

## Curriculum Vitae

Fabrizio Mazzetto is Full Professor of Farm Machinery and Mechanisation (since 2010) at the Faculty of Agricultural, Environmental and Food Sciences of the Free University of Bolzano (UNIBZ). He graduated in Agricultural Science at the University of Milan (1983) and obtained a PhD in Agricultural Engineering (1990) also at the same University. Here he then became Researcher (1990) and later Associate Professor (2000) for the Scientific Disciplinary Sector AGR/09 - Agricultural Mechanics.

During his teaching activity at UNIBZ he held various courses, all related to the problems of agricultural engineering in the application contexts of agri-environmental enterprises. During the last two years, these teachings have been related to: a) Farm machinery and mechanisation; b) Rural technologies systems for mountain environments; c) Mountain viticulture and landscape; d) Food processing equipment; e) Solutions for the digitalisation of agri-environmental enterprises.

From the beginning of his carrier till now, his research activities have focused on topics related to: a) agricultural mechanics and mechanisation, including the development of prototypes of agricultural machinery featured by radical innovations (stripper heads for cereal harvesting, small articulated tractors for the steep lands), b) the application of information technology for the digital management of business processes, including various experiences in modelling applied also to management problems, c) precision agriculture and automation, d) energy applications in the rural sector; e) technologies for baking in small mountain farms.

He has been energy consultant for FAO-UNDP and has coordinated several national and international research projects. Winner of several national research awards, he is a Full Ordinary Member of the Accademia dei Georgofili in Florence. He is currently coordinating the research laboratory for agro-forestry innovations within the framework of the settlement activities of the Bolzano NOI-Technology Park. He has been President of the VII Section AIIA (Italian Association of Agricultural Engineering, 2017-2022) which deals with the development of ICT solution in the agricultural, forestry and food sectors.

About institutional activities at UNIBZ, he has held the following roles: Rector's Delegate for Research Quality Assessment at University level (2018-2022); Vice Dean for Research (2013-2017 and 2025-present); member of the University Evaluation Board (2013-2017). Member of the Commission for the National Scientific Habilitation (ASN) for the academic Sector 07/C1 (Agricultural, Forestry and Biosystems Engineering) for the period 2018-2020. Director of the Competence Centre for Mountain Innovation Ecosystems (2022-present), within the research activities of the Consortium iNEST (PNRR-MUR, Next Generation EU Program). Member of the ENTAM 2.0 International Committee (European Network for Testing of Agricultural Machines) (2025-present). Full Member of the Club of Bologna (Worldwide Strategies for the Development of Agricultural Mechanisation, supported by FEDERUNACOMA) (2024-present).

He has more than 400 scientific and popular publications, whose details are available at the following link: <https://scholar.google.it/citations?hl=it&user=76fRPasAAAAJ>, including his overall bibliometric profile (Citations: 2920, ca. 58% since 2021; H index: 25; i10-index: 57). As recorded by SCOPUS, the number of listed publications is 139 (cit.: 1780, H-index: 21).

## Selected indexed papers (2020-2025)

1. Khan, N.A., Carabin, G., **Mazzetto, F.** Mobile Laser Scanning in Forest Inventories: Testing the Impact of Point Cloud Density on Tree Parameter Estimation (2025) *Sensors*, 25 (18), art. no. 5798. DOI: 10.3390/s25185798
2. Sacco, P., Don, D., Mandler, A., **Mazzetto, F.** Integrating LCA and Multi-Criteria Tools for Eco-Design Approaches: A Case Study of Mountain Farming Systems (2025) *Sustainability* (Switzerland), 17 (14), art. no. 624. DOI: 10.3390/su17146240
3. Carabin, G., Karaca, M., **Mazzetto, F.** Preliminary results of extensive tractor rollover stability tests using a tilting-rotating rig (2025) *Biosystems Engineering*, 254, art. no. 104146, DOI: 10.1016/j.biosystemseng.2025.104146
4. Vos, J., Alessandrini, M., Trevisan, M., Pii, Y., **Mazzetto, F.**, Orzes, G., Cesco, S. One Health approach: Addressing data challenges and unresolved questions in agriculture (2025) *Science of the Total Environment*, 977, art. no. 179312. DOI: 10.1016/j.scitotenv.2025.179312
5. Mazzi, G., Becce, L., Ali, A., Bortolini, M., Gregoris, E., Feltracco, M., Barbaro, E., Gronauer, A., Gambaro, A., **Mazzetto, F.** Methodological Advancements in Testing Agricultural Nozzles and Handling of Drop Size Distribution Data (2025) *AgriEngineering*, 7 (5), art. no. 139. DOI: 10.3390/agriengineering7050139
6. Mahmood, G.G., Liberatori, S., **Mazzetto, F.** Agricultural mechanization perspective in Pakistan: present challenges and digital future (2025) *Journal of Agricultural Engineering*, 56 (2), art. no. 1636. DOI: 10.4081/jae.2025.1636
7. Sebald, C.M., Grebner, S., Mayr, M., Vidric, V., Mandler, A., Becce, L., Paulus, C., Carabin, G., **Mazzetto, F.**, Bernhardt, H. Up-skilling the next generation in Agricultural Engineering in Europe (2025). DOI: 10.13031/aim.202500458
8. Galli, L.E., Becce, L., Nicolosi, F.F., **Mazzetto, F.**, Pessina, D. Efficiency and Environmental Impact of Tractors Used in Specialized Crops of Autonomous Province of Bolzano (2025) *Lecture Notes in Civil Engineering*, 586 LNCE, pp. 841 – 849. DOI: 10.1007/978-3-031-84212-2\_104
9. Mandler, A., Becce, L., Carabin, G., Gronauer, A., **Mazzetto, F.** Mechanisation of Mountain Farming. Observations on Grain Production in the Alps (2025) *Lecture Notes in Civil Engineering*, 586 LNCE, pp. 807 – 815. DOI: 10.1007/978-3-031-84212-2\_100
10. Cesco, S., Ascoli, D., Bailoni, L., Bischetti, G.B., Buzzini, P., Cairoli, M., Celi, L., Corti, G., Marchetti, M., Scarascia Mugnozza, G.S., Orlandini, S., Porceddu, A., Gigliotti, G., **Mazzetto, F.** Smart management of emergencies in the agricultural, forestry, and animal production domain: Tackling evolving risks in the climate change era (2024) *International Journal of Disaster Risk Reduction*, 114, art. no. 105015, Cited 4 times. DOI: 10.1016/j.ijdr.2024.105015
11. Becce, L., Mazzi, G., Ali, A., Bortolini, M., Gregoris, E., Feltracco, M., Barbaro, E., Contini, D., **Mazzetto, F.**, Gambaro, A. Wind Tunnel Evaluation of Plant Protection Products Drift Using an Integrated Chemical–Physical Approach (2024) *Atmosphere*, 15 (6), art. no. 656. DOI: 10.3390/atmos15060656
12. Pii, Y., Orzes, G., **Mazzetto, F.**, Sambo, P., Cesco, S. Advances in viticulture via smart phenotyping: current progress and future directions in tackling soil copper accumulation (2024) *Frontiers in Plant Science*, 15, art. no. 1459670. DOI: 10.3389/fpls.2024.1459670
13. Leitner, S., Perez Estevez, M.A., Renzi, M., Spinelli, R., **Mazzetto, F.**, Vidoni, R. Tower yarder powertrain performance simulation analysis: electrification study (2023) *European Journal of Forest Research*, 142 (4), pp. 739 – 761. DOI: 10.1007/s10342-023-01553-0
14. Cesco, S., Sambo, P., Borin, M., Basso, B., Orzes, G., **Mazzetto, F.** Smart agriculture and digital twins:

Applications and challenges in a vision of sustainability (**2023**) *European Journal of Agronomy*, 146, art. no. 126809. DOI: 10.1016/j.eja.2023.126809

15. Cesco, S., Pii, Y., Borruso, L., Orzes, G., Lugli, P., **Mazzetto, F.**, Genova, G., Signorini, M., Brunetto, G., Terzano, R., Vigani, G., Mimmo, T. A smart and sustainable future for viticulture is rooted in soil: How to face CU toxicity. *Applied Sciences (Switzerland)* **2021**, 11 (3), art. no. 907, pp. 1-21.
16. Bietresato, M., **Mazzetto, F.** Stability tests of agricultural and operating machines by means of an installation composed by a rotating platform (the "turntable") with four weighting quadrants. *Applied Sciences (Switzerland)* **2020**, 10 (11), art. no. 3786, DOI: 10.3390/app10113786.
17. **Mazzetto, F.**, Gallo, R., Sacco, P. Reflections and methodological proposals to treat the concept of "information precision" in smart agriculture practices. *Sensors (Switzerland)* **2020**, 20 (10), art. no. 2847, DOI: 10.3390/s20102847.
18. Bietresato, M., **Mazzetto, F.** Morphometry as a key to investigate the stability to a wind-induced rollover of agricultural equipment for irrigation. *International Journal of Safety and Security Engineering* **2020**, 10 (1), pp. 129-139. DOI: 10.18280/ijss.100117