

# Xavier Guidetti

## Personal data

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| Date of birth  | 01.05.1994   |
| Place of birth | Aosta, Italy |
| Nationality    | Italian      |

## Education

|               |   |
|---------------|---|
| 12/19 – 06/24 | ETH Zurich, Switzerland<br><i>PhD Student</i>   |
| 09/16 – 09/19 | EPFL, Switzerland<br><i>MSc Mechanical Engineering</i>  |
| 09/12 – 02/17 | EPFL, Switzerland<br><i>BSc Mechanical Engineering</i>  |
| 09/07 – 07/12 | Liceo Scientifico “E. Bérard”, Aosta, Italy<br><i>High school diploma: Maturità scientifica (PNI)</i> |

## Professional experience

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|---------------|--|
| 02/19 – 09/19 | Schindler Aufzüge AG, EPFL Innovatoin Park<br><i>New technologies intern</i> |
| 09/13 – 03/19 | Sport Activities Unit of the Italian Army<br><i>Professional athlete</i>     |

## Peer-reviewed publications

- 1 **X. Guidetti**, N. Mingard, R. Cruz-Oliver, et al., “Force controlled printing for material extrusion additive manufacturing”, *Additive Manufacturing*, vol. 89, p. 104297, 2024
- 2 **X. Guidetti**, A. Mukne, M. Rueppel, Y. Nagel, E. C. Balta, and J. Lygeros, “Data-driven extrusion force control tuning for 3D printing”, in *2024 IEEE 20th International Conference on Automation Science and Engineering (CASE)*, IEEE, in press
- 3 **X. Guidetti**, E. C. Balta, Y. Nagel, H. Yin, A. Rupenyan, and J. Lygeros, “Stress flow guided non-planar print trajectory optimization for additive manufacturing of anisotropic polymers”, *Additive Manufacturing*, vol. 72, p. 103628, 2023
- 4 **X. Guidetti**, A. Rupenyan, E. F. Sichani, M. Nabavi, and J. Lygeros, “Spraying parameters selection based on predicted equipment status: A study on measured voltage”, *Journal of Thermal Spray Technology*, vol. 32, no. 2, pp. 523–531, 2023
- 5 **X. Guidetti**, M. Kühne, Y. Nagel, E. C. Balta, A. Rupenyan, and J. Lygeros, “Data-driven process optimization of fused filament fabrication based on in situ measurements”, *IFAC-PapersOnLine*, vol. 56, no. 2, pp. 4713–4718, 2022
- 6 **X. Guidetti**, A. Rupenyan, L. Fassel, M. Nabavi, and J. Lygeros, “Advanced manufacturing configuration by sample-efficient batch bayesian optimization”, *IEEE Robotics and Automation Letters*, vol. 7, no. 4, pp. 11886–11893, 2022
- 7 **X. Guidetti**, A. Rupenyan, L. Fassel, M. Nabavi, and J. Lygeros, “Plasma spray process parameters configuration using sample-efficient batch bayesian optimization”, in *2021 IEEE 17th International Conference on Automation Science and Engineering (CASE)*, IEEE, 2021, pp. 31–38

## Preprints

- 1 **X. Guidetti**, E. C. Balta, and J. Lygeros, “Swarm-based trajectory generation and optimization for stress-aligned 3D printing”, *arXiv preprint arXiv:2404.10686*, 2024
- 2 U. Hudomalj, **X. Guidetti**, L. Weiss, M. Nabavi, and K. Wegener, “Improving Coating Repeatability by Parameter Adaptation Through Process Monitoring, Gaussian Process Models and Kalman Filters”, *SSRN preprint ssrn.4803076*, 2024