

Refereed Conference Papers (All):

1. E. Lughofer, M. Pratama, C. Eitzinger and T. Radauer. **Dynamic Anomaly Detection based on Recursive Independent Component Analysis of Multi-Variate Residual Signals.** [Proceedings of the 33rd annual European Simulation and Modelling Conference](#), Palma de Mallorca, Spain, 2019.
2. M. Pratama, M. de Carvalho, R. Xie, E. Lughofer and J. Lu. **ATL: Autonomous Knowledge Transfer from Many Streaming Processes.** [Proceedings of the 28th ACM International Conference on Information and Knowledge Management \(CIKM\) 2019](#), Beijing, China, 2019.
3. A. Baghbanpourasl, E. Lughofer, P. Meyer-Heye, H. Zörrer and C. Eitzinger. **Virtual Quality Control using bidirectional LSTM networks and gradient boosting.** [Proceedings of the IEEE International Conference on Industrial Informatics \(INDIN\) 2019](#), Helsinki, Finland, 2019.
4. W. Zellinger, B. Moser, M. Zwick, E. Lughofer, T. Natschläger, and S. Saminger-Platz. **Moment distances for comparing high-entropy distributions with application in domain adaptation** [\[link\]](#) [Proceedings of the International Conference on Computational Statistics \(COMPSTAT\), 2018.](#)
5. A.-C. Zavoianu, E. Lughofer, S. Saminger-Platz, W. Amrhein, **Two Enhancements for Improving the Convergence Speed of a Robust Multi-Objective Coevolutionary Algorithm,** [Proceedings of the Genetic and Evolutionary Computation Conference \(GECCO\) 2018](#), Kyoto, Japan
6. E. Lughofer, R. Pollak, A.C. Zavoianu, M. Pratama, P. Meyer-Heye, H. Zörrer, C. Eitzinger, J. Lehner and T. Radauer, **Evolving Time-Series Based Prediction Models for Quality Criteria in a Multi-Stage Production Process.** [Proceedings of the IEEE Evolving and Adaptive Intelligent Systems \(EAIS\) Conference](#), to appear, 2018, Rhodes, Greece.
7. C. Zain, M. Pratama, E. Lughofer, M. Ferdous and Q. Cai. **Big Data Analytics based on PANFIS MapReduce.** [Proceedings of the INNS Big Data Conference](#), to appear, 2018, Bali, Indonesia.
8. R. Nikzad-Langerodi, W. Zellinger, E. Lughofer, T. Reischer and S. Saminger-Platz, **Domain-Invariant Partial Least Squares Regression: A Novel Calibration Transfer Algorithm,** [Proceedings of the APACT 2018 Conference](#), Newcastle, 2018, to appear.
9. A.C. Zavoianu, E. Lughofer, R. Pollak, P. Meyer-Heye, C. Eitzinger, T. Radauer, **Multi-Objective Knowledge-Based Strategy for Process Parameter Optimization in Micro-Fluidic Chip Production,** [Proceedings of the SSCI 2017 Conference \(CIES workshop\)](#), Honolulu, Hawaii, to appear, 2017.
10. E. Lughofer, R. Pollak, A.C. Zavoianu, P. Meyer-Heye, H. Zörrer, C. Eitzinger, J. Haim, T. Radauer, **Self-Adaptive Time-Series Based Forecast Models for Predicting Quality Criteria in Microfluidics Chip Production,** [Proceedings of the IEEE Cybernetics Conference 2017](#), Exeter, U.K., 2017.
11. R. Nikzad Langerodi, E. Lughofer, T. Reischer, W. Kantner, M. Pawliczek and M. Brandstetter, **Improved drift handling in melamine resin production by ensemble partial least squares and incremental Page-Hinkley testing,** [Proceedings of the EuroAnalysis 2017 Conference](#), Stockholm, Sweden.
12. E. Lughofer, M. Pratama and I. Skrjanc, **Incremental Rule Splitting in Generalized Evolving Fuzzy Regression Models,** [Proceedings of the IEEE Conference on Evolving and Adaptive Intelligent Systems](#)

[2017](#), Ljubljana, Slovenia, pp 1--8.

13. W. Zellinger, E. Lughofer, S. Saminger-Platz, T. Grubinger and T. Natschläger. **Central Moment Discrepancy (CMD) for Domain-Invariant Representation Learning**. Proceedings of the 5th [International Conference on Learning Representations \(ICLR 2017\)](#), to appear, Toulon, France, 2017.
14. M. Pratama, P.P. Angelov, J. Lu, E. Lughofer, M. Seera and Chee Peng Lim. **A Randomized Neural Network for Data Streams**. Proceedings of the [International Joint Conference on Neural Networks \(IJCNN 2017\)](#), to appear, Anchorage, Alaska, U.S.A.
15. G. Andonovski, E. Lughofer and I. Skrjanc. **A Comparison of RECCO and FCPFC Controller on Nonlinear Chemical Reactor**. The 36th [IASTED International Conference on Modelling, Identification and Control](#), Innsbruck, Austria, 2017, to appear.
16. R. Nikzad-Langerodi, E. Lughofer, T. Zahel, P. Sagmeister, C. Herwig. **A novel framework for automated feed phase identification**. Proceedings of the 4th [European Conference on Process Analytics and Control Technology \(EuroPACT\) 2017](#), Potsdam, to appear.
17. A.C. Zavoianu, G. Bramerdorfer, E. Lughofer and S. Saminger-Platz, **Multi-Objective Topology Optimization of Electrical Machine Designs using Evolutionary Algorithms with Discrete and Real Encodings**, Proceedings of the [EuroCAST Conference 2017](#), Las Palmas de Gran Canaria, Spain, to appear
18. E. Lughofer, G. Kronberger, M. Kommenda, S. Saminger-Platz, A. Promberger, F. Nickel, S. Winkler and M. Affenzeller. **Robust Fuzzy Modeling and Symbolic Regression for Establishing Accurate and Interpretable Prediction Models in Supervising Tribological Systems**, Proceedings of the 8th International [Conference on Fuzzy Computation Theory and Applications \(FCTA\) 2016](#), pp. 51--63, 2016.
19. E. Weigl, A. Walch, U. Neissl, P. Meyer-Heye, W. Heidl, C. Eitzinger, T. Radauer and E. Lughofer. **MapView: Graphical Data Representation for Active Learning**, Proceedings of the [iKnow Conference 2016](#), Graz, Austria, 2016.
20. E. Lughofer, R. Richter, U. Neissl, W. Heidl, C. Eitzinger and T. Radauer, **Advanced Linguistic Explanations of Classifier Decisions for Users' Annotation Support**, Proceedings of the [IEEE Intelligent Systems Conference 2016](#), Sofia, Bulgaria, 2016, pp. 421—432
21. F. Serdio and E. Lughofer, **A Fault Detection and Isolation Framework for Repeatable and Comparable Experimentation**, Proceedings of the PHM Conference/Society, Bilbao, on-line and in press, 2016
22. M. Pratama, E. Lughofer, M.J. Err, W. Rahayu and T. Dillon, **Evolving Type-2 Recurrent Fuzzy Neural Network**, Proceedings of the IJCNN 2016 conference (under the scope of the [WCCI 2016 conference](#)), Vancouver, Canada, 2016, to appear
23. C. Cernuda, E. Lughofer, T. Reischer, W. Kantner, M. Pawliczek and M. Brandstetter, **On-line Outlier/Redundancy Filtering and Semisupervised Incremental Calibration Modeling in Melamine Resin Production using FT-NIR Spectra**, Proceedings of the CAC Conference 2016, Barcelona
24. E. Lughofer, E. Weigl, W. Heidl, C. Eitzinger and T. Radauer, **Drift Detection in Data Stream Classification without Fully Labelled Instances**, Proceedings of the [Evolving and Adaptive Intelligent](#)

[Systems Conference \(EAIS\) 2015](#), Douai, France, pp. 1-8, 2015

25. J. Liu, E. Lughofer, X. Zeng and L. Wang, **Affective Property Computation of Visual Texture**, Proceedings of the [10'th International Conference on Intelligent Systems and Knowledge Engineering \(ISKE'15\)](#), pp. 52-57, Taiwan, November 2015
26. A.-C. Zavoianu, E. Lughofer, G. Bramerdorfer, W. Amrhein and S. Saminger-Platz, **A Surrogate-Based Strategy for Multi-Objective Tolerance Analysis in Electrical Machine Design**, Proceedings of the [17th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing \(SYNASC\) 2015](#), Timisoara, 2015
27. C. Cernuda, E. Lughofer, T. Reischer, W. Kantner, M. Pawliczek and M. Brandstetter, **Dynamically Slided Chemometric Models for Robust On-line Prediction of Cloud Point in Melamine Resin Production**, Proceedings of the [Conferentia Chemometrica](#), Budapest, September 2015
28. C. Cernuda, E. Lughofer, H. Klein, C. Forster, M. Pawliczek and M. Brandstetter, **Quantification of quality parameters in unfermented beer using a flexible support vector regression variation**, Proceedings of the [SSC14 conference](#), 2015
29. E. Lughofer, **Efficient Sample Selection in Data Stream Regression using Evolving Generalized Fuzzy Models**, Proceedings of the [International FUZZ-IEEE Conference 2015](#), Istanbul, pp. 1-8, 2015
30. E. Lughofer, E. Weigl, W. Heidl, C. Eitzinger and T. Radauer, **Fast and Economic Integration of New Classes On the Fly in Evolving Fuzzy Classifiers using Class Decomposition**, Proceedings of the [International FUZZ-IEEE Conference 2015](#), Istanbul, pp. 1-8, 2015
31. G. Bramerdorfer, A.-C. Zavoianu, S. Silber, E. Lughofer, W. Amrhein, **Speed Improvements for the Optimization of Electrical Machines - a Survey**, Proceedings of the [2015 IEEE International Conference on Electric Machines Drives Conference \(IEMDC\)](#), Coeur d'Alene, Idaho, USA, 2015
32. E. Lughofer, E. Weigl, W. Heidl and T. Radauer, **Dynamic Inclusion of New Event Types in Visual Inspection using Evolving Classifiers**, Proceedings of the [International Conference on Machine Learning and Applications \(ICMLA 2014\)](#), pp. 487-494, Detroit, U.S.A., 2014
33. F. Serdio, C. Zavoianu, E. Lughofer, K. Pichler, T. Buchegger and H. Efendic, **Hybrid Genetic-Fuzzy Systems for Improved Performance in Residual-Based Fault Detection**, Proceedings of the 2014 Sixth [World Congress on Nature and Biologically Inspired Computing \(NaBIC\)](#), pp. 91-96, Porto, Portugal, 2014
34. F. Serdio, E. Lughofer, K. Pichler, T. Buchegger, M. Pichler and H. Efendic, **Reducing False Positives for Residual-Based On-line Fault Detection by Means of Adaptive Filters**, Proceedings of the [IEEE SMC 2014 Conference](#), San Diego, pp. 2803-2808, 2014
35. K. Pichler, M. Pichler, E. Lughofer, E.P. Klement, M. Huschenbett, T. Buchegger, **On the robustness of fault detection in reciprocating compressor valves**, Proceedings of the [IEEE SMC 2014 Conference](#), San Diego, pp. 2733-2738, 2014
36. F. Serdio, E. Lughofer, K. Pichler, T. Buchegger, M. Pichler and H. Efendic. **Gradient-based Fuzzy Fault Isolation in Residual-based Fault Detection Systems**. Proceedings of the [WCCI 2014 Conference](#), Beijing, China, pp. 1428-1435, 2014
37. M. Pratama, S.G. Anavatti, M.J. Er and E. Lughofer. **A Novel Meta-Cognitive-based Scaffolding Classifier to Sequential Non-stationary Classification Problems**. Proceedings of the [WCCI 2014](#)

[Conference](#), Beijing, China, pp. 369-376, 2014

38. C. Cernuda, E. Lughofer, P. Hintenaus, W. Märzinger and J. Kasberger. **Genetic Hybridization (Hybridgen): A Cooperative Coevolution Algorithm for Variable Selection**. Proceedings of the [CAC 2014 conference](#), Richmond, Virginia, 2014.
39. M. Pratama, S.G. Anavatti and E. Lughofer. **An Incremental Classifier from Data Streams**. in: A. Likas, K. Blekas, and D. Kalles (Eds.): SETN 2014, LNCS 8445, pp. 15--28, Springer International Publishing Switzerland, 2014.
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42. A.-C. Zavoianu, E. Lughofer, G. Bramerdorfer, W. Amrhein, and E.P. Klement, **Effective Ensemble-based Method for Creating On-the-Fly Surrogate Fitness Functions for Multi-Objective Evolutionary Algorithms**, Proceedings of the 5th [International Symposium on Symbolic and Numeric Algorithms for Scientific Computing \(SYNASC\) 2013](#), pp. 235-242, Timisoara, Romania, 2013
43. A.-C. Zavoianu, E. Lughofer, W. Amrhein and E.P. Klement, **Efficient Multi-Objective Optimization using 2-Population Cooperative Coevolution**, Proceedings of the [EUROCAST 2013 Conference](#), LNCS vol. 8111, pp. 251-258, Las Palmas de Gran Canaria, Spain, 2013
44. C. Cernuda, E. Lughofer, G. Mayr, T. Röder, P. Hintenaus, W. Märzinger and J. Kasberger, **Decremental Active Learning for Optimized Self-Adaptive Calibration in Viscose Production**, Proceedings of the [SSC 2013 Conference](#), Stockholm, 2013
45. F. Serdio, E. Lughofer, K. Pichler, T. Buchegger, M. Pichler and H. Efendic, **Multivariate Fault Detection in the Residual Space using VARMA and Orthogonal Transformations**, [PHM 2013 Conference](#), pp. 548-555, New Orleans, 2013
46. C. Cernuda, E. Lughofer, P. Hintenaus, W. Märzinger, T. Reischer, M. Pawliczek, J. Kasberger, **Ensembled Self-Adaptive Fuzzy Calibration Models for On-line Cloud Point Prediction**, Proceedings of the [EUSFLAT 2013 conference](#), pp. 17-24, Milano, Italy, 2013
47. F. Serdio, E. Lughofer, K. Pichler, T. Buchegger and H. Efendic, **Data-Driven Residual-Based Fault Detection for Condition Monitoring in Rolling Mills**, Proceedings of the [IFAC Conference on Manufacturing Modeling, Management and Control \(MIM\) 2013](#), St. Petersburg, 2013, pp. 1546-1551. (awarded as best paper)
48. K. Pichler, E. Lughofer, M. Pichler, T. Buchegger, E.P. Klement, M. Huschenbett, **Detecting broken Reciprocating Compressor Valves in the pV-diagram**, Proceedings of the 2013 IEEE/ASME International Conference on Advanced Intelligent Mechatronics, 2013
49. M. Pratama, S. Anavatti and E. Lughofer, **Evolving Fuzzy Rule-Based Classifier Based on GENEFIS**, Proceedings of the [FUZZ-IEEE 2013 Conference](#), Hyderabad, India, 2013, pp.1-8
50. C. Zavoianu, E. Lughofer, W. Koppelstaetter, G. Weidenholzer, W. Amrhein, E.P. Klement, **On the Performance of Master-Slave Parallelization Methods for Multi-Objective Evolutionary Algorithms**,

51. A. Shaker and E. Lughofer, **Resolving Global and Local Drifts in Data Stream Regression using Evolving Rule-Based Models**, 2013 IEEE Conference on Evolving and Adaptive Intelligent Systems (EAIS) ([under the scope of IEEE SSCI 2013 Conference](#)), Singapore, pp. 9-16, 2013
52. M. Pratama, S. Anavatti, M. Garret and E. Lughofer, **Online Identification of Complex Multi-Input-Multi-Output System Based on Generic Evolving Neuro-Fuzzy Inference System**, Proceedings of the IEEE EAIS 2013 workshop (SSCI 2013 conference), pp. 106-113, Singapore, 2013
53. E. Lughofer, **eVQ-AM: An Extended Dynamic Version of Evolving Vector Quantization**, Proceedings of the 2013 IEEE Conference on Evolving and Adaptive Intelligent Systems (EAIS), pp. 40-47, Singapore, 2013
54. C. Zavoianu, G. Bramerdorfer, E. Lughofer, W. Amrhein and E.P. Klement, **A Hybrid Soft Computing Approach for Optimizing Design Parameters of Electrical Drives**, in: Soft Computing Models in Industrial and Environmental Applications (Proceedings of the SOCO 2012 Conference), LNAI vol. 181, pp. 347-358, Springer, Berlin Heidelberg, 2012
55. G. Mayr, L. Suppan, F. Zeppetzauer, C. Cernuda, E. Lughofer, H. Trinker, P. Hintenaus, W. Märzinger and T. Roder. **Scope and limitations of spectroscopic methods for on- and in-line analysis at the viscose production**. Proceedings of the 245th ACS National Meeting}, New Orleans, U.S.A., 2013.
56. C. Cernuda, E. Lughofer, W. Märzinger and W. Summerer. **Hybrid evolutionary particle swarm optimization and ant colony optimization for variable selection. Application to near infrared spectroscopy**. Proceedings of the 3rd World Conference on Information Technology 2012, AWERProcedia Information Technology & Computer Science, Vol. 4, pp. 6--13, Barcelona, Spain, 2012.
57. E. Lughofer, **Navigating Interpretability Issues in Evolving Fuzzy Systems**, Proceedings of the Sixth International Conference on Scalable Uncertainty Management 2012, LNAI, vol. 7520, Springer, Marburg, Germany, 2012, pp. 141-153
58. K. Pichler, E. Lughofer, T. Buchegger, E.P. Klement, M. Huschenbett. **A Visual Method to Detect Broken Reciprocating Compressor Valves Under Varying Load Conditions**. Proceedings of the 13th Mechatronics Forum International Conference, 2012.
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61. C. Cernuda, E. Lughofer, L. Suppan, T. Röder, R. Schmuck, P. Hintenaus, W. Märzinger, J. Kasberger. **Dynamic Quantification of Process Parameters in Viscose Production with Evolving Fuzzy Systems**. Proceedings of the IPMU 2012, Advances on Computational Intelligence, CCIS, vol. 297, Springer, pp. 1-10, 2012.
62. E. Lughofer, **On-line active learning based on enhanced reliability concepts**, Proceedings of the IEEE Conference on Evolving and Adaptive Intelligent Systems (EAIS) 2012, pp. 1-6, IEEE, Madrid, Spain, 2012

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64. M. Nasiri, E. Hüllermeier, R. Senge and E. Lughofer, **Comparing Methods for Knowledge-Driven and Data-Driven Fuzzy Modeling: A Case Study in Textile Industry**, Proceedings of the IFSA World Congress 2011, Surabaya and Bali Island, Indonesia, 2011
65. B. Trawinski, K. Trawinski, E. Lughofer and T. Lasota, **Investigation of Evolving Fuzzy Systems Methods FLEXFIS and eTS on Predicting Residential Prices**, Proceedings of the 9th International Workshop on Fuzzy Logic and Applications (WILF) 2011, pp. 123-130, Trani, Italy, 2011
66. E. Lughofer, B. Trawinski, K. Trawinski and T. Lasota, **On-line Valuation of Residential Premises with Evolving Fuzzy Models**, Proceedings of the Hybrid Artificial Intelligent Systems (HAIS) Conference 2011, pp. 107-115, Wroclaw, Poland, 2011
67. E. Lughofer and E. Hüllermeier, **On-line Redundancy Elimination in Evolving Fuzzy Regression Models using a Fuzzy Inclusion Measure**, Proceedings of the EUSFLAT 2011 Conference, pp. 380-387, Aix-Les-Bains, France, 2011
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74. D. Sannen, E. Lughofer and H. Van Brussel, **Increasing On-line Classification Performance Using Incremental Classifier Fusion**, pp. 101—107, Proc. of International Conference on Adaptive and Intelligent Systems (ICAIS'09), Klagenfurt, Austria, 2009
75. E. Lughofer and P. Angelov, **Detecting and Reacting on Drifts and Shifts in On-Line Data Streams with Evolving Fuzzy Systems**, Proceedings of the IFSA/EUSFLAT 2009 conference, Lisbon, Portugal, pp. 931--937, 2009

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