

Prof. Francesco Ferrise – Curriculum Vitae

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Italian citizenship

1. Short bio

Since June 5th, 2023, Francesco Ferrise is a Full Professor at the Department of Mechanical Engineering of Politecnico di Milano, SSC 09-A3, SSD ING-IND/15.

From November 1st, 2014, to June 5th, 2023, he was an Associate Professor, and from June 1st, 2008, to October 31st, 2014, Assistant Professor in the same department.

He has been a member of the board of the Department of Mechanical Engineering of Politecnico di Milano from 2017 to 2019 with the role of delegate for young researchers' policies and from 2020 to 2022 as a delegate on culture, sustainability, and social responsibility.

He received a Ph.D. in "Virtual Prototypes and Real Products" (Italian name "Disegno e Metodi di Sviluppo Prodotto") from *Politecnico di Milano* on February 24th, 2010, with a thesis entitled "Multimodal Interaction in the Aesthetic Product Design" (Supervisor: Prof. Monica Bordegoni).

On the 24th of May 2005, Francesco Ferrise received a master's degree with honors (Laurea Vecchio Ordinamento) in Mechanical Engineering from *Università della Calabria*.

His research interests include:

- multisensory interaction in virtual environments;
- virtual prototyping;
- multisensory user experience design;
- virtual and augmented reality;
- haptic and multimodal interfaces design;
- ergonomics;
- human-in-the-loop simulation.

1.1. Journals, participation as a member of the editorial board, associate, or guest editor

Francesco Ferrise is currently **Associate Editor** in

ASME JCISE Journal of Computing and Information Science in Engineering

Frontiers in Computer Science, section Human-Media Interaction

As co-editor of the Department "**Graphically Speaking**" of **IEEE Computer Graphics & Applications** (formerly also associate editor).

He has been or is currently a member of the scientific committee of the following conferences (last 4 years):

IEEE ISMAR 2025 (IEEE International Symposium on Mixed and Augmented Reality)

IEEE VR 2025 (Conference on Virtual Reality + 3D User Interfaces)
ICED 2025 (International Conference on Engineering Design)
ICORD 2025 (International Conference on Research Into Design)
IEEE AIVR 2025 (IEEE International conference on Artificial Intelligence & Virtual Reality)
IEEE ISMAR 2024 (IEEE International Symposium on Mixed and Augmented Reality)
IEEE VR 2024 (Conference on Virtual Reality + 3D User Interfaces)
ICAT-EGVE 2024 (International Conference on Artificial Reality and Telexistence and Eurographics Symposium on Virtual Environments)
IEEE AIVR 2024 (IEEE International conference on Artificial Intelligence & Virtual Reality)
IEEE VR 2023 (Conference on Virtual Reality + 3D User Interfaces)
ISVC'23 (International Symposium on Visual Computing)
ICED 2023 (International Conference on Engineering Design)
ICORD 2023 (International Conference on Research Into Design)
CAD Conference 2023
ICAT-EGVE 2022 (International Conference on Artificial Reality and Telexistence and Eurographics Symposium on Virtual Environments)
IEEE ICIR 2022 (International Conference on Intelligent Reality) (<https://icir.ieee.org/committee/technical-program-committee/>)
IEEE VR 2022 (Conference on Virtual Reality + 3D User Interfaces)
DESIGN 2022 (International Design Conference)
ACM VRST 2022 (Symposium on Virtual Reality Software and Technology) 2022 (<https://vrst.acm.org/vrst2022/organizers/>)
CAD Conference 2022
AIKE 2022 (IEEE International Conference on Artificial Intelligence and Knowledge Engineering)
IEEE AIVR 2022 (IEEE International conference on Artificial Intelligence & Virtual Reality)

2. Publications

Journal papers (last 5 years)

- [J1] Scurati, G.W., Ferrise, F. and Bertoni, M., 2025. Extended realities and discrete events simulations: A systematic review to define design trade-offs and directions. *Computers in Industry*, 164, p.104188.
- [J2] Colombo, A., Depaola, M., Ferrise, F., Dozio, N. and de Campos, G.R., 2024. Predicting Mispredictions: A Model of Human Misjudgment About Vulnerable Road Users' Trajectories. *IEEE Transactions on Intelligent Transportation Systems*.
- [J3] Giussani, R., Dozio, N., Rigone, S., Parenzan, L. and Ferrise, F., 2024. Enhancing Virtual Reality Training Through Artificial Intelligence: A Case Study. *IEEE Computer Graphics and Applications*.
- [J4] Dozio, N., Bertoni, M. and Ferrise, F., 2024. Driving emotions: using virtual reality to explore the effect of low and high arousal on driver's attention. *Virtual Reality*, 28(1), p.51.

- [J5] Lukasiewicz, M.S., Rossoni, M., Spadoni, E., Dozio, N., Carulli, M., Ferrise, F. and Bordegoni, M., 2024. An open-source Olfactory Display to add the sense of smell to the Metaverse. *Journal of Computing and Information Science in Engineering*, 24(2), p.024501.
- [J6] Aruanno, B., Carruba, M.C., Mondellini, M., Santos-Paz, J.A., Ferrise, F., Karaki, J. and Covarrubias, M., 2024. Enhancing inclusive education for young students with special needs through mixed reality: Exploring the potential of CNC milling machine application. *Computer-Aided Design and Applications*, 21(3), pp.522-535.
- [J7] Ulrich, L., Marcolin, F., Vezzetti, E., Nonis, F., Mograbi, D.C., Scurati, G.W., Dozio, N. and Ferrise, F., 2024. CalD3r and MenD3s: Spontaneous 3D facial expression databases. *Journal of Visual Communication and Image Representation*, 98, p.104033.
- [J8] Carulli, M., Rossoni, M., Spadoni, E., Dozio, N., Giussani, R., Ferrise, F. and Bordegoni, M., 2024. A case study on digital training: benefits and unexplored opportunities. *Journal of Computing and Information Science in Engineering*, 24(5).
- [J9] Bedendo, V., Aruanno, B., Dozio, N., Covarrubias, M., Ferrise, F. and Bordegoni, M., 2024. Exploiting Virtual Reality to Design Exercises for the Recovery of Stroke Patients at Home. *Comput. Aided Des. Appl*, 21, pp.463-473.
- [J11] Bordegoni, M. and Ferrise, F., 2023. Exploring the intersection of metaverse, digital twins, and artificial intelligence in training and maintenance. *Journal of Computing and Information Science in Engineering*, 23(6), p.060806.
- [J12] N. Dozio, L. Rozza, M.S. Lukasiewicz, A. Colombo, **F. Ferrise**, "Localization and prediction of visual targets' position in immersive virtual reality", submitted to *Presence: virtual and augmented reality*, MIT Press, 2023.
- [J13] A. Colombo, R. Maj, M. Canina, F. Fedeli, N. Dozio, **F. Ferrise**, "Design of a sensor network for the quantitative analysis of climbing performance", *Frontiers in Sports and Active Living*, section Sports Science, Technology and Engineering, Vol. 5, 2023, doi: 10.3389/fspor.2023.1114539
- [J14] I. Frigione, G. Massetti, M. Girondini, R. Etzi, G.W. Scurati, **F. Ferrise**, A. Chirico, A. Gaggioli, A. Gallace, "An Exploratory Study on the Effect of Virtual Environments on Cognitive Performances and Psychophysiological Responses" *Cyberpsychology, Behavior, and Social Networking*, 25(10):666-671, 2022. doi: 10.1089/cyber.2021.0162
- [J15] G. W. Scurati, J. W. Nylander, **F. Ferrise**, M. Bertoni, "Sustainability awareness in engineering design through serious gaming", *Design Science*, 8, E12. 2022, doi:10.1017/dsj.2022.9.
- [J16] N. Dozio, F. Marcolin, G.W. Scurati, L. Ulrich, F. Nonis, E. Vezzetti, G. Marsocci, A. La Rosa, **F. Ferrise**, "A design methodology for affective Virtual Reality". *International Journal of Human-Computer Studies*, 162, p.102791, 2022 doi: 10.1016/j.ijhcs.2022.102791
- [J17] N. Dozio, F. Marcolin, G. W. Scurati, F. Nonis, L. Ulrich, E. Vezzetti, **F. Ferrise**, "Development of an affective database made of interactive virtual environments". *Scientific Reports*, 11(1), 1-10, 24108, 2021, doi: 10.1038/s41598-021-03380-y
- [J18] F. Marcolin, G. W. Scurati, L. Ulrich, F. Nonis, E. Vezzetti, N. Dozio, **F. Ferrise**, "Affective Virtual Reality: How to Design Artificial Experiences Impacting Human Emotions". *IEEE Computer Graphics and Applications*, 41(6), 171-178, 2021, doi: 10.1109/MCG.2021.3115015
- [J19] G. W. Scurati, M. Bertoni, S. Graziosi, **F. Ferrise**, "Exploring the use of virtual reality to support environmentally sustainable behavior: A framework to design experiences". *Sustainability*, 13(2), 943, 2021, doi: 10.3390/su13020943
- [J20] L. Panagiotopoulou, N. Cía Gayarre, G. W. Scurati, R. Etzi, G. Massetti, A. Gallace, **F. Ferrise**, "Design of a serious game for children to raise awareness on plastic pollution and promoting pro-environmental behaviors", *ASME Journal of Computing and Information Science in Engineering*, 21 (6), art. No. 064502, 2021, doi: 10.1115/1.4050291

- [J21] A. Pietra, M. Vazquez Rull, R. Etzi, A. Gallace, G. W. Scurati, **F. Ferrise**, M. Bordegoni, "Promoting eco-driving behavior through multisensory stimulation: a preliminary study on the use of visual and haptic feedback in a virtual reality driving simulator", *Virtual Reality*, Springer, 25 (4), 945-959, 2021, doi: 10.1007/s10055-021-00499-1
- [J22] G. W. Scurati, **F. Ferrise**, "Looking into a future which hopefully will not become reality: how computer graphics can impact our behavior – a study of the potential of VR", *IEEE Computer Graphics and Applications*, 40 (5), art. no. 9175071, 82-882020, doi: 10.1109/MCG.2020.3004276
- [J23] R. Etzi, A. Gallace, G. Massetti, M. D'Agostino, V. Cinquetti, **F. Ferrise**, M. Bordegoni, "Conveying trunk orientation information through a wearable tactile interface", *Applied Ergonomics*, 88, art. No. 103176, 2020. doi: 10.1016/j.apergo.2020.103176
- [J24] A. Chirico, G. W. Scurati, C. Maffi, S. Huang, S. Graziosi, **F. Ferrise**, A. Gaggioli, "Designing Virtual Environments for attitudes and behavioral change on plastic consumption: A comparison between concrete and numerical information.", *Virtual Reality*, Springer, 25 (1), pp. 107-121, 2021, doi: 10.1007/s10055-020-00442-w

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