disorders, 38, pp. 8-12.

55. Boccia, G., Fornasiero, A., Savoldelli, A., Bortolan, L., Rainoldi, A., Schena, F., **Pellegrini, B**. *Oxygen consumption and muscle fatigue induced by whole-body electromyostimulation compared to equal-duration body weight circuit training.* (2017) Sport Sciences for Health, 13 (1), pp. 121-130.

56. Boccia, G., Dardanello, D., Tarperi, C., Rosso, V., Festa, L., La Torre, A., **Pellegrini, B**., Schena, F., Rainoldi, *A. Decrease of muscle fiber conduction velocity correlates with strength loss after an endurance run*. (2017) Physiological Measurement, 38 (2), pp. 233-240.

57. **Pellegrini, B**., Peyré-Tartaruga, L.A., Zoppirolli, C., Bortolan, L., Savoldelli, A., Minetti, A.E., Schena, F.; *Mechanical energy patterns in nordic walking: comparisons with conventional walking*. (2017) Gait and Posture, 51, pp. 234-238.

58. Vernillo, G., Savoldelli, A., Skafidas, S., Zignoli, A., La Torre, A., **Pellegrini, B.**, Giardini, G., Trabucchi, P., Millet, G.P., Schena, F. *An extreme mountain ultra-marathon decreases the cost of uphill walking and running.* (2016) Frontiers in Physiology, 7 (NOV), art. no. 530

59. Zoppirolli, C., **Pellegrini, B.**, Bortolan, L., Schena, F. *Effects of short-term fatigue on biomechanical and physiological aspects of double poling in high-level cross-country skiers*. (2016) Human Movement Science, 47, pp. 88-97.

60. **Pellegrini, B.,** Peyré-Tartaruga, L.A., Zoppirolli, C., Bortolan, L., Bacchi, E., Figard-Fabre, H., Schena, F. *Exploring muscle activation during nordic walking: A comparison between conventional and uphill walking.*(2015) PLoS ONE, 10 (9), art. no. e0138906

61. Zoppirolli, C., **Pellegrini, B.,** Bortolan, L., Schena, F. *Energetics and biomechanics of double poling in regional and high-level cross-country skiers.* (2015) European Journal of Applied Physiology, 115 (5), pp. 969-979.

62. Vernillo, G., Savoldelli, A., **Pellegrini, B.**, Schena, F. *Validity of the SenseWear armband to assess energy expenditure in graded walking.* (2015) Journal of Physical Activity and Health, 12 (2), pp. 178-183.

63. Vernillo, G., Savoldelli, A., Zignoli, A., Skafidas, S., Fornasiero, A., Torre, A.L., Bortolan, L., **Pellegrini, B**., Schena, F. *Energy cost and kinematics of level, uphill and downhill running: Fatigue-induced changes after a mountain ultramarathon*. (2015) Journal of Sports Sciences, 33 (19), pp. 1998-2005.

64. Vernillo, G., Savoldelli, A., **Pellegrini, B.,** Schena, F. *Evaluation of the sense wear mini armband to assess energy expenditure during pole walking.*(2014) International Journal of Sport Nutrition and Exercise Metabolism, 24 (5), pp. 565-569.

65. **Pellegrini, B**., Zoppirolli, C., Bortolan, L., Zamparo, P., Schena, F. *Gait models and mechanical energy in three cross-country skiing Techniques.* (2014) Journal of Experimental Biology, 217 (21), pp. 3910-3918.

66. Andersson, E., **Pellegrini, B.**, Sandbakk, Ø., Stüggl, T., Holmberg, H.-C. *The effects of skiing velocity on mechanical aspects of diagonal cross-country skiing.* (2014) Sports Biomechanics, 13 (3), pp. 267-284.

67. Schena, F., **Pellegrini, B**., Tarperi, C., Calabria, E., Salvagno, G.L., Capelli, C. *Running economy during a simulated 60-km trial.* (2014) International Journal of Sports Physiology and Performance, 9 (4), pp. 604-609. Cited 5 times.

68. Andersson, E., Stöggl, T., **Pellegrini, B.**, Sandbakk, Ø., Ettema, G., Holmberg, H.-C. *Biomechanical analysis of the herringbone technique as employed by elite cross-country skiers.* (2014) Scandinavian Journal of Medicine and Science in Sports, 24 (3), pp. 542-552.

69. Vernillo, G., Savoldelli, A., Zignoli, A., Trabucchi, P., **Pellegrini, B.**, Millet, G.P., Schena, F. *Influence of the world's most challenging mountain ultra-marathon on energy cost and running mechanics.* (2014) European Journal of Applied Physiology, 114 (5), pp. 929-939.

70. Colonna, M., Moncalero, M., Nicotra, M., Pezzoli, A., Fabbri, E., Bortolan, L., **Pellegrini, B.**, Schena, F. *Thermal behaviour of ski-boot liners: Effect of materials on thermal comfort in real and simulated skiing conditions.* (2014) Procedia Engineering, 72, pp. 386-391.

71. **Pellegrini, B.,** Zoppirolli, C., Bortolan, L., Holmberg, H.-C., Zamparo, P., Schena, F. *Biomechanical and energetic determinants of technique selection in classical cross-country skiing.* (2013) Human Movement Science, 32 (6), pp. 1415-1429.

72. Brighenti, A., Bortolan, L., Savoldelli, A., Modena, R., **Pellegrini, B**., Schena, F.*Effect of new type of compression garments on sub-maximal and maximal cycling performance in the heat (32 °C).* (2013) Sport Sciences for Health, 9 (3), pp. 127-131.

73. Zoppirolli, C., Holmberg, H.-C., **Pellegrini, B.**, Quaglia, D., Bortolan, L., Schena, F. *The effectiveness of stretch-shortening cycling in upper-limb extensor muscles during elite cross-country skiing with the double-poling technique.* (2013) Journal of Electromyography and Kinesiology, 23 (6), pp. 1512-1519.

74. Impellizzeri, F.M., Bizzini, M., Dvorak, J., **Pellegrini, B.,** Schena, F., Junge, A. *Physiological and performance responses to the FIFA 11+ (part 2): A randomised controlled trial on the training effects.* (2013) Journal of Sports Sciences, 31 (13), pp. 1491-1502.

75. Bernardi, M., Janssen, T., Bortolan, L., **Pellegrini, B**., Fischer, G., Schena, F. *Kinematics of cross-country sit skiing during a Paralympic race.* (2013) Journal of Electromyography and Kinesiology, 23 (1), pp. 94-101.

76. Fabre, N., Mourot, L., Zerbini, L., **Pellegrini, B.**, Bortolan, L., Schena, F. *A novel approach for lactate threshold assessment based on rating of perceived exertion.* (2013) International Journal of Sports Physiology and Performance, 8 (3), pp. 263-270.

77. Zerbini, L., Brighenti, A., **Pellegrini, B**., Bortolan, L., Antonetti, T., Schena, F. *Effects of acute hypoxia on the oxygen uptake kinetics of older adults during cycling exercise.* (2012) Applied Physiology, Nutrition and Metabolism, 37 (4), pp. 744-752.

78. Fabre, N., Bortolan, L., **Pellegrini, B.**, Zerbini, L., Mourot, L., Schena, F. *Anaerobic threshold assessment through the ventilatory method during roller-ski skating testing: Right or wrong?* (2012) Journal of Strength and Conditioning Research, 26 (2), pp. 381-387.

79. **Pellegrini, B.,** Bortolan, L., Schena, F. *Poling force analysis in diagonal stride at different grades in cross country skiers.* (2011) Scandinavian Journal of Medicine and Science in Sports, 21 (4), pp. 589-597.

80. Fabre, N., Balestreri, F., **Pellegrini, B**., Schena, F. *The modified DMax method is reliable to predict the second ventilatory threshold in elite cross-country skiers.* (2010) Journal of Strength and Conditioning Research, 24 (6), pp. 1546-1552.

81. Zory, R., Vuillerme, N., **Pellegrini, B.,** Schena, F., Rouard, A. *Effect of fatigue on double pole kinematics in sprint cross-country skiing.* (2009) Human Movement Science, 28 (1), pp. 85-98.

82. Bortolan, L., **Pellegrini, B.**, Finizia, G., Schena, F. *Assessment of the reliability of a custom built nordic ski ergometer for cross-country skiing power test.* (2008) Journal of Sports Medicine and Physical Fitness, 48 (2), pp. 177-182.

83. **Pellegrini,** B., Schena, F. *Characterization of arm-gun movement during air pistol aiming phase.* (2005) Journal of Sports Medicine and Physical Fitness, 45 (4), pp. 467-475.

84. **Pellegrini, B.,** Faes, L., Nollo, G., Schena, F. *Quantifying the contribution of arm postural tremor to the outcome of goal-directed pointing task by displacement measures.* (2004) Journal of Neuroscience Methods, 139 (2), pp. 185-193.

85. Cavina-Pratesi, C., Bricolo, E., **Pellegrini, B.**, Marzi, C.A. *At what stage of manual visual reaction time does interhemispheric transmission occur: Controlled or ballistic?* (2004) Experimental Brain Research, 155 (2), pp. 220-230.

86. Pratesi, C.C., Emmanuela, B., **Pellegrini, B.**, Marzi, C.A. *Interhemispheric transfer as assessed with the Poffenberger paradigm: What kind of signal is transferred?* (2003) Journal of Vision, 3 (9), pp. 747a.

87. Nollo, G., Faes, L., Porta, A., **Pellegrini, B.**, Ravelli, F., Del Greco, M., Disertori, M., Antolini, R. *Evidence of unbalanced regulatory mechanism of heart rate and systolic pressure after acute myocardial infarction.* (2002) American Journal of Physiology - Heart and Circulatory Physiology, 283 (3 52-3), pp. H1200-H1207..

88. Nollo, G., Faes, L., **Pellegrini, B.**, Porta, A., Antolini, R. *Synchronization index for quantifying nonlinear causal coupling between RR interval and systolic arterial pressure after myocardial infarction.* (2000) Computers in Cardiology, pp. 143-146.

Updated: 17 febbraio 2025