



CURRICULUM VITAE (short version)

Andrea Nicolò

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Current position

From 2022 – Assistant Professor at the University of Rome “Foro Italico”, Department of Movement, Human and Health Sciences.

Scientific qualification

From 2020 – Eligible for the Associate Professor position (II Fascia) for the scientific disciplinary sector 06/N2 (Scienze dell'Esercizio Fisico e dello Sport).

Education and training

- 2015 – Ph.D. in Sports, Exercise and Ergonomics from the University of Rome “Foro Italico”. Title of the Thesis: Respiratory frequency as a marker of effort and fatigue during exercise.
- 2011 – Master of Science degree cum laude in “Scienza e Tecnica dello Sport” from the University of Rome “Foro Italico”.
- 2009 – Bachelor’s degree cum laude in Sport and Exercise Sciences from the University of Rome “Foro Italico”.

Work experience

- From 2018 to 2021 – Post-Doctoral researcher at the University of Rome “Foro Italico”.
- From 2018 – Chair of the “Sports Sensors” technical committee of the IEEE Sensors Council Italy Chapter.
- From 2017 to 2018 – Post-Doctoral research bursary at the University of Rome “Foro Italico”.
- 2015 – Research assistant at the School of Sport and Exercise Sciences, University of Kent, UK.
- From 2014 to 2015 – Visiting Training Fellow at the School of Sport and Exercise Sciences, University of Kent, UK.

Main publications related to the topic of the proposed lecture

- Innocenti, L., Romano, C., Greco, G., Nuccio, S., Bellini, A., Mari, F., Silvestri, S., Schena, E., Sacchetti, M., Massaroni, C., & Nicolò, A. (2024). Breathing Monitoring in Soccer: Part I—Validity of Commercial Wearable Sensors. *Sensors*, 24(14), 4571.
- Nicolò, A., Girardi, M., Bazzucchi, I., Sacchetti, M., & Felici, F. (2023). Ventilation and perceived exertion are sensitive to changes in exercise tolerance: arm+leg cycling vs. leg cycling. *Frontiers in Physiology*, 14. <https://doi.org/10.3389/fphys.2023.1226421>
- Nicolò, A., & Sacchetti, M. (2023). Differential control of respiratory frequency and tidal volume during exercise. *European Journal of Applied Physiology*, 123(2), 215-242.
- Girardi, M., Nicolò, A., Bazzucchi, I., Felici, F., & Sacchetti, M. (2021). The effect of pedalling cadence on respiratory frequency: passive vs. active exercise of different intensities. *European Journal of Applied Physiology*, 121, 583–596.
- Nicolò, A., Massaroni, C., Schena, E., & Sacchetti, M. (2020). The Importance of Respiratory Rate Monitoring: From Healthcare to Sport and Exercise. *Sensors*, 20(21), 6396.
- Nicolò, A., Marcora, S. M., & Sacchetti, M. (2020). Time to reconsider how ventilation is regulated above the respiratory compensation point during incremental exercise. *Journal of Applied Physiology*, 128(5), 1447-1449.
- Nicolò, A., Montini, M., Girardi, M., Felici, F., Bazzucchi, I., & Sacchetti, M. (2020). Respiratory Frequency as a Marker of Physical Effort During High-Intensity Interval Training in Soccer Players. *International Journal of Sports Physiology and Performance*, 15(1), 73-80.
- Nicolò, A., & Sacchetti, M. (2019). A new model of ventilatory control during exercise. *Experimental Physiology*, 104:1331-1332.
- Nicolò, A., Girardi, M., Bazzucchi, I., Felici, F., & Sacchetti, M. (2018). Respiratory frequency and tidal volume during exercise: differential control and unbalanced interdependence. *Physiological Reports*, 6(21), e13908.
- Nicolò, A., Massaroni, C., & Passfield, L. (2017). Respiratory Frequency during Exercise: the Neglected Physiological Measure. *Frontiers in Physiology*, 8, 922.
- Nicolò, A., Marcora, S. M., Bazzucchi, I., & Sacchetti, M. (2017). Differential control of respiratory frequency and tidal volume during high-intensity interval training. *Experimental Physiology*, 102(8):934-949.

- **Nicolò, A.,** Marcora, S. M., & Sacchetti, M. (2016). Respiratory frequency is strongly associated with perceived exertion during time trials of different duration. *Journal of Sports Sciences*, 34(13), 1199-1206.

Honours and Awards

- 2022 – Best Poster award for the presentation “Perceptual and physiological responses underlying the greater exercise tolerance of arm+leg cycling vs. leg cycling” within the XIII SISMeS Congress, Milan, Italy.
- 2021 – Young researcher in Sport and Exercise Sciences Award granted by SISMeS – Third place.
- 2021 – “Sensors 2021 Best Paper Award” granted by Sensors for the article Contact-Based Methods for Measuring Respiratory Rate.
- 2017 – The article “Differential control of respiratory frequency and tidal volume during high-intensity interval training” was selected by *Experimental Physiology* as the Editor’s Pick of August.
- 2014 – Marco Marchetti Award for the oral presentation “Muscle fibre conduction velocity decreases with power output during the 3 min all-out cycling test” at the XX ISEK Congress, Rome, Italy.

International Summer School organizer

- 2022 – School Chair of the “2nd International Summer School on Wearable Sensors in Sport”.
- 2021 – School Chair of the “International Summer School on Wearable Sensors in Sport”.

Workshop and special session organizer

- 2021 – Member of the International Program Committee of the 2021 IEEE 2nd international workshop on wearable sensors and devices, artificial intelligence and wearables markets.
- 2020 – Member of the International Program Committee of the 1ST International workshop on wearable sensors and devices, artificial intelligence and wearable markets.
- 2020 – Member of the International Program Committee of the 2021 IEEE International Workshop on Metrology for Industry 4.0 and IoT.
- 2021 – Organizer of the Special Session “Sensors and techniques for sport and physical activity”, 2021 IEEE International Workshop on Metrology for Industry 4.0 and IoT.
- 2020 – Organizer of the Special Session “Physiological sensors and techniques for monitoring sport and physical activity”, 2020 IEEE International Workshop on Metrology for Industry 4.0 and IoT.

Main invited seminars, lectures, and oral presentations at conferences

- 2024 – Invited lecture “Training load monitoring in soccer: limitations and perspectives” at the Italian Olympic Committee, Rome, Italy.
- 2024 – Invited lecture “Errors and future perspectives in the monitoring of training load in soccer” at the Rome City Institute, Italy.
- 2024 – Invited remote lecture “Training load and recovery in endurance training” at the Italian Olympic Committee, Rome, Italy.
- 2024 – Invited remote lecture “Towards breathing monitoring in the field: the journey” at the University of Lisbon, Portugal.
- 2023 – Invited lecture “Cycling monitoring: why we can’t miss a breath” at the University of Agder, Norway.
- 2023 – Invited lecture “Validity of commercial wearable sensors measuring respiratory frequency in soccer players” at the XIV SISMeS Congress, Naples (Italy) in the Symposium “Performance monitoring: a new vision”.
- 2023 – Invited lecture “The importance of breathing monitoring in sport and exercise” at the GNB XLII Annual School – The Bioengineering of Sport.
- 2023 – Invited lecture “The benefits of combined arm-leg exercise: exercise tolerance and cardio-respiratory responses” at the ELAV Sport Science Day, Rimini, Italy.
- 2022 – Invited remote lecture “A new model of ventilatory control during exercise” at the ELAV Sport Science Day.
- 2022 – Invited remote lecture “How to monitor the internal training load during intermittent exercise” at the ELAV Sport Science Day.
- 2021 – Invited remote lecture “Breathing monitoring in endurance sports” at the ELAV Sport Science Day.
- 2021 – Invited remote seminar “New perspectives in the monitoring of training load in soccer” at the eCampus University.
- 2019 – Invited seminar “Respiratory frequency as a marker of physical effort: mechanisms and practical applications” at the University of Verona, Italy.
- 2019 – Invited lecture “Sports sensors: what should we measure, why and how” at the University of Rome Campus Bio-Medico.
- 2016 – Keynote speaker at the VIII SISMeS Congress, Rome (Italy), “Physiological and psychological indicators of variability in endurance performance”.