

Declaration in lieu of certification
(Art. 46, D.P.R. 28 December 2000 n. 445)
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(Art. 47, D.P.R. 28 December 2000 n. 445)

Curriculum vitae (CV)

Education, training

Date	Title/Certification	Institution
14/11/2018	Bachelor's degree in Biomedical Engineering with a grade of 110/110 cum laude.	University of Cagliari
23/07/2021	Master's Degree in Biomedical Engineering - Biomechanics and Biomaterials Curriculum with a grade of 110/110 cum laude.	Politecnico di Milano
22/04/2021	Ph.D. in Industrial Engineering	University of Cagliari
11/2021	Licensing to Practice as an Industrial Engineer	University of Cagliari

Esperienza professionale

Period	Institution	Type of job and responsibility	SSD
2022-2023 (50 hours)	University of Cagliari	University Tutor Mechanical Bioengineering Bachelor of Science in Biomedical Engineering - Faculty of Engineering and Architecture	BIO/10
2023-2024 (50 hours)	University of Cagliari	University Tutor Mechanical Bioengineering Bachelor of Science in Biomedical Engineering - Faculty of Engineering and Architecture	BIO/10
2023-2024 (25 hours)	University of Cagliari	University Tutor Fundamentals of Mechanics and Biomechanics Bachelor of Science in Biomedical Engineering - Faculty of Engineering and Architecture	BIO/10
2023-2024 (25 hours)	University of Cagliari	University Tutor Applied Biomechanics Bachelor of Science in Biomedical Engineering - Faculty of Engineering and Architecture	BIO/10

2024-2025 (50 hours)	University of Cagliari	University Tutor Mechanical Bioengineering Bachelor of Science in Biomedical Engineering - Faculty of Engineering and Architecture	BIO/10
2024-2025 (25 hours)	University of Cagliari	University Tutor Fundamentals of Mechanics and Biomechanics Bachelor of Science in Biomedical Engineering - Faculty of Engineering and Architecture	BIO/10
2023-2024 (25 hours)	University of Cagliari	University Tutor Applied Biomechanics Bachelor of Science in Biomedical Engineering - Faculty of Engineering and Architecture	BIO/10
2024-2025 (36 hours)	University of Cagliari	Lecturer Teaching BIOMECHANICS Bachelor of Science in "Science of Motor and Sports Activities," Faculty of Medicine	BIO/10
2024-2025 (16 hours)	University of Cagliari	Lecturer Teaching BIOMECHANICS Bachelor of Science in "Physiotherapy," Faculty of Medicine	BIO/10

Publications and other scientific activities

Publications

<p>1. Casu, G., Porta, M., Lecca, L. I., Murru, A., Medas, F., Pau, M., & Campagna, M. (2025). Use of Wearable Inertial Sensors to Assess Trunk and Cervical Postures Among Surgeons: Effect of Surgical Specialties and Roles. <i>Bioengineering</i>, 12(3), 299. doi: 10.3390/bioengineering12030299</p>
<p>2. Fastame, M. C., Porta, M., Leban, B., Arippa, F., Casu, G., & Pau, M. (2025). How do the motor efficiency and visuo-spatial skills of primary school children relate to their teachers' evaluation of visuo-spatial skills?. <i>Human Movement Science</i>, 101, 103342. doi: 10.1016/j.humov.2025.103342</p>
<p>3. Porta, M., Casu, G., Fastame, M. C., Nussbaum, M. A., & Pau, M. (2025). Older workers spend less time in extreme trunk and upper-arm postures during order-picking tasks: Results from field testing. <i>Applied Ergonomics</i>, 125, 104462. doi: 10.1016/j.apergo.2024.104462</p>
<p>4. Porta, M., Casu, G., Lim, S., Nussbaum, M. A., & Pau, M. (2025). Use of wearable sensors for continuous field monitoring of upper arm and trunk postures among construction workers. <i>Ergonomics</i>, 1-14. doi: https://doi.org/10.1080/00140139.2025.2470235</p>
<p>5. Casu, G., Barajas-Smith, I., Barr, A., Phillips, B., Kim, S., Nussbaum, M. A., ... & Harris-Adamson, C. (2024). Shoulder kinematics during cyclic overhead work are affected by a passive arm support exoskeleton. <i>Applied Ergonomics</i>, 121, 104357. doi: 10.1016/j.apergo.2024.104357</p>
<p>6. Sanna, A., Pau, M., Pilia, G., Porta, M., Casu, G., Secci, V., Cartella, E., De Mattia, A., Firinu, S., Pau C., Milia, A., Cocco E., and Tacconi, P. (2024). Comparison of two therapeutic approaches of</p>

cerebellar transcranial direct current stimulation in a Sardinian family affected by spinocerebellar Ataxia 38: a clinical and computerized 3D Gait analysis study. *The Cerebellum*, 23(3), 973-980. doi: [10.1007/s12311-023-01590-w](https://doi.org/10.1007/s12311-023-01590-w)

7. Pau, M., Arippa, F., Leban, B., Porta, M., **Casu, G.**, Frau, J., Loreface L., Coghe, G., and Cocco, E. (2024). Cybersickness in People with Multiple Sclerosis Exposed to Immersive Virtual Reality. *Bioengineering*, 11(2), 115. doi: [10.3390/bioengineering11020115](https://doi.org/10.3390/bioengineering11020115)

8. Pau, M., Arippa, F., Porta, M., **Casu, G.**, Leban, B., & Cocco, E. (2024, June). Associations Between Perceived Discomfort, Postural Control Alterations and Disability in People with Multiple Sclerosis Exposed to Immersive Virtual Reality. In 2024 IEEE Gaming, Entertainment, and Media Conference (GEM) (pp. 1-6). IEEE. doi: [10.1109/GEM61861.2024.10585386](https://doi.org/10.1109/GEM61861.2024.10585386)

9. Arippa, F., Porta, M., **Casu, G.**, Leban, B., & Pau, M. (2024, June). To Stand or to Sit? Examining the Influence of Player Posture on Balance Alterations Associated to Immersive Virtual Reality Exposure. In 2024 IEEE Gaming, Entertainment, and Media Conference (GEM) (pp. 1-6). IEEE. doi: [10.1109/GEM61861.2024.10585552](https://doi.org/10.1109/GEM61861.2024.10585552)

10. Porta, M., Porceddu, S., Leban, B., **Casu, G.**, Mura, G. M., Campagna, M., & Pau, M. (2023). Characterization of upper limb use in health care workers during regular shifts: A quantitative approach based on wrist-worn accelerometers. *Applied Ergonomics*, 112, 104046. doi: [10.1016/j.apergo.2023.104046](https://doi.org/10.1016/j.apergo.2023.104046)

11. Fastame, M. C., Spada, E., Cimmino, D., Leban, B., Porta, M., Arippa, F., **Casu, G.**, and Pau, M. (2023). Motor and cognitive skills implicated in the Motor Observation Questionnaire for Teachers (MOQ-T): A multidisciplinary approach. *Heliyon*, 9(6).doi: [10.1016/j.heliyon.2023.e16659](https://doi.org/10.1016/j.heliyon.2023.e16659)

12. Pau, M., Cocco, E., Arippa, F., **Casu, G.**, Porta, M., Menascu, S., Achiron, A., and Kalron, A. (2023). An immersive virtual kitchen training system for people with multiple sclerosis: a development and validation study. *Journal of Clinical Medicine*, 12(9), 3222. doi: [10.3390/jcm12093222](https://doi.org/10.3390/jcm12093222)

13. Porta, M., Cimmino, D., Leban, B., Arippa, F., **Casu, G.**, Fastame, M. C., & Pau, M. (2023). Smoothness of Gait in Overweight (But Not Obese) Children Aged 6–10. *Bioengineering*, 10(3), 286. doi: [10.3390/bioengineering10030286](https://doi.org/10.3390/bioengineering10030286)

14. Porta, M., **Casu, G.**, Leban, B., & Pau, M. (2023, July). Quantitative Characterization of Upper Limb Intensity and Symmetry of Use in Healthcare Workers Using Wrist-Worn Accelerometers. In *International Conference on Human-Computer Interaction* (pp. 194-204). Cham: Springer Nature Switzerland. doi: [10.1007/978-3-031-35741-1_16](https://doi.org/10.1007/978-3-031-35741-1_16)

15. Pau, M., **Casu, G.**, Porta, M., Pilloni, G., Frau, J., Coghe, G., & Cocco, E. (2020). Timed Up and Go in men and women with multiple sclerosis: effect of muscular strength. *Journal of Bodywork and Movement Therapies*, 24(4), 124-130. doi: [10.1016/j.jbmt.2020.06.014](https://doi.org/10.1016/j.jbmt.2020.06.014)

Conferences and awards

<p>1. 21st Annual National Occupational Research Agenda (NORA) Symposium. Titolo Abstract: Validation of an Accelerometer-Based Inclinometer for Measuring Shoulder Elevation Angle during a Simulated Industrial Working Task 20/21 Aprile, 2023</p>
<p>2. Evento organizzato dall'Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro (INAIL), la scuola edile di Cagliari (EPT), l'Ordine degli Ingegneri di Cagliari e l'Università degli Studi di Cagliari. Titolo dell'evento: La valutazione del rischio biomeccanico nell'operatore del settore edile: stato dell'arte e nuove tecnologie. Titolo dell'intervento: Impiego di esoscheletri passivi in edilizia: potenzialità e limiti. 23 Febbraio, 2024</p>
<p>3. Human Factors and Ergonomics Society (HFES). Titolo poster: Field Assessment of Static Postures and the Frequency of Trunk and Upper Arms Movements Among Construction Workers 9/13 Settembre, 2024</p>
<p>4. Rehabilitation in Multiple Sclerosis (RIMS) Special Interest Group (SIG) Mobility. Titolo Abstract: Accelerometric analysis of physical activity and sleep patterns in people with Multiple Sclerosis 3/4 Ottobre, 2024</p>
<p>Best Paper Award Pau, M., Arippa, F., Porta, M., Casu, G., Leban, B., & Cocco, E. (2024, June). Associations Between Perceived Discomfort, Postural Control Alterations and Disability in People with Multiple Sclerosis Exposed to Immersive Virtual Reality. In 2024 IEEE Gaming, Entertainment, and Media Conference (GEM) (pp. 1-6). IEEE. doi: 10.1109/GEM61861.2024.10585386</p>

Other scientific activities

<p>01/10/2024 – to now (deadline 30/09/2026)</p> <p>Research grant entitled: “Quantitative techniques for the evaluation of the effectiveness of an advanced telerehabilitation platform for individuals with Multiple Sclerosis” within the Research Project entitled “ImPLementation of an Advanced TelerehabilitatioN solution for people with Multiple Sclerosis (PLATINUMS)” funded by the Ministry of University and Research (MUR). Department of Mechanical, Chemical and Materials Engineering, Faculty of Engineering and Architecture - University of Cagliari</p>
<p>12/07/2023 – 28/07/2023</p> <p>Workshop – The center for occupational and environmental health continuing education program Applied skills in ergonomics: analysis, prevention through design, and Implementation</p>
<p>01/03/2023 - 30/09/2023 (7 months)</p> <p>PhD visiting student - Division of Environmental Health Sciences at the University of California at Berkeley (California, USA). Simulation in a laboratory environment of work tasks with and without the use of passive occupational exoskeletons. Kinematic and electromyographic analysis of the worker to identify limitations and potential of using exoskeletons in a similar realistic environment.</p>

01/10/2020 – 01/07/2021 (9 months)

Internship - Laboratory of biological structures mechanics (LABS) Politecnico di Milano (Milan, Italy). Analysis of structural mechanics conducted by finite element study on innovative sacropelvic fixation implants. In-house software was used for the realization of the anatomical models (from the T10 vertebra to the pelvis) instrumented, while the commercial program ABAQUS was used for the performance of simulations and post-processing. The analysis was conducted not only on traditional sacropelvic fixation devices (pedicle screws, iliac screws, iliac wing screws) but also on innovative devices manufactured by the American company SI-BONE (San Jose, CA).

01/09/2018 – 31/10/2018 (2 months)

Internship - Binaghi Hospital, Regional Center for the Diagnosis and Treatment of Multiple Sclerosis (Cagliari, Italy)

Inherent to a research project focused on evaluating the effects of the application of tDCS (transcranial Direct Current Stimulation) on patients with Multiple Sclerosis, the following were performed: posturography tests using baropodometric platform (Zebris FDM System); dynamometry tests for force assessment using Hand Grip; and tests on functional balance and gait using an inertial sensor (G-Walk from BTS). The data collected on the patients were processed in the Biomechanics and Industrial Ergonomics laboratory in Monserrato through the use of software such as MATLAB, Igor, Microsoft Excel, SPSS.

01/02/2018 - 01/07/2018 (6 months)

Erasmus - Politechnika Łódzka (Łódź, Polonia). Courses: Matlab and Simulink; Microbiology; Thermodynamics and Fluid Dynamics; Biosensors.