

# Michael Biehl - Publications

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## Monographs and Edited Volumes

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- [1] Michael Biehl. *The Shallow and the Deep: A biased introduction to neural networks and old school machine learning*. University of Groningen Press, 2023. 292 pages.
  - [2] M. Biehl, B. Hammer, M. Verleysen, and T. Villmann. *Similarity based clustering - recent developments and biomedical applications*, volume 5400 of *Lecture Notes in Artificial Intelligence*. Springer, 2009. 201 pages.
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## Journal Articles

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- [3] Alessandro Prete, Katharina Lang, David Pavlov, Yara Rhayem, Alice J Sitch, Anna S Franke, Lorna C Gilligan, Cedric HL Shackleton, Stefanie Hahner, Marcus Quinkler, et al. Urine steroid metabolomics as a diagnostic tool in primary aldosteronism. *The Journal of Steroid Biochemistry and Molecular Biology*, pages Article No. 106445,10 pages, 2023.
- [4] Htet Htet Htun, Michael Biehl and Nicolai Petkov. Survey of feature selection and extraction techniques for stock market prediction. *Financial Innovation*, 9(1):1–25, 2023.
- [5] S. Ghosh, E.S. Baranowski, M. Biehl, W. Arlt, P. Tino, and K. Bunte. Interpretable models capable of handling systematic missingness in imbalanced classes and heterogeneous datasets. *arXiv preprint*, (2206.02056), 2022. submitted.
- [6] R. van Veen, S.K. Meles, R.J. Renken, F.E. Reesink, W.H. Oertel, A. Janzen, G.-J. de Vries, K.L. Leenders, and M. Biehl. FDG-PET combined with learning vector quantization allows classification of neurodegenerative diseases and reveals the trajectory of idiopathic REM sleep behavior disorder. *Computer Methods and Programs in Biomedicine*, 225:Article No. 107042, 2022.
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- [8] S. Rezaei, J.P. McKean, M. Biehl, and A. Javadpour. DECORAS: detection and characterization of radio-astronomical sources using deep learning. *Monthly Notices of the Royal Astronomical Society*, 510(4):5891–5907, 2022. doi: 10.1093/mnras/stab3519.

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- [10] G. Owomugisha, F. Melchert, E. Mwebaze, J. Quinn, and M. Biehl. Matrix Relevance Learning from Spectral Data for Diagnosing Cassava Diseases. *IEEE Access*, 9:83355–83363, 2021.
- [11] R. van Veen, M. Biehl, and G.-J. de Vries. sklvq: Scikit Learning Vector Quantization. *Journal of Machine Learning Research*, 22(231):1–6, 2021.
- [12] E. Oostwal, M. Straat, and M. Biehl. Hidden unit specialization in layered neural networks: ReLU vs. sigmoidal activation. *Physica A: Statistical Mechanics and its Applications*, 564:125517, 2021.
- [13] M. Münch, C. Raab, M. Biehl, and F.-M. Schleif. Data-driven supervised learning for life science data. *Frontiers in Applied Mathematics and Statistics*, 6:56, 2020.
- [14] R. van Veen, V. Gurvits, R.V. Kogan, S.K. Meles, G.-J. de Vries, R.J. Renken, M.C. Rodriguez-Oroz, R. Rodriguez-Rojas, D. Arnaldi, S. Raffa, B.M. de Jong, K. L. Leenders, and M. Biehl. An application of generalized matrix learning vector quantization in neuroimaging. *Computer Methods and Programs in Biomedicine*, 197:105708, 2020.
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## Errata

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