

Prof. Dr. Claus Weihs: Publications

Journal articles

- Weihs, C., Jastrow, M. (2020): Class Prediction by Prediction Intervals for Neural Nets, *Archives of Data Science (Series A)* 6(1), 1–13, <https://doi.org/10.5445/KSP/1000098011/03>
- Weihs, C., Pauly, M., Stotz, P. (2020): Data Journalism – Impact of Statistical Methods; *Archives of Data Science, Series A* (accepted)
- Hernandez Rodriguez, T., Posch, C., Schmutzhard, J., Stettner, J., Weihs, C., Pörtner, R., Frahm, B. (2019): Predicting industrial-scale cell culture seed trains – A Bayesian framework for model fitting and parameter estimation, dealing with uncertainty in measurements and model parameters, applied to a nonlinear kinetic cell culture model, using an MCMC method. *Biotechnology and Bioengineering* 2019 1-16. <https://doi.org/10.1002/bit.27125>
- Meyer, O., Weihs, C., Mähr, S., Tran, H.Y., Kirchhof, M., Schnackenberg, S., Neuhaus-Stern, J., Rößler, S., Braunwarth, W. (2019): Development and implementation of statistical methods for quality optimization in the large-format lithium-ion cells production; *Energy Technology* 7(5), <https://doi.org/10.1002/ente.201900244>
- Surmann, D., Ligges, U., Weihs, C. (2019): Optimal Node Subset with Minimal Graph Kernel Prediction Error in an Electrical Transmission System via Evolutionary Algorithms. *Electric Power Systems Research* 175, <https://doi.org/10.1016/j.epr.2019.105915>
- Bauer, N., Stankiewicz, L., Jastrow, M., Horn, D., Teubner, J., Kersting, K., Deuse, J., Weihs, C. (2018): Industrial Data Science: Developing a Qualification Concept for Machine Learning in Industrial Production; *Archives of Data Science, Series A* 5(1), 1–14. <https://doi.org/10.5445/KSP/1000087327/27>
- Fouodo, C.J.K., König, I.R., Weihs, C., Ziegler, A., Wright, M.N. (2018): Support Vector Machines for Survival Analysis with R. *The R Journal* 10:1, 412–423
- Herbrandt, S., Ligges, U., Ferreira, M., Kansteiner, M., Biermann, D., Tillmann, W., Weihs, C. (2018): Model Based Optimization of a Statistical Simulation Model for Single Diamond Grinding, *Computational Statistics* 33 (3), 1127–1143
- Horn, D., Demircioglu, A., Bischl, B., Glasmachers, T., Weihs, C. (2018): A comparative study on large scale kernelized support vector machines. *Advances in Data Analysis and Classification* 12(4): 867–88371
- Kirchhof, M., Meyer, O., Mähr, S., Braunwarth, W., Weihs, C. (2018): Cutting Optimal Sections from Production Foils. *Archives of Data Science, Series A (Online First)* 5(1), 1–16. <https://doi.org/10.5445/KSP/1000087327/23>
- Mejri, D., Limam, M., Weihs, C. (2018): A new dynamic weighted majority control chart for data streams, *Soft Computing*, 22(2)
- Schnackenberg, S., Ligges, U., Weihs, C. (2018): Online Linear Discriminant Analysis for Data Streams with Concept Drift; *Archives of Data Science, Series A (Online First)* 5(1), 1–20. <https://doi.org/10.5445/KSP/1000087327/02>
- Surmann, D., Ligges, U., Weihs, C. (2018): Predicting measurements at unobserved locations in an electrical transmission system, *Computational Statistics* 33 (3), 1159–1172
- Weihs, C., Hernández Rodríguez, T., Doeckel, M., Marty, C., Wormer, H. (2018): Arbeitszeiten von Professorinnen und Professoren in Deutschland 2016, *AStA Wirtschafts- und Sozialstatistisches Archiv* 12, 135–17767
- Weihs, C., Kassner, T. (2018): Classification Method Performance in High Dimensions; *Archives of Data Science* 3(1), 1–29, <https://doi.org/10.5445/KSP/1000083488/03>
- Weihs, C., Ickstadt, K. (2018): Data Science: the impact of statistics, *International Journal of Data Science and Analytics* 6(3), 189–194, <https://doi.org/10.1007/s41060-018-0102-5>
- Weihs, C., Meyer, O., Schnackenberg, S. (2018): DMAIC in Lithium-Ion-Battery Production; *Archives of Data Science Series A* 4(1), 1–13, <https://doi.org/10.5445/KSP/1000085951/09>
- Friedrichs, K., Bauer, N., Martin, R., Weihs, C. (2017). A computational study of auditory models in music recognition tasks for normal-hearing and hearing-impaired listeners, *EURASIP Journal on Audio, Speech, and Music Processing*, vol. 2017, no. 1, <https://doi.org/10.1186/s13636-017-0103-7>
- Horn, D., Bischl, B., Demircioglu, A., Glasmachers, T., Wagner, T., Weihs, C. (2017). Multi-objective selection of algorithm portfolios, *Archives of Data Science, Series A (Online First)*, vol. 2, no. 1 (15 S.), <https://doi.org/10.5445/KSP/1000058749/24>
- Mejri, D., Limam, M., Weihs, C. (2017). Combination of Several Control Charts Based on Dynamic Ensemble Methods, *Journal of Mathematics and Statistics*, Vol. 5(3), pp: 117–129, <https://doi.org/10.13189/ms.2017.050302>
- Nagathil, A., Weihs, C., Neumann, K., Martin, R. (2017). Spectral Complexity Reduction of Music Signals Based on Frequency-domain Reduced-rank Approximations: An Evaluation with Cochlear Implant Listeners, *J. Acous. Soc. Am. (JASA)*, 142(3), pp. 1219–1228

- Weihls, C., Herbrandt, S., Bauer, N., Friedrichs, K., Horn, D. (2017). Efficient Global Optimization: Motivation, Variations, and Applications. Archives of Data Science, Series A (Online First), vol. 2, no. 1, KIT Scientific Publishing (26 pp.), <https://doi.org/10.5445/KSP/1000058749/01>
- Herbrandt, S., Ligges, U., Ferreira, M., Kansteiner, M., Weihls, C. (2016). Statistical Simulation of a Multi-Phase Tool Machining a Multi-Phase Workpiece. In: A. Geyer-Schulz, J. Pocięcha (eds): Archives of Data Science Series 1 (1), 129–155
- Herbrandt, S., Ligges, U., Ferreira, M., Kansteiner, M., Biermann, D., Tillmann, W., Weihls, C. (2016). Model Based Optimization of a Statistical Simulation Model for Single Diamond Grinding, Computational Statistics, Springer, 1–17
- Horn, D., Demirciođlu, A., Bischl, B., Glasmachers, T., Weihls, C. (2016). A comparative study on large-scale kernelized support vector machines. Adv Data Anal Classif. <https://doi.org/10.1007/s11634-016-0265-7>
- Nagathil, A., Weihls, C., Martin, R. (2016). Spectral Complexity Reduction of Music Signals for Mitigating Effects of Cochlear Hearing Loss. IEEE Trans. Audio, Speech, Language Proc. 24 (3), 445–458, <https://doi.org/10.1109/TASLP.2015.2511623>
- Bischl, B., Lang, M., Mersmann, O., Rahnenführer, J., Weihls, C. (2015). BatchJobs and BatchExperiments: Abstraction Mechanisms for Using R in Batch Environments. Journal of Statistical Software 64(11), 1–25, DOI: <http://www.jstatsoft.org/v64/i11/>
- Krey, S., Brato, S., Ligges, U., Götze, J., Weihls, C. (2015). Clustering of electrical transmission systems based on network topology and Stability. Journal of Statistical Computation and Simulation 85(1), 47–61
- Lang, M., Kotthaus, H., Marwedel, P., Weihls, C., Rahnenführer, J., Bischl, B. (2015). Automatic model selection for high-dimensional survival analysis. Journal of Statistical Computation and Simulation, 85(1):62–76
- Mersmann, O., Preuss, M., Trautmann, H., Bischl, B., Weihls, C. (2015). Analyzing the BBOB results by means of benchmarking concepts. Evolutionary Computation Journal 23(1): 161–185
- Trautmann, H., Wagner, T., Biermann, D., Weihls, C. (2013): Indicator-based Selection in Evolutionary Multiobjective Optimization Algorithms Based On the Desirability Index; Journal of Multi-Criteria Decision Analysis 20 (5-6), 319–337
- Bischl, B., Schiffner, J., Weihls, C. (2013). Benchmarking local classification methods. Computational Statistics, 28(6):2599–2619
- Bischl, B., Mersmann, O., Trautmann, M. and Weihls, C. (2012). Resampling Methods in Model Validation. Evolutionary Computation Journal 20 (2), 249–275
- Khediri, I. Ben, Weihls, C., Limam, M. (2012): Kernel k-means clustering based local support vector domain description fault detection of multimodal processes; Expert Systems with Applications 39 (2), 2166–2171
- Koch, P., Bischl, B., Flasch, O., Bartz-Beielstein, T., Weihls, C., Konen, W. (2012). Tuning and evolution of support vector kernels. Evolutionary Intelligence, 5(3), 153–170
- Vatolkin, I., Preuß, M., Rudolph, G., Eichhoff, M., Weihls, C. (2012). Multi-Objective Evolutionary Feature Selection for Instrument Recognition in Polyphonic Audio Mixtures. Soft Computing, 16(12), 2027–2047
- Bensmann, S., Lockow, E., Walzel, P., Weihls, C. (2011): Tracer percentage prediction of dive reflex samplers; Powder Technology 208, 63–71
- Blume, H., Bischl, B., Botteck, M., Igel, C., Martin, R., Rötter, G., Rudolph, G., Theimer, W., Vatolkin, I., Weihls, C. (2011): Huge Music Archives on Mobile Devices. IEEE Signal Processing Magazine 28, 24–39
- Khediri, I. Ben, Limam, M., Weihls, C. (2011): Variable window adaptive Kernel Principal Component Analysis for nonlinear nonstationary process monitoring; Computers & Industrial Engineering 61 (3), 437–446
- Luebke, K., Weihls, C. (2011): Linear dimension reduction in classification: adaptive procedure for optimum results; ADAC 5, 201–213
- Naujoks, B., Trautmann, H., Wessing, S., Weihls, C. (2011). Advanced Concepts for Multiobjective Evolutionary Optimisation in Aircraft Industry, Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering 225, 1081–1096
- Khediri, I. Ben, Weihls, C., Limam, M. (2010): Support Vector Regression control charts for multivariate nonlinear autocorrelated processes; Chemometrics and Intelligent Laboratory Systems 103, 76–81
- Tillmann, W., Vogli, E., Baumann, I., Kopp, G., Weihls, C. (2010): Desirability-Based Multi-Criteria Optimization of HVOF Spray Experiments to Manufacture Fine Structured Wear-Resistant 75Cr3C2-25(NiCr20) Coatings, Journal of Thermal Spray Technology 19, 392–408
- Weihls, C., Messaoud, A., and Raabe, N. (2010): Control Charts Based on Models Derived from Differential Equations; Quality and Reliability Engineering International 26, 807–816
- Messaoud, A., Weihls, C. (2009): Monitoring a deep hole drilling process by nonlinear time series modeling; Journal of Sound and Vibration 321, 620–630
- Messaoud, A., Theis, W., Hering, F., Weihls, C. (2009): Monitoring a Drilling Process Using Residual Control Charts, Quality Engineering 21, 1–9
- Weihls, C., und Szepannek, G. (2009): Distances in Classification. Transactions on Case-based Reasoning 2, 3–14

- Raabe, N., Weihs, C. (2008): Universitäten als Landschaften; *Das Hochschulwesen*, 2008(3), 80–84
- Szepannek, G., Bischl, B., Weihs, C. (2008): On the Combination of Locally Optimal Pairwise Classifiers; *Engineering Applications of Artificial Intelligence*, 22(1):79–85
- Thöne, M., und Weihs, C. (2008): Vielseitig und gefragt: Absolventinnen und Absolventen des Dortmunder Studiengangs Statistik. *AStA Wirtschafts- und Sozialstatistisches Archiv* 2 (1-2): 75–92
- Messaoud, A., Weihs, C., Hering, F. (2008): Detection of chatter vibration in a drilling process using multivariate control charts; *Computational Statistics & Data Analysis* 52(6): 3208–3219
- Kauermann, G., Weihs, C. (2007): Statistical Consulting; *Advances in Statistical Analysis (AStA)* 91(4), 343–347
- Weihs, C. (2007): Quality assurance for statistical consulting; *Advances in Statistical Analysis (AStA)* 91(4), 429–440
- Weihs, C., Ligges, U., Mörchen, F., Müllensiefen, D. (2007): Classification in Music Research; *Advances in Data Analysis and Classification (ADAC)* 1(3), 255–291
- Weinert, K., Weihs, C., Webber, O., Raabe, N. (2007): Varying bending eigenfrequencies in BTA deep hole drilling: mechanical modeling using statistical parameter estimation; *Production Engineering* 1(2), 127–134
- Trautmann, H., Weihs, C. (2006), On the Distribution of the Desirability Index using Harrington's Desirability Function, *Metrika*, 63, 207–213
- Kopiez, R., Weihs, C., Ligges, U., Lee, J.I. (2005), Classification of High and Low Achievers in Music Sight Reading Task"; *Psychology of Music* 34, 5–26
- Luebke, K., Weihs, C. (2005), Improving Feature Extraction by Replacing the Fisher Criterion by an Upper Error Bound, *Pattern Recognition* 38 (11), 2220–2223
- Szepannek, G., Klefenz F., Weihs, C. (2005), Neuronale Repräsentation des Hörvorgangs als Basis zur Schallanalyse, *Informatik Spektrum* 28 (5), 389–395; Springer-Verlag, Berlin
- Garczarek, U., Weihs, C. (2004), Incorporating Background Knowledge for Better Prediction of Cycle Phases, *Knowledge and Information Systems* 6, 544–569
- Luebke, K., Weihs, C. (2004), Generation of Prediction Optimal Projection on Latent Factors by a Stochastic Search Algorithm, *Computational Statistics and Data Analysis* 47 (2), 297–310
- Garczarek, U., Weihs, C. (2003), Standardizing the Comparison of Partitions, *Computational Statistics* 18, 143–162
- Röhl, M. C., Weihs, C., Theis, W. (2002), Direct Minimization of Error Rates in Multivariate Classification, *Computational Statistics* 17, 29–46
- Jessenberger, J., Weihs, C. (2001), A Note on the Behaviour of the Process Capability Index Cpmk with Asymmetric Specification Limits, *Journal of Quality Technology* 32, 438–441
- Stemann, D., Weihs, C. (2001), The EWMA-X-S-Control Chart and its Performance in the Case of Precise and Imprecise Data, *Statistical Papers*, 42, 207–223
- Weihs, C., Berres, M., Grize, Y.-L. (1995), Statistical design of experiments in industrial practice; *Surveys on Mathematics for Industry* 5, 49–75
- Schmidli, H., Weihs, C. (1994), Evaporation Loss from Solvent Tanks; *The Chemical Engineering Journal* 55, 61–68
- Weihs, C. (1993), Multivariate Exploratory Data Analysis and Graphics: A Tutorial; *Journal of Chemometrics* 7, 305–34021
- Weihs, C., Baumeister, W., Schmidli, H. (1993), Classification Methods for Multivariate Quality Parameters; *Journal of Chemometrics* 7, 131–142
- Racine, A., Weihs, C., Smith, A.F.M. (1991), Estimation of Relative Potency with Sequential Dilution Errors in Radioimmunoassay; *Biometrics* 47, 1235–1246
- Weihs, C., Schmidli, H. (1991), Multivariate Exploratory Data Analysis in Chemical Industry; *Mikrochimica Acta* II, 467–482
- Weihs, C., Schmidli, H. (1990), OMEGA - Online Multivariate Exploratory Graphical Analysis: Routine search for structure (mit Diskussion); *Statistical Science* 5, 175–226
- Calzolari, G., Panattoni, L., Weihs, C. (1987), Computational efficiency of FIML-estimation; *Journal of Econometrics* 36, 299–310
- Weihs, C., Calzolari, G., Panattoni, L. (1987), The behavior of trust-region methods in FIML-estimation; *Computing* 38, 89–100

Contributions to edited volumes and proceedings

- Chambers, John M., Ligges, U., Weihs, C. (2019): Algorithms, Statistical; <https://doi.org/10.1002/9781118445112.stat00399.pub2>. In: Wiley StatsRef: Statistics Reference Online
- Bauer, N., Weihs, C. (2019). Mit Statistik weniger Ausschuss. In: W. Krämer, C. Weihs (eds): *Faszination Statistik*, 149–156
- Ickstadt, K., Weihs, C. (2019). Ist Data Science mehr als Statistik? Ein Blick über den Tellerrand. In: W. Krämer, C. Weihs (eds): *Faszination Statistik*, 203–210
- Weihs, C. (2019). Musikdatenanalyse. In: W. Krämer, C. Weihs (eds): *Faszination Statistik*, 75–84
- Weihs, C. (2019). Wo wirken Medikamente im Körper: Eine systematische statistische Datenanalyse. In: W. Krämer, C. Weihs (eds): *Faszination Statistik*, 11–18
- Bauer, N., Friedrichs, K., Bischl, B., Weihs, C. (2016). Fast Model based Optimization of Tone Onset Detection by Instance Sampling. In: A. F. X. Wilhelm, H., A. Kestler (eds): *Analysis of Large and Complex Data*, Springer, 461–472
- Bauer, N., Krey, S., Ligges, U., Weihs, C. (2016). Segmentation. In C. Weihs, Jannach, D., Vatulkin, I., Rudolph, G. (Eds.), *Music Data Analysis: Foundations and Applications*, 411–432
- Demircioğlu, A., Horn, D., Glasmachers, T., Bischl, B., Weihs, C. (2016). Fast model selection by limiting SVM training times (arxiv:1302.1602.03368v1). arxiv.org
- Friedrichs, K., Weihs, C. (2016): Auditory Models, In C. Weihs, Jannach, D., Vatulkin, I., Rudolph, G. (Eds.), *Music Data Analysis: Foundations and Applications*, 165–176
- Herbrandt, S., Weihs, C., Ligges, U., Ferreira, M., Rautert, C., Biermann, D., Tillmann, W. (2016): Optimization of a simulation for inhomogeneous mineral subsoil machining. In Wilhelm, A. F.X., Kestler, H. A. (eds), *Analysis of Large and Complex Data*, Springer, 487–496
- Ligges, U., Weihs, C. (2016): Transcription. In C. Weihs, Jannach, D., Vatulkin, I., Rudolph, G. (Eds.), *Music Data Analysis: Foundations and Applications*, 433–450
- Mejri, D., Limam, M., Weihs, C. (2016). Monitoring a Dynamic Weighted Majority Method Based on Datasets with Concept Drift. In A. F. X. Wilhelm, H. A. Kestler (eds): *Analysis of Large and Complex Data*, Springer, 241–250
- Meyer, O., Keller, J., Weihs, C. (2016). Uncertainty in Process Chains. In: L. Walls, M. Revie, T. Bedford (eds): *Risk, Reliability and Safety: Innovating Theory and Practice: Proceedings of ESREL 2016*, CRC Press, 2812–2815
- Meyer, O., Weihs, C. (2016). Statistical Analysis of sequential Process Chains based on Errors-in-Variables Models. In: *Proceedings of the 2016 IEEE Symposium Series on Computational Intelligence*
- Vatulkin, I., Weihs, C. (2016): Evaluation. In C. Weihs, Jannach, D., Vatulkin, I., & Rudolph, G. (Eds.), *Music Data Analysis: Foundations and Applications*, 329–363
- Weihs, C., Horn, D., Bischl, B. (2016). Big Data Classification: Aspects on Many Features and Many Observations. In: A. F. X. Wilhelm, H. A. Kestler (eds): *Analysis of Large and Complex Data*, Springer, 113–122
- Weihs, C. (2016). Statistical Methods. In C. Weihs, Jannach, D., Vatulkin, I., Rudolph, G. (Eds.), *Music Data Analysis: Foundations and Applications*, 219–262
- Weihs, C. (2016). Unsupervised Learning. In C. Weihs, Jannach, D., Vatulkin, I., & Rudolph, G. (Eds.), *Music Data Analysis: Foundations and Applications*, 283–302
- Weihs, C., Glasmachers, T. (2016). Supervised Classification. In C. Weihs, Jannach, D., Vatulkin, I., Rudolph, G. (Eds.), *Music Data Analysis: Foundations and Applications*, 303–327
- Weihs, C., Friedrichs, K., Wintersohl, K. (2016). Instrument Recognition. In C. Weihs, Jannach, D., Vatulkin, I., Rudolph, G. (Eds.), *Music Data Analysis: Foundations and Applications*, 451–467
- Weihs, C. (2016). Big data classification - aspects on many features. In Michaelis, S., Piatkowski, N., Stolpe, M. (eds): *Solving Large Scale Learning Tasks: Challenges and Algorithms*, Lecture Notes in Computer Science 9580. Springer, 139–147
- Horn, D., Wagner, T., Biermann, D., Weihs, C., Bischl, B. (2015). Model-Based Multi-objective Optimization: Taxonomy, Multi-Point Proposal, Toolbox and Benchmark. In A. Gaspar-Cunha, C. H. Antunes and C. Coello (eds), *Evolutionary Multi-Criterion Optimization*, Lecture Notes in Computer Science, Springer, 64–78
- Stoller, D., Mauch, M., Vatulkin, I. Weihs, C. (2015): Impact of Frame Size and Instrumentation on Chroma-based Automatic Chord Recognition, In: B. Lausen, S. Krolak-Schwerdt, M. Böhmer (eds.) *Data Science, Learning by Latent Structures, and Knowledge Discovery*; Springer, 411–421
- Vatulkin, I., Rudolph, G., Weihs, C. (2015): Evaluation of Album Effect for Feature Selection in Music Genre Recognition; Meinard Müller, Frans Wiering (Eds.) *Proceedings of the 16th International Society for Music Information Retrieval Conference (ISMIR)*, Malaga, Spain; 169 – 175

- Vatolkin, I., Rudolph, G., Weihs, C. (2015): Interpretability of Music Classification as a Criterion for Evolutionary Multi-Objective Feature Selection, Proceedings of the 4th European Conference on Evolutionary and Biologically Inspired Music, Sound, Art and Design (EvoMUSART), Copenhagen, Denmark; Lecture Notes in Computer Science 9021, 236–248
- Bischi, B., Wessing, S., Bauer, N., Friedrichs, K., Weihs, C. (2014): MOI-MBO: Multiobjective infill for parallel model-based optimization, in: Learning and Intelligent Optimization; P. M. Pardalos, M. G.C. Resende, C. Vogiatzis, J. L. Walteros (Hrsg.), Springer, LNCS 8426, 173–186
- Weihs, C., Raabe, N., Ferreira, M., Rautert, C. (2014). Statistical process modelling for machining of inhomogeneous mineral subsoil. In W. Gaul, A. Geyer-Schulz, Y. Baba, A. Okada (eds) German-Japanese Interchange of Data Analysis Results, Springer, 253–263
- Bauer, N., Friedrichs, K., Kirchhoff, D., Schiffner, J., Weihs, C. (2013). Tone Onset Detection Using an Auditory Model. In M. Spiliopoulou, L. Schmidt-Thieme, and R. Jannings, editors, Data Analysis, Machine Learning and Knowledge Discovery, Springer, 315–324
- Bauer, N., Schiffner, J., Weihs, C. (2013): Comparison of Classical and Sequential Design of Experiments in Note Onset Detection. B. Lausen, D. van den Poel, A. Ultsch (eds.): Algorithms from and for Nature and Life, Springer, 501–509
- Beige, T., Terhorst, T., Weihs, C., Wormer, H. (2013): The Most Dangerous Districts of Dortmund. In M. Spiliopoulou, L. Schmidt-Thieme, and R. Jannings, editors, Data Analysis, Machine Learning and Knowledge Discovery, Springer, 13–21
- Bischi, B., Schiffner, J., Weihs, C. (2013): Benchmarking Classification Algorithms on High-Performance Computing Clusters. In M. Spiliopoulou, L. Schmidt-Thieme, and R. Jannings, editors, Data Analysis, Machine Learning and Knowledge Discovery, Springer, 23–31
- Eichhoff, M., Vatolkin, I., Weihs, C. (2013): Piano and Guitar Tone Distinction Based on Extended Feature Analysis. A. Giusti, G. Ritter, M. Vichi (eds.): Classification and Data Mining, Springer, 215–224
- Eichhoff, M., Weihs, C. (2013). Recognition of Musical Instruments in Intervals and Chords. In M. Spiliopoulou, L. Schmidt-Thieme, and R. Jannings, editors, Data Analysis, Machine Learning and Knowledge Discovery, Springer, 333–341
- Friedrichs, K., Weihs, C. (2013): Auralization of Auditory Models. A. Giusti, G. Ritter, M. Vichi (eds.): Classification and Data Mining, Springer, 225–232
- Meyer, O., Bischi, B., Weihs, C. (2013). Support vector machines on large data sets: Simple parallel approaches. In M. Spiliopoulou, L. Schmidt-Thieme, and R. Jannings, editors, Data Analysis, Machine Learning and Knowledge Discovery, Springer, 87–95
- Rötter, G., Vatolkin, I., Weihs, C. (2013): Computational Prediction of High-Level Descriptors of Music Personal Categories. B. Lausen, D. van den Poel, A. Ultsch (eds.): Algorithms from and for Nature and Life, Springer, 529–537
- Schiffner, J., Godehardt, E., Hillebrand, S., Albert, A., Lichtenberg, A., Weihs, C. (2013): Identification of Risk Factors in Coronary Bypass Surgery. B. Lausen, D. van den Poel, A. Ultsch (eds.): Algorithms from and for Nature and Life, Springer, 287–295
- Vatolkin, I., Bischi, B., Rudolph, G., Weihs, C. (2013). Statistical comparison of classifiers for multi-objective feature selection in instrument recognition. In M. Spiliopoulou, L. Schmidt-Thieme, and R. Jannings, editors, Data Analysis, Machine Learning and Knowledge Discovery, Springer, 171–178
- Vatolkin, I., Roetter, G., Weihs, C. (2013). Music Genre Prediction by Low-Level and High-Level Characteristics. In M. Spiliopoulou, L. Schmidt-Thieme, and R. Jannings (Eds), Data Analysis, Machine Learning and Knowledge Discovery, Springer, 427–434
- Eichhoff, M., Weihs, C. (2012). Musical Instrument Recognition by High-Level Features. In W. Gaul, A. Geyer-Schulz (Eds.) Challenges at the Interface of Data Analysis, Computer Science, and Optimization, Heidelberg Berlin: Springer, 373–381
- Schiffner, J., Bischi, B., and Weihs, C. (2012). Bias-variance analysis of local classification methods. In W. Gaul, A. Geyer-Schulz, L. Schmidt-Thieme, & J. Kunze (Eds.), Challenges at the Interface of Data Analysis, Computer Science, and Optimization (pp. 49–57). Studies in Classification, Data Analysis, and Knowledge Organization, 43. Berlin Heidelberg: Springer
- Weihs, C., Friedrichs, K., Bischi, B. (2012): Statistics for hearing aids: Auralization; In: J. Pocięcha, R. Decker (eds), Data Analysis Methods and its Applications, 183–196
- Weihs, C., Friedrichs, K., Eichhoff, M., Vatolkin, I. (2012). Software in Music Information Retrieval (MIR). In W. Gaul, A. Geyer-Schulz (Eds.) Challenges at the Interface of Data Analysis, Computer Science, and Optimization, Heidelberg Berlin: Springer, 421–432
- Weihs, C., Mersmann, O., Bischi, B., Fritsch, A., Trautmann, H., Karbach, T. M., et al. (2012). A Case Study on the Use of Statistical Classification Methods in Particle Physics. In W. Gaul, A. Geyer-Schulz, L. Schmidt-Thieme, & J. Kunze (Eds.), Challenges at the Interface of Data Analysis, Computer Science, and Optimization (pp. 69–77). Studies in Classification, Data Analysis, and Knowledge Organization, 43. Berlin Heidelberg: Springer

- Mersmann, O., Bischl, B., Trautmann, H., Preuss, M., Weihs, C. and Rudolph, G. (2011): Exploratory landscape analysis. In: Proceedings of the 13th annual conference on Genetic and evolutionary computation (GECCO '11), Natalio Krasnogor (Ed.). ACM, New York, NY, USA, 829–836
- Bischl, B., Eichhoff, M., Weihs, C. (2010). Selecting Groups of Audio Features by Statistical Tests and the Group Lasso. In 9. ITG Fachtagung Sprachkommunikation. Bochum, Germany, VDE Verlag, Berlin, Offenbach
- Bücker, M., Szepannek, G., Weihs, C. (2010). Local Classification of Discrete Variables by Latent Class Models. In Classification as a Tool for Research. Studies in Classification, Data Analysis, and Knowledge Organization, 40. Heidelberg Berlin: Springer, 127–135
- Kopp, G., Baumann, I., Vogli, E., Tillmann, W., Weihs, C. (2010). Desirability-Based Multi-Criteria Optimisation of HVOF Spray Experiments. In Classification as a Tool for Research Studies in Classification, Data Analysis, and Knowledge Organization, 40. Heidelberg Berlin: Springer, 811–818
- Mersmann, O., Trautmann, H., Naujoks, B., Weihs, C. (2010). On the Distribution of EMOA Hypervolumes. In Blum, C., Battiti, R. (Eds.), Learning and Intelligent Optimization, 4th International Conference, LION 4, Venice, Italy (pp. 333–337). Lecture Notes in Computer Science: Vol. 6073. Springer
- Müller, T., Schiffner, J., Schwender, H., Szepannek, G., Weihs, C., Ickstadt, K. (2010). Local analysis of SNP data. In H. Locarek-Junge, & C. Weihs (Eds.), Classification as a Tool for Research. Studies in Classification, Data Analysis, and Knowledge Organization, 40. Heidelberg Berlin: Springer, 473–480
- Raabe, N., Enk, D., Biermann, D., Weihs, C. (2010): Dynamic disturbances of BTO deep-hole drilling: Modelling chatter and spiralling as regenerative effects, In: A. Fink, B. Lausen, W. Seidel, A. Ultsch (Eds.), Advances in Data Analysis, Data Handling and Business Intelligence, 745–754
- Schiffner, J., Szepannek, G., Monthé, T., Weihs, C. (2010): Localized logistic regression for categorical influential factors, In: A. Fink, B. Lausen, W. Seidel, A. Ultsch (Eds.), Advances in Data Analysis, Data Handling and Business Intelligence, 185–195
- Sommer, K., Weihs, C. (2010): Analysis of polyphonic music time series, In: A. Fink, B. Lausen, W. Seidel, A. Ultsch (Eds.), Advances in Data Analysis, Data Handling and Business Intelligence, 429–437
- Szepannek, G. Gruhne, M., Bischl, B., Krey, S., Harczos, T., Klefenz, F., Dittmar, C., Weihs, C. (2010): Perceptually Based Phonem Recognition in Popular Music. In H. Locarek-Junge, C. Weihs (Eds.), Classification as a Tool for Research. Studies in Classification, Data Analysis, and Knowledge Organization, 40. Heidelberg Berlin: Springer, 751–758
- Szepannek, G., Harczos, T., Klefenz, F., Weihs, C. (2009): Combining Different Auditory Model Based Feature Extraction Principles for Feature Enrichment in Automatic Speech Recognition, In: A. Karpov (ed.): Specom 2009 Proceedings ISBN 978-5-8088-0442-5, 205–210
- Tillmann, W., Vogli, E., Baumann, I., Kopp, G., Weihs, C. (2009): Statistical Design of HVOF Spray Experiments to Manufacture Superfine Structured Wear Resistant Cr₃C₂ - 25(Ni 20Cr) Coatings, In: Thermal Spray 2009: Proceedings of the International Thermal Spray Conference (ITSC 09), Marple, B.R., Hyland, M.M., Lau, Y.-C., Li, C.-J., Lima, R.S., Montavon, G. (editors), 4. 7.05.2009, Las Vegas, USA, 700–708
- Lübke K., Weihs, C. (2009): Vorhersage-optimale Klassifikation von Konjunkturphasen, in Adolf Wagner (ed.): Empirische Wirtschaftsforschung heute, Schäffer-Poehchel, Stuttgart, 149–156
- Weihs, C., Raabe, N., Webber, O. (2009): Deriving a statistical model for the prediction of spiralling in BTA-deep-hole drilling from a physical model; In: A. Okada, T. Imaizumi, H.-H. Bock, W. Gaul (Eds.): Cooperation in Classification and Data Analysis; Springer, 107–114
- Weihs, C., und Szepannek, G. (2009): Distances in Classification. In: P. Perner (Ed.): Advances in Data Mining: Applications and Theoretical Aspects, LNAI 5633, Springer, 1–12
- Gebel, M., Weihs, C. (2008), Calibrating margin-based classifier scores into polychotomous assessment probabilities. In: C. Preisach, H Burkhardt, L. Schmidt-Thieme, R. Decker (Eds.), Data Analysis, Machine Learning and Applications, Springer, 29–36
- Messaoud, A., Weihs, C. (2008), On the Properties of the Rank Based Multivariate Exponentially Weighted Moving Average Control Charts. In: C. Preisach, H Burkhardt, L. Schmidt-Thieme, R. Decker (Eds.), Data Analysis, Machine Learning and Applications, Springer, 455–462
- Schiffner, J., Weihs, C. (2008), Comparison of Local Classification Methods. In: C. Preisach, H Burkhardt, L. Schmidt-Thieme, R. Decker (Eds.), Data Analysis, Machine Learning and Applications, Springer, 69–76
- Sommer, K., Weihs, C. (2008), A comparative study on polyphonic musical time series using MCMC methods. In: C. Preisach, H Burkhardt, L. Schmidt-Thieme, R. Decker (Eds.), Data Analysis, Machine Learning and Applications, Springer, 285–292
- Szepannek G, Schiffner J, Wilson J, Weihs C (2008) Local modelling in classification. In: Perner P. (ed) Advances in Data Mining. Medical Applications, E-Commerce, Marketing, and Theoretical Aspects, Springer, Berlin Heidelberg, LNCS 5077, 153–164

- Jahnke, I., Tzankow, M., van Veen, A., Weihs, C. (2008): Informationsaustausch und Wissensmanagement in Online-Communities – Neue Kommunikationsräume an der Universität. In: A. Scholkmann, B. Roters, J. Ricken, M. Höcker (Hrsg.), *Hochschulforschung und Hochschulmanagement im Dialog – Zur Praxisrelevanz empirischer Forschung über die Hochschule*, Waxmann, 119–136
- Czogiel, I., Luebke, K., Zentgraf, M., und Weihs, C. (2007): Localized linear discriminant analysis. In: R. Decker, H.-J. Lenz, *Advances in Data Analysis*, Springer, 133–140.
- Gebel, M., Weihs, C. (2007): Calibrating Classifier Scores into Probabilities; In: R. Decker, H.-J. Lenz, *Advances in Data Analysis*, Springer, 141–148
- Sommer, K., Weihs, C. (2007): Using MCMC as a Stochastic Optimization Procedure for Monophonic and Polyphonic Sound; In: R. Decker, H.-J. Lenz, *Advances in Data Analysis*, Springer, 645–652
- Szepannek, G., Bischl, B., Weihs, C. (2007), On the Combination of Locally Optimal Pairwise Classifiers, *Machine Learning and Data Mining in Pattern Recognition*, Lecture Notes in Computer Science 4571, 104–116
- Szepannek, G., Harczos, T., Klefenz, F., Katai, A., Schikowski, P., Weihs, C. (2007), Vowel Classification by a Neurophysiologically Parametrized Auditory Model; In: R. Decker, H.-J. Lenz (Eds.): *Advances in Data Analysis*, Springer, 653–660.
- Enache, D., Weihs, C., Garczarek, U.M. (2006), Classification-relevant Importance Measures for the West German Business Cycle. In: M. Spiliopoulou, R. Kruse, C. Borgelt, A. Nürnberger, W. Gaul (Eds), *From Data and Information Analysis to Knowledge Engineering*, Springer, Heidelberg, 470–477
- Garczarek, U., Weihs, C. (2006), Univariate Characterization of the German Business Cycle 1955–1994. In: U. Heilemann, C. Weihs (Eds), *Klassifikations-/Clustermethoden und Konjunkturanalyse*, RWI-Schriften 79, Duncker & Humblot, Berlin, 127–136
- Heilemann, U., Weihs, C. (2006), *Klassifikations-/Clustermethoden und Konjunkturanalyse*. In: U. Heilemann, C. Weihs (Eds), *Klassifikations-/Clustermethoden und Konjunkturanalyse*, RWI-Schriften 79, Duncker & Humblot, Berlin, 9–18
- Messaoud, A., Weihs, C., Hering, F. (2006), Nonlinear Time Series, Modelling: Monitoring a Drilling Process; In: M. Spiliopoulou, R. Kruse, C. Borgelt, A. Nürnberger, W. Gaul (Eds), *From Data and Information Analysis to Knowledge Engineering*, Springer, Heidelberg, 302–309
- Raabe, N., Webber, O., Theis, W., Weihs, C. (2006), Spiralling in BTA Deep-Hole Drilling: Models of Varying Frequencies; M. Spiliopoulou, R. Kruse, C. Borgelt, A. Nürnberger, W. Gaul (Eds), *From Data and Information Analysis to Knowledge Engineering*, Springer, Heidelberg, 510–517
- Sommer, K., Weihs, C. (2006), Using MCMC as a stochastic optimization procedure for musical time series; In: V. Batagely, H.-H. Bock, A. Ferligoy, A. Ziberna (Eds), *Data Science and Classification*, 307–315
- Szepannek, G., Weihs, C. (2006), Variable Selection for Discrimination of More Than Two Classes Where Data are Sparse. In: M. Spiliopoulou, R. Kruse, C. Borgelt, A. Nürnberger, W. Gaul (Eds), *From Data and Information Analysis to Knowledge Engineering*, Springer, Heidelberg, 700–707
- Szepannek, G., Weihs, C. (2006), Local Modelling in Classification on Different Feature Subspaces; In: P. Perner (Ed.): *Advances in Data Mining*, Lecture Notes in Computer Science 4065, 226–238
- Weihs, C., Garczarek, U. (2006), Stability of Multivariate Representation of Business Cycles over Time. In: U. Heilemann, C. Weihs (Eds), *Klassifikations-/Clustermethoden und Konjunkturanalyse*, RWI-Schriften 79, Duncker & Humblot, Berlin, 55–68
- Weihs, C., Ligges, U. (2006), Parameter Optimization in Automatic Transcription of Music. In: M. Spiliopoulou, R. Kruse, C. Borgelt, A. Nürnberger, W. Gaul (Eds), *From Data and Information Analysis to Knowledge Engineering*, Springer, Heidelberg, 740–747
- Weihs, C., Ligges, U., Sommer, K. (2006): Analysis of Music Time Series, in: A. Rizzi, M. Vichi (Eds.), *COMPSTAT 2006, Proceedings in Computational Statistics*, Physika, 147–159
- Weihs, C., Szepannek, G., Ligges, U., Luebke, K., Raabe, N. (2006), Local Models in Register Classification by Timbre". In: V. Batagely, H.-H. Bock, A. Ferligoy, A. Ziberna (Eds), *Data Science and Classification*, 316–322
- Enache, D., Weihs, C. (2005), Importance Assessment of Correlated Predictors in Business Cycles Classification. In: C. Weihs, W. Gaul (Eds): *Classification: The Ubiquitous Challenge*, Springer Studies in Classification, Data Analysis and Knowledge Organisation, Springer, Heidelberg, 545–552
- Jessenberger, J., Weihs, C. (2005), Desirability to characterize process capability. In: C. Weihs, W. Gaul (Eds): *Classification- The Ubiquitous Challenge*; Springer Studies in Classification, 640–647.
- Kopiecz, R., Weihs, C., Ligges, U., Lee, J. I. (2005), In Search of Variables Distinguishing Low and High Achievers in a Music Sight Reading Task. In: C. Weihs, W. Gaul (Eds), *Classification: The Ubiquitous Challenge*, Springer-Verlag, Berlin, 593–599
- Messaoud, A., Theis, W., Weihs, C., Hering, F. (2005), Application and use of multivariate control charts in a BTA deep hole drilling process. In: C. Weihs, W. Gaul (Eds), *Classification- The Ubiquitous Challenge*; Springer Studies in Classification, Data Analysis and Knowledge Organisation, Springer, Heidelberg, 648–655

- Messaoud, A., Weihs, C., Hering, F. (2005), Time Series, Control Charts: An Industrial application. In: J. Janssen, P. Lenca (Eds), Proceedings of the XIth International Symposium on Applied Stochastic Models and Data Analysis 2005, Brest, 1329–1338, <http://asmda2005.enst-bretagne.fr/IMG/pdf/proceedings/proceedings-asmda2005.pdf>
- Pumplün, C., Weihs, C., Preusser, A. (2005): Experimental Design for Variable Selection in Data Bases. In: C. Weihs, W. Gaul (Eds): Classification - The Ubiquitous Challenge; Springer Studies in Classification, Springer, Heidelberg, 192–199
- Röver, C., Klefenz, F., Weihs, C. (2005), Identification of Musical Instruments by Means of the Hough-Transformation. In: C. Weihs, W. Gaul (Eds), Classification - The Ubiquitous Challenge, Springer-Verlag, Heidelberg, 608–615
- Szepannek, G., Luebke, K., Weihs, C. (2005), Understanding Patterns with Different Subspace Classification. In: P. Perner, A. Imiya (Eds), Machine Learning and Data Mining (MLDM 2005), Springer Lecture Notes in Artificial Intelligence, 3587, 110–119
- Theis, W., Weihs, C. (2005), Determination of Relevant Frequencies and Modeling Varying Amplitudes of Harmonic Processes, In: C. Weihs, W. Gaul (Eds), Classification - The Ubiquitous Challenge, Springer Studies in Classification, Data Analysis and Knowledge Organisation, 656–663
- Weihs, C., Ligges, U., Garczarek, U. (2005), Prediction of Notes from Vocal Time Series: An Overview. In: D. Baier, K.-D. Wernecke (Eds), Innovations in Classification, Data Science, and Information Systems, Springer-Verlag, Berlin, 283–294
- Weihs, C., Reuter, C., Ligges, U. (2005), Register Classification by Timbre. In: C. Weihs, W. Gaul (Eds), Classification - The Ubiquitous Challenge, Springer-Verlag, Berlin, 624–631
- Weihs, C., Ligges, U. (2005), From local to global analysis of music time series. In: K. Morik, A. Siebes, J.-F. Boulicault (Eds): Detecting Local Patterns, Springer Lecture Notes in Artificial Intelligence 3539, Springer, Heidelberg, 233–245
- Weihs, C., Ligges, U., Lübke, K., Raabe, N. (2005), klaR Analyzing German Business Cycles. In: D. Baier, R. Decker, L. Schmidt-Thieme (Eds), Data Analysis and Decision Support, Springer-Verlag, Berlin, 335–343
- Luebke, K., Weihs, C. (2004), Optimal Separation Projection. In: J. Antoch (Ed.), COMPSTAT 2004 - Proceedings in Computational Statistics, Physica, Heidelberg, 1429–1437
- Messaoud, A., Theis, W., Weihs, C., Hering, F. (2004), Improving the BTA Deep Hole Drilling Process Using Multivariate Control Charts. In S. Ekinovic, S. Brdarevic, J. Vivancos, F. Puerta (Eds), Proceedings of the 8th International Research/Expert Conference “Trends in the Development of Machinery and Associated Technology”, TMT 2004, 67–70, Neum, Bosnia and Herzegovina.
- Weihs, C., Ligges, U. (2004), Interfaces in statistischen Anwendungssystemen – Die Entwicklung in den 25 Jahren aus persönlicher Sicht; In: R. Biehler, J. Engel, J. Meyer (Eds), Neue Medien und innermathematische Vernetzungen in der Stochastik, Anregungen zum Stochastikunterricht, Band 2, Verlag Franzbecker, 127–150
- Luebke, K., Weihs, C. (2003), Testing a Simulated Annealing Algorithm in a Classification Problem. In: A. Albrecht, K. Steinhoefel (Eds), Stochastic Algorithms: Foundations and Applications, Springer Lecture Notes in Computer Science, 2827, 61–70
- Luebke, K., Weihs, C. (2003), Prediction Optimal Data Analysis by Means of Stochastic Search. In: M. Schader, W. Gaul, M. Vichi (Eds): Between Data Science and Applied Data Analysis, Springer-Verlag, Berlin, 305–312
- Weihs, C. and Ligges, U. (2003), Voice Prints as a Tool for Automatic Classification of Vocal Performance. In: Kopiez, R., Lehmann, A. C., Wolther, I. and Wolf, C. (Eds), Proceedings of the 5th Triennial ESCOM Conference, Hanover University of Music and Drama, Germany, September 8-13, 2003, 332–335.
- Weihs, C., Ligges, U. (2003), Automatic Transcription of Singing Performances; Bulletin of the International Statistical Institute, 54th Session, Proceedings, Volume LX, Book 2, 507–510
- Weihs, C., Ligges, U., Güttner, J., Hasse-Becker, P., Berghoff, S. (2003), Classification and Clustering of Vocal Performances. In: M. Schader, W. Gaul, M. Vichi (Eds), Between Data Science and Applied Data Analysis, Springer-Verlag, Berlin, 118–126
- Ligges, U., Weihs, C., Hasse-Becker, P. (2002), Detection of Locally Stationary Segments in Time Series. In: W. Härdle, B. Rönz (Eds), Proceedings in Computational Statistics 2002, Physica-Verlag, Heidelberg, 285–290
- Sondhaus, U., Weihs, C. (2002), Standardized Partition Spaces. In: W. Härdle, B. Rönz (Eds), Proceedings in Computational Statistics 2002, Physica-Verlag, Heidelberg, 539–544
- Weihs, C., Kappler, M. (2002), e-stat: Development of a Scenario for Statistics in Chemical Engineering. In: W. Härdle, B. Rönz (Eds), Proceedings in Computational Statistics 2002, Physica-Verlag, Heidelberg, 327–332
- Weihs, C., Sondhaus, U. (2002), Combining Mental Fit and Data Fit for Classification Rule Selection. In: O. Opitz, M. Schwaiger (Eds), Explanatory Data Analysis in Empirical Research, Series: Studies in Classification, Data Analysis and Knowledge Organization, Springer-Verlag, 188–203

- Weihls, C., Kunert, J. (2001), Greedy Variables Selection in Experimental Studies, Proceedings of the Workshop 'Active Learning, Database Sampling, Experimental Design: Views on Instance Selection', ECML/PKDD 01, Freiburg, 6–20
- Weihls, C., Sondhaus, U. (2001), Incorporating background knowledge for better prediction of cycle phases. In: R. Klinkenberg, S. Rüping, A. Fick, N. Henze, C. Herzog, R. Molitor, O. Schröder (Eds), LLWA 01 - Tagungsband der GI-Workshop-Woche Lernen - Lehren - Wissen - Adaptivität, Dortmund, 27–34.
- Heilemann, U., Weihls, C. (2000 und 2004), Diskriminanzanalyse. In: Taschenbuch der Statistik, W. Voß (Ed.), Fachbuchverlag Leipzig, 583–608
- Theis, W., Weihls, C. (2000), Clustering techniques for the detection of business cycles. In: R. Decker, W. Gaul (Eds), Classification and Information Processing at the Turn of the Millennium, Springer Berlin; 127–134
- Weihls, C., Sondhaus, U. (2000), Business phase classification and prediction: How to compare interpretability of classification methods? In: H.H. Hoos, T.G. Stützle (Eds): Proceedings of the ECAI Workshop Notes 'Empirical Methods in Artificial Intelligence', 65–77
- Kreutz, M., Reimetz, A.M., Sendhoff, B., Weihls, C., von Seelen, W. (1999), Structure Optimization of Density Estimation Models Applied to Regression with Dynamic Noise. In: D. Heckerman und J. Whittaker (Eds), Uncertainty 99: Proceedings of the Seventh International Workshop on Artificial Intelligence and Statistics, Morgan Kaufmann, San Francisco, 2337–242
- Röhl, M.C., Weihls, C. (1999), Optimal vs. Classical Linear Dimension Reduction. In: W. Gaul, H. Locarek-Junge (Eds), Classification in the Information Age, Studies in Classification, Data Analysis, and Knowledge Organization; Heidelberg, Springer, 252–259
- Kreutz, M., Reimetz, A.M., Sendhoff, B., Weihls, C., von Seelen, W. (1998), Optimisation of Density Estimation Models with Evolutionary Algorithms; In: A. Eiben, T. Bäck, M. Schoenauer und H. Schwefel (Eds), Parallel Problem Solving from Nature PPSN V, LNCS 1498, Springer, Berlin, 998–1007.
- Weihls, C., Seewald, W. (1996): Computer-based design of experiments in industry. In: H.H. Bock und W. Polasek (Eds): Data Analysis and Information Systems, Heidelberg, Springer, 272–288
- Weihls, C. (1993), Canonical Discriminant Analysis: Comparison of Resampling Methods and Convex-Hull Approximation. In O. Opitz, B. Lausen, R. Klar (Eds), Information and Classification; Springer Verlag Heidelberg; 225–238
- Weihls, C. (1992), Vorhersagefähigkeit multivariater linearer Methoden: Simulation und Grafik (mit Diskussion). In: E. Enke, J. Göllés, R. Haux, H.-D. Wernecke (Eds), Methoden und Werkzeuge für die exploratorische Datenanalyse in den Biowissenschaften; Fischer, Stuttgart; 111–127
- Kirchen, A., Weihls, C. (1986): Das IAS-System Bonn: Ein interaktives Software-System für den ökonomischen Modellbau. In: W. Krelle (Eds): Ökonomische Prognose-, Entscheidungs- und Gleichgewichtsmodelle, Ergebnisse aus dem gleichnamigen Sonderforschungsbereich der Universität Bonn; Verlag Chemie, 123–132
- Weihls, C. (1985), Convergence of an algorithm for FIML-estimation in (non-)linear econometric models. In: P. Brucker, R. Pauly (Eds), Proceedings für das IX. Symposium über Operations Research 1984; A. Hain, 101–126

Monographs

- Weihls, C., Mersmann, O., Ligges, U. (2013): Foundations of Statistical Algorithms; CRC Press, 473 + 13 pp.
- Weihls, C., Jessenberger, J. (1999), Statistische Methoden zur Qualitätssicherung und -optimierung in der Industrie. Wiley-VCH, Weinheim, 436 pp.
- Weihls, C. (1987), Auswirkungen von Fehlern in den Daten auf Parameterschätzungen und Prognosen; Physica-Verlag, Arbeiten zur Angewandten Statistik 30, 391 pp.

Edited Volumes

- Krämer, W., Weihls, C. (Eds) (2019). Faszination Statistik: Einblicke in aktuelle Forschungsfragen und Erkenntnisse. Springer
- Weihls, C., Jannach, D., Vatulkin, I., Rudolph, G. (Eds) (2016). Music Data Analysis: Foundations and Applications. CRC Press, Taylor & Francis Group, 675 + 18 pp.
- Vicari, D., Okada, A., Ragozini, G., Weihls, C. (Eds) (2014). Analysis and Modeling of Complex Data in Behavioral and Social Sciences. Springer
- Locarek-Junge, H., Weihls, C. (Eds) (2010). Classification as a tool for research. Springer
- Kunert, J., Weihls, C. (Eds) (2008): Quality and Reliability Engineering International, Special Issue on Seventh Annual ENBIS Conference

- Kauermann, G., Weihs, C. (Eds) (2007): *Advances in Statistical Analysis (AStA) 91(4)*, Special Issue on 'Statistical Consulting'
- Heilemann, U., Weihs, C. (Eds) (2006), *Klassifikations-/Clustermethoden und Konjunkturanalyse*, RWI-Schriften 79, Duncker & Humblot, Berlin
- Weihs, C., Gaul, W. (Eds) (2005), *Classification - The Ubiquitous Challenge*, Springer-Verlag, Heidelberg
- Christmann, A., Weihs, C. (Eds) (2003), *Data Mining und Statistik in Hochschule und Wirtschaft. Proceedings der 6. Konferenz der SAS-Anwender in Forschung und Entwicklung (KSFE)*; Shaker Verlag, Aachen
- Unwin, A., Weihs, C. (Eds) (2000), *Metrika 51*, Special Issue on 'Interactive Statistics'

Other publications

- Krämer, W., Weihs, C. (2019). *Vorwort: Faszination Statistik*. Springer
- Locarek-Junge, H., Weihs, C. (2010). *Preface: Classification as a tool for research*. Springer
- Szepannek, G., Harczos, T., Klefenz, F., Weihs, C. (2009): *Extending features for automatic speech recognition by means of auditory modelling*, Proceedings of the 17th European Signal Processing Conference (EUSIPCO 2009), CD, 1235–1239
- Weihs, C., Messaoud, A., Raabe, N. (2009): *Control Charts Based on Models Derived From Differential Equations*, Proceedings of the ENBIS9, Goteborg, 20 – 24 September 2009, CD
- Weihs, C. (2009): *Testing Numerical Methods Solving the Linear Least Squares Problem*; In: B. Schipp, W. Krämer (Hrsg.), *Statistical Inference, Econometric Analysis and Matrix Algebra. Festschrift in Honour of Götz Trenkler*, Springer, 333–347
- Kunert, J., Weihs, C. (2008): *Editorial: Seventh Annual ENBIS Conference; Special Issue of Quality and Reliability Engineering International*; 625
- Weihs, C., Trautmann, H. (2007): *Parallel Universes: Multi-Criteria Optimization*. In: Berthold, M.R., Morik, K., and Siebes, A. (Eds.): *Parallel Universes and Local Patterns*, <http://drops.dagstuhl.de/opus/volltexte/2007/1255/>
- Weihs, C., Berghoff, S., Hasse-Becker, P., Ligges, U. (2001), *Assessment of Purity of Intonation in Singing Presentations by Discriminant Analysis*. In J. Kunert, G. Trenkler (Eds), *Mathematical Statistics and Biometrical Applications*, Josef Eul, Bergisch-Gladbach, Köln, 395–410