

Publications

As of March 2025, my **h-index** is **ca. 160**. The following list contains **only my most important publications**. For a **full list** of my publications, see Google Scholar:
<https://scholar.google.com/citations?user=ZgO3g3QAAAAJ>.

Artificial Intelligence and Deep Learning

Journal publications, conference papers, proceedings, others

1. C. Frischknecht-Gruber, P. Denzel, O. Forster, Y. Billeter, A. Iranfar, M. Repetto, M. Reif, F.-P. Schilling, J. Weng, and R. Chavarriaga, "Assessment tool for trustworthy AI systems: operational workflows for compliance assessment with regulatory requirements," in *AI Days @ HES-SO, Geneva and Lausanne, Switzerland*, 2025. [Online]. Available: <https://digitalcollection.zhaw.ch/handle/11475/32422>
2. C. Frischknecht-Gruber, P. Denzel, M. Reif, Y. Billeter, S. Brunner, O. Forster, F.-P. Schilling, J. Weng, and R. Chavarriaga, "AI Assessment in Practice: Implementing a Certification Scheme for AI Trustworthiness," in *Symposium on Scaling AI Assessments (SAIA 2024)*, R. Görges, E. Haedecke, M. Poretschkin, and A. Schmitz, Eds., vol. 126. Dagstuhl, Germany: Schloss Dagstuhl – Leibniz-Zentrum für Informatik, 2025. doi: 10.4230/OASIcs.SAIA.2024.15 pp. 15:1–15:18
3. P. Denzel, S. Brunner, Y. Billeter, O. Forster, C. Frischknecht-Gruber, M. Reif, F.-P. Schilling, J. Weng, R. Chavarriaga, A. Amini, M. Repetto, and A. Iranfar, "Towards the Certification of AI-based Systems," in *SDS 2024: 11th IEEE Swiss Conference on Data Science*, 2024. doi: 10.1109/SDS60720.2024.00020 pp. 84–91
4. Y. Billeter, P. Denzel, R. Chavarriaga, O. Forster, F.-P. Schilling, S. Brunner, C. Frischknecht-Gruber, M. Reif, and J. Weng, "MLOps as Enabler of Trustworthy AI," in *SDS 2024: 11th IEEE Swiss Conference on Data Science*, 2024. doi: 10.1109/SDS60720.2024.00013 pp. 37–40
5. Y. Billeter, S. Brunner, R. Chavarriaga, P. Denzel, O. Forster, C. M.-L. Frischknecht-Gruber, M. Reif, F.-P. Schilling, J. Weng, A. Iranfar, and M. Repetto, "Certification Scheme For Artificial Intelligence Based Systems," in *ESREL 2024: Advances in Reliability, Safety and Security*, K. Kolowrocki and E. Dabrowska, Eds., 2024. doi: 10.21256/zhaw-30549. ISBN 978-83-68136-03-6
6. M. Amirian, D. Barco, I. Herzig, and F.-P. Schilling, "Artifact Reduction in 3D and 4D Cone-beam Computed Tomography Images with Deep Learning - A Review," *IEEE Access*, vol. 12, pp. 10 281–10 295, 2024. doi: 10.1109/ACCESS.2024.3353195
7. P. Denzel, S. Brunner, P.-P. Luley, C. Frischknecht-Gruber, M. U. Reif, F.-P. Schilling, A. Amini, M. Repetto, A. Iranfar, J. Weng, and R. Chavarriaga, "A framework for assessing and certifying explainability of health-oriented AI systems," in *Explainable AI in Medicine Workshop, Lugano, Switzerland, November 2023*, 2023. [Online]. Available: <https://digitalcollection.zhaw.ch/handle/11475/29258>
8. P. Denzel, F.-P. Schilling, and E. Gavagnin, "Map-to-map translation for SKA mock observations and cosmological simulations," in *Hammers and Nails 2023 - Swiss Edition, Ascona, Switzerland, October 2023*, 2023. doi: 10.21256/zhaw-29047
9. M. Amirian, J. A. Montoya-Zegarra, I. Herzig, P. E. Hotz, L. Lichtensteiger, M. Morf, A. Züst, P. Paysan, I. Peterlik, S. Scheib, R. M. Fuchsli, T. Stadelmann, and F.-P. Schilling, "Mitigation

- of motion-induced artefacts in Cone Beam Computed Tomography using Deep Convolutional Neural Networks," *Med. Phys.*, vol. 50, no. 10, pp. 6228–6242, 2023. doi: 10.1002/mp.16405
10. J. Weng, M. Reif, R. Chavarriaga, and F.-P. Schilling, "certAlnty: a certification scheme for AI systems," in *Poster presented at ZHAW Datalab Symposium, Winterthur, Switzerland, 2023*. doi: 10.21256/zhaw-27261
 11. P. Denzel, E. Gavagnin, and F.-P. Schilling, "Deep learning the SKA: the Square Kilometer Array project," in *Poster presented at ZHAW Datalab Symposium, Winterthur, Switzerland, 2023*. doi: 10.21256/zhaw-27219
 12. F.-P. Schilling, D. Flumini, R. M. Fuchsli, E. Gavagnin, A. Geller, S. Quarteroni, and T. Stadelmann, "Foundations of Data Science: A Comprehensive Overview Formed at the 1st International Symposium on the Science of Data Science," *Archives of Data Science, Series A*, vol. 8, no. 2, pp. 1 – 20, 2022. doi: 10.5445/IR/1000146422
 13. I. Herzig, P. Paysan, S. Scheib, F.-P. Schilling, J. Montoya, M. Amirian, T. Stadelmann, P. Eggenberger, R. M. Fuchsli, and L. Lichtensteiger, "Deep Learning-Based Simultaneous Multi-Phase Deformable Image Registration of Sparse 4D-CBCT," in *Proceedings of the American Association of Physics in Medicine Annual Meeting (AAPM 2022)*, 2022. doi: 10.21256/zhaw-25181 Washington, DC, USA, July 2022
 14. T. Stadelmann and F.-P. Schilling, Eds., *Advances in Deep Neural Networks for Visual Pattern Recognition*. MDPI, 2022, Special issue of J. Imaging (ISSN 2313-433X). [Online]. Available: https://www.mdpi.com/journal/jimaging/special_issues/deep_neural_network
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 16. F.-P. Schilling and T. Stadelmann, Eds., *Artificial Neural Networks in Pattern Recognition*. MDPI, 2020, Special issue of Computers (ISSN 2073-431X). [Online]. Available: https://www.mdpi.com/journal/computers/special_issues/ANNPR2020
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 18. F.-P. Schilling and T. Stadelmann, Eds., *Artificial neural networks in pattern recognition : Proceedings of the 9th IAPR TC3 workshop, ANNPR 2020, Winterthur, Switzerland, September 2-4, 2020*, vol. Lecture Notes in Computer Science, no. 12294. Springer, 2020. doi: 10.1007/978-3-030-58309-5
 19. M. Amirian, L. Tuggener, R. Chavarriaga, Y. P. Satyawan, F.-P. Schilling, F. Schwenker, and T. Stadelmann, "Two to trust: Automl for safe modelling and interpretable deep learning for robustness," *Proc. of the 1st TAILOR Workshop on Trustworthy AI at ECAI 2020*, 2020. doi: 10.21256/zhaw-22061
 20. M. Amirian, K. Rombach, L. Tuggener, F.-P. Schilling, and T. Stadelmann, "Efficient deep cnns for cross-modal automated computer vision under time and space constraints," *Proc. of ECML-PKDD 2019, Würzburg*, 2019. doi: 10.21256/zhaw-18357
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Journal Publications

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24. S. Chatrchyan *et al.*, "Search for the standard model Higgs boson produced in association with a W or a Z boson and decaying to bottom quarks," *Phys. Rev.*, vol. D89, p. 012003, 2014. doi: 10.1103/PhysRevD.89.012003
25. S. Chatrchyan *et al.*, "Observation of a new boson with mass near 125 GeV in pp collisions at $\sqrt{s} = 7$ and 8 TeV," *JHEP*, vol. 1306, p. 081, 2013. doi: 10.1007/JHEP06(2013)081
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