

Liste der Publikationen

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- 83 Zeitschriftenbeiträge
- 5 Bücher/Monographien
- 81 begutachtete Buchbeiträge
- 101 weitere begutachtete Beiträge
- 40 Technical Reports

wichtigste Veröffentlichungen

1. T. Villmann, R. Der, M. Herrmann, T. Martinetz: Topology Preservation in Self-Organizing Feature Maps: Exact Definition and Measurement. in *IEEE Transactions on Neural Networks* **8(2)** 256–266 (1997).
2. B. Hammer, T. Villmann: Generalized Relevance Learning Vector Quantization. *Neural Networks* **15** (8-9) 1059–1068 (2002).
3. T. Villmann, J.-C. Claussen: Magnification Control in Self-Organizing Maps and Neural Gas. *Neural Computation*. **18** (2) 446–469, 2006.
4. T. Villmann, S. Haase: Divergence Based Vector Quantization Using Fréchet-Derivatives. *Neural Computation*, **23(5)** 1343–1392, 2011.
5. T. Villmann, F.-M. Schleif, M. Kostrzewa, A. Walch, B. Hammer: Classification of Mass-Spectrometric Data in Clinical Proteomics Using Learning Vector Quantization Methods. *Briefings in Bioinformatics*, **9(2)** 129–143, 2008

Bücher / Habilitation /Dissertation

1. Villmann, Th.: Neural Maps and Learning Vector Quantization for Data Mining - Theory and Applications -, Habilitation, Universität Leipzig, Fakultät für Mathematik und Informatik, 2005
2. Villmann, Th.: Topologieerhaltung in selbstorganisierenden neuronalen Merkmalskarten, Verlag Harri Deutsch, Frankfurt/M. (1997) - zugleich Diss. Universität Leipzig 1996.
3. Geyer, M.; Plöttner, G.; Villmann, Th. (**Eds.**): Psychotherapeutische Reflexionen gesellschaftlichen Wandels, VAS Verlag Frankfurt (2003)
4. M. Biehl, B. Hammer, M. Verleysen, T. Villmann (**Eds.**): Similarity-based Clustering. Springer, LNAI 5400, 2009.

5. T. Villmann, F.-M. Schleif, M. Kaden, M. Lange (**Eds.**): Advances in Self-Organizing Maps and Learning Vector Quantization. Springer, Advances in Intelligent Systems and Computing 295, 2014

Publikationen in Zeitschriften

1. Villmann, Th.; Schierwagen, A.: The Symmetries of a Nerve Conduction Equation. *Applied Mathematics Letters* **4**, 33-36, 1991.
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8. Albani, C.; Villmann, Th.; Villmann, B.; Geyer, M.; Pokorny, D.; Blaser, G.; Kächele, H.: Kritik und erste Reformulierung der kategorialen Strukturen der Methode des Zentralen Beziehungs-Konflikt-Themas (ZBKT). *Psychotherapie, Psychosomatik und medizinische Psychologie* **49** (11), 408-421, (1999).
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88. T. Villmann, M. Kaden, W. Hermann, M. Biehl: Learning Vector Quantization Classifiers for ROC-Optimization. *Computational Statistics*, submitted 2015.

(begutachtete) Buchbeiträge

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5. Villmann, Th.; Villmann, B.; Albani, C.: Application of Evolutionary Algorithms to the Problem of New Clustering of Psychological Categories Using Real Clinical Data Sets. International Conference on Computational Intelligence '5. FUZZY DAYS - Dortmund 1997' in *Lecture Notes in Computer Science 1226*, Springer-Verlag, 311-320, (1997).
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