



Marcello Sicbaldi

PhD student, marcello.sicbaldi2@unibo.it

Date of birth: 06/04/1997

Affiliation: University of Bologna, Department of Electrical, Electronic, and Information Engineering

Work experience

11/2022 - current	PhD student in Biomedical, Electrical, and Systems Engineering – Bioengineering curriculum. <i>Supervisor:</i> Prof. Lorenzo Chiari Tutor activities: in the courses “Ageing and rehabilitation engineering” and “Laboratory of wearable sensors and mobile health”, master course in Biomedical Engineering
03/2022-09/2022	Research internship at the Danish Research Center for Magnetic Resonance, Copenhagen, Denmark. <i>Supervisor:</i> Prof. Hartwig R. Siebner
06/2020-09/2020	Software analyst at S.Orsola-Malpighi Hospital, Bologna, Italy. <ul style="list-style-type: none">• Implementation of digital medical records• Training and assistance to medical doctors and nurses

Education

09/2020 - 09/2022	MSc in Biomedical Engineering, University of Bologna, Italy. 110/110 cum laude (GPA: 28.9/30). <i>Thesis:</i> Predicting corticospinal excitability from pre-TMS EEG using convolutional neural networks
09/2019 – 09/2020	MSc in Artificial intelligence, University of Bologna, Italy. <i>Interrupted.</i> (GPA: 29.0/30)
09/2016 - 07/2019	BSc in Biomedical Engineering, University of Bologna, Italy. 108/110 (GPA: 28.1/30) <i>Thesis:</i> Brain-Computer Interfaces for motor and cognitive rehabilitation

Courses and summer schools

09/2023	XLII Annual School of Bioengineering “The Bioengineering of Sport”, Bressanone, Italy
08/2023	Summer School, “Digital Mobility Outcomes for Health Promotion and Prevention: Extracting Actionable Insights from Real-World Data”, Bertinoro, Italy (certificate)
05/2022	Online Course, Deep Learning by DeepLearning.AI, Coursera (certificate)
04/2021	Spring School, “BCI & Neurotechnology”, online (certificate)

Honours and awards

2018	Merit-based scholarship for deserving students, BSc in Biomedical Engineering, University of Bologna, Italy
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Language skills

09/2020	IELTS Academic, band 7.5 (certificate)
12/2018	Certificate in Advanced English, CEFR Level C1 (certificate)

Publications

- 1) *Heart Rate Estimation from Motion-corrupted Photoplethysmography: a Review with Benchmarking of Open-source Algorithms*. [Sicbaldi M](#), Palmerini L, Moscato S, Di Florio P, Silvani A, Chiari L. Journal paper submitted to npj Digital Medicine. Status: under review.
- 2) *Monitoring the association between movements and heart rate changes during sleep: insights from a multi-sensor wearable system setup*. [Sicbaldi M](#), Di Florio P, Butt AH, Palmerini L, Chiari L, Silvani A. Conference abstract accepted for oral presentation at the 27th Conference of the European Sleep Research Society, September 24 – 27 2024, Seville, Spain.
- 3) *LOOKING-GLASS MIAR: a pilot open-access database of multi-wearable sensor monitoring of acceleration and heart rate during sleep*. Di Florio P, [Sicbaldi M](#), Butt AH, Palmerini L, Chiari L, Silvani A. Conference abstract accepted for poster presentation at the 27th Conference of the European Sleep Research Society, September 24 – 27 2024, Seville, Spain.
- 4) *Laboratory vs. real-world PPG characterization for blood pressure stratification in healthy individuals*. [Sicbaldi M](#), Moscato S, Palmerini L, Silvani A, Diemberger I, Chiari L. Conference abstract submitted to the Computing in Cardiology conference (CinC), September 8 - 11 2024, Karlsruhe, Germany.
- 5) *Benchmarking open-source algorithms for heart rate estimation from motion-corrupted photoplethysmography*. [Sicbaldi M](#), Palmerini L, Chiari L, Silvani A. Conference abstract accepted for oral presentation at the International Conference on Ambulatory Monitoring of Physical Activity and Movement (ICAMPAM), June 18 – 21 2024, Rennes, France.
- 6) *VEGA, an app for real-world monitoring exploiting commercial devices*. Di Florio P, [Sicbaldi M](#), Palmerini L, Silvani A, Chiari L, Silvani A. Conference abstract accepted for poster presentation at the International Conference on Ambulatory Monitoring of Physical Activity and Movement (ICAMPAM), June 18 – 21 2024, Rennes, France.
- 7) *Exploring the relationship between pain and physical activity in the real world in people with multiple sclerosis*. Moscato S, [Sicbaldi M](#), Orlandi S, Lullini G, Pozzi S, Sabattini L, Chiari L, La Porta F. Conference abstract accepted for poster presentation at the International Conference on Ambulatory Monitoring of Physical Activity and Movement (ICAMPAM), June 18 – 21 2024, Rennes, France.
- 8) *Measuring spontaneous activity, sleep, and heart rate with wearable sensors to improve prediction of incident falls in older subjects: the DARE FALLSPREDICT projects*. Silvani A, Albites Sanabria JL, Atella V, Bedogni G, Butt AH, D'Ascanio I, Di Florio P, Domenicali M, Liotta M, Mellone S, Palmerini L, Palmese F, Palumbo P, Piano Mortari A, Ranciati S, [Sicbaldi M](#), Chiari L. Conference abstract accepted for symposium presentation at the International Conference on Ambulatory Monitoring of Physical Activity and Movement (ICAMPAM), June 18 – 21 2024, Rennes, France.
- 9) *LOOKING-GLASS: proof of concept of an integrated system of wearable sensors for continuous monitoring of sleep, physical activity, and heart rate in older adults*. Di Florio P, Butt AH, [Sicbaldi M](#), Palmerini L, Chiari L, Silvani A. Conference abstract, 33rd Annual Meeting of the Italian Association of Sleep Medicine (AIMS), November 24-26 2023, Milan, Italy.
- 10) *Validated open-source algorithms for sleep analysis based on wearable inertial sensors: preliminary results of a systematic literature review*. Butt AH, Bedogni G, Di Florio P, [Sicbaldi M](#), Palmerini L, Chiari L, Silvani A. Conference abstract, 33rd Annual Meeting of the Italian Association of Sleep Medicine (AIMS), November 24-26 2023, Milan, Italy.