

Adaptability, interpretability and rule weights in fuzzy rule-based systems

Riid, Andri; Rüstern, Ennu Information sciences 2014 / p. 301-312 : ill <https://doi.org/10.1016/j.ins.2012.12.048> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

An integrated approach for the identification of compact, interpretable and accurate Fuzzy rule-based classifiers from data

Riid, Andri; Rüstern, Ennu INES 2011 : 15th International Conference on Intelligent Engineering Systems : June 23–25, 2011, Poprad, Slovakia 2011 / p. 101-107 : ill <https://ieeexplore.ieee.org/document/5954728>

Andmetöötlus hägusloogika vahenditega ja selle rakendused

Riid, Andri Tallinna Tehnikaülikooli aastaraamat 2010 2011 / lk. 118-121 : ill

An application of a low-cost microwave radar to traffic monitoring [Online resource]

Riid, Andri; Kaugerand, Jaanus; Ehala, Johannes; Jaanus, Martin; Preden, Jürgo-Sören BEC 2018 : 2018 16th Biennial Baltic Electronics Conference (BEC) : proceedings of the 16th Biennial Baltic Electronics Conference, October 8-10, 2018 2018 / 4 p.: ill <https://doi.org/10.1109/BEC.2018.8600962>

Automated training set size reduction for detection of small and thin objects

Pihlak, Rene; Riid, Andri 12th International Conference on Information Systems and Advanced Technologies "ICISAT 2022" : Intelligent Information, Data Science and Decision Support System 2023 / p. 423-433 https://doi.org/10.1007/978-3-031-25344-7_39 [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Automatic code generation for embedded systems from high-level models

Riid, Andri; Preden, Jürgo-Sören; Pahtma, Raido; Serg, Risto; Lints, Taivo Elektronika ir elektrotehnika = Electronics and electrical engineering 2009 / 7, p. 33-36 <https://eejournal.ktu.lt/index.php/elt/article/view/10035>

Automatic linguistic inversion of a fuzzy model for fed-batch fermentation control

Riid, Andri; Leibak, Alar; Rüstern, Ennu Proc. 2006 International Conference on Intelligent Engineering Systems : INES, London, 26-28 June 2006 2006 / p. 129-134 https://www.researchgate.net/publication/224646300_Automatic_Linguistic_Inversion_of_a_Fuzzy_Model_for_Fed-Batch_Fermentation_Control

Car navigation and collision avoidance system with fuzzy logic

Riid, Andri; Pahhomov, Dmitri; Rüstern, Ennu 2004 IEEE International Conference on Fuzzy Systems : proceedings : Budapest, Hungary, 25-29 July, 2004. Vol. 3 2004 / p. 1443-1448 : ill <https://ieeexplore.ieee.org/document/1375386>

A combined method for error and complexity reduction in fuzzy rule-based classification

Riid, Andri; Preden, Jürgo-Sören IEEE International Conference on Fuzzy Systems : August 2-5, 2015, Istanbul, Turkey 2015 / [6] p. : ill <https://doi.org/10.1109/FUZZ-IEEE.2015.7337806> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Combining multiple sound sources localization hybrid algorithm and fuzzy rule based classification for real-time speaker tracking application

Ibala, Christian; Astapov, Sergei; Riid, Andri International journal of microelectronics and computer science 2013 / p. 12-25 : ill https://www.researchgate.net/publication/261467057_Combining_Multiple_Sound_Sources_Localization_Hybrid_Algorithm_and_Fuzzy_Rule_Based_Classification_for_Real-time_Speaker_Tracking_Application

Comparison of fuzzy function approximators

Riid, Andri; Rüstern, Ennu BEC'98 : the 6th Biennial Conference on Electronics and Microsystems Technology, October 7-9, 1998, Tallinn, Estonia : proceedings 1998 / p. 139-142: ill

Computational intelligence methods for process control : fed-batch fermentation application

Riid, Andri; Rüstern, Ennu International journal of computational intelligence in bioinformatics and systems biology 2009 / 2, p. 135-162 https://www.academia.edu/19788077/Computational_intelligence_methods_for_process_control_fed_batch_fermentation_application

Deep learning for detection of pavement distress using nonideal photographic images

Tepljakov, Aleksei; Riid, Andri; Pihlak, Rene; Vassiljeva, Kristina; Petlenkov, Eduard 2019 42nd International Conference on Telecommunications and Signal Processing (TSP) 2019 / p. 195-200 : ill <https://doi.org/10.1109/TSP.2019.8769086>

Design of fuzzy rule-based classifiers through granulation and consolidation

Riid, Andri; Preden, Jürgo-Sören Journal of artificial intelligence and soft computing research 2017 / p. 137-147 : ill <https://doi.org/10.1515/jaiscr-2017-0010> [Journal metrics at Scopus](#) [Article at Scopus](#)

Detection, identification and tracking of mobile objects with distributed system of systems

Riid, Andri; Preden, Jürgo-Sören; Astapov, Sergei Proceedings of the 9th International Conference on System of Systems Engineering (SoSE 2014) : 9-13 June 2014, Stamford Grand, Glenelg, Australia 2014 / p. 224-229 : ill

Determination of regional variants in the versification of Estonian folksongs using an interpretable fuzzy rule-based

classifier

Riid, Andri; Sarv, Mari Proceedings of the 8th Conference of the European Society for Fuzzy Logic and Technology (EUSFLAT 2013), Milano, Italy, September 11-13, 2013 2013 / p. 61-66 : ill

Development and testing of a compact voice command recognition algorithm for limited complexity microcontroller devices

Udal, Andres; Riid, Andri; Jaanus, Martin; Pärnamets, Kaiser; Lokuta, Madis 2018 22nd International Conference Electronics : Palanga, Lithuania, 18-20 June 2018 2018 / p. 1-4 : ill <http://doi.org/10.1109/ELECTRONICS.2018.8443645>

Distributed fusion and automated sensor tasking in ISR systems

Preden, Jürjo-Sören; Pahtma, Raido; Astapov, Sergei; Ehala, Johannes; Riid, Andri; Mõtus, Leo Ground/air multisensor interoperability, integration, and networking for persistent ISR V 2014 / p. 90790M-1 - 90790M-10 : ill <https://doi.org/10.1117/12.2054731>
[Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Distributed signal processing for situation assessment in cyber-physical systems = Hajutatud signaalitöötlus olukorra hindamiseks küberfüüsilikes süsteemides

Astapov, Sergei 2016 <http://digi.lib.ttu.ee/i/76212> https://www.ester.ee/record=b4603470*est

Error-free simplification of transparent Mamdani systems

Riid, Andri; Saastamoinen, Kalle; **Rüstern, Ennu** 2008 / p. 2-8 - 2-13 <https://ieeexplore.ieee.org/document/4670399>

Extracting and exploiting linguistic information from a Fuzzy process model for bed-batch fermentation control

Riid, Andri; Rüstern, Ennu Intelligent engineering systems and computational cybernetics. III 2009 / p. 95-105
https://www.researchgate.net/publication/226373084_Extracting_and_Exploiting_Linguistic_Information_from_a_Fuzzy_Process_Model_for_Fed-Batch_Fermentation_Control

Fed-batch fermentation controller design with evolutionary computation

Riid, Andri; Rüstern, Ennu CSTST '08 Proceedings of the 5th international conference on Soft computing as transdisciplinary science and technology 2008 / p. 371-377 : ill

Fuzzy hierarchical control of truck and trailer

Riid, Andri; Rüstern, Ennu BEC 2002 : proceedings of the 8th Biennial Baltic Electronics Conference : October 6-9, 2002, Tallinn, Estonia 2002 / p. 141-144 : ill

Fuzzy knowledge-based control for backing multi-trailer systems

Riid, Andri; Ketola, J.; Rüstern, Ennu Proceedings of the IEEE Intelligent Vehicles Symposium (IV'07) : Istanbul, 13-15 June, 2007 2007 / p. 498-504 <https://ieeexplore.ieee.org/document/4290164>

Fuzzy logic in control : truck backer-upper problem revisited

Riid, Andri; Rüstern, Ennu The 10th IEEE International Conference on Fuzzy Systems : Melbourne, Australia, December 2001. Volume 1 2001 / [4] p. : ill <https://www.semanticscholar.org/paper/Fuzzy-logic-in-control%3A-truck-backer-upper-problem-Riid-R%C3%BCstern/a3aff429485b23df6fa100139e71f0e0345165eb>

Fuzzy modelling and control of fed-batch fermentation

Riid, Andri; Rüstern, Ennu Computational intelligence and applications 1999 / p. 283-291

Generic membership function and its application to fuzzy modeling

Riid, Andri; Isotamm, Raul; Rüstern, Ennu BEC 2004 : proceedings of the 9th Biennial Baltic Electronics Conference : October 3-6, 2004, Tallinn, Estonia 2004 / p. 129-132 : ill

Genetic algorithms in transparent fuzzy modeling

Riid, Andri; Jartsev, Pavel; Rüstern, Ennu The 7th Biennial Conference on Electronics and Microsystem Technology "Baltic Electronics Conference" : BEC 2000 : October 8 - 11, 2000, Tallinn, Estonia : conference proceedings 2000 / p. 91-94 : ill

Gradient descent based optimization of transparent Mamdani systems

Riid, Andri; Rüstern, Ennu Proc. 6th Int. Conf. on Neural Networks and Soft Computing 2002, Zakopane 2002 / p. 545-550
https://link.springer.com/chapter/10.1007/978-3-7908-1902-1_83

Heuro-fuzzy extraction of interpretable fuzzy rules from data

Riid, Andri; Rüstern, Ennu 2004 IEEE International Conference on Systems, Man & Cybernetics : The Hague, Netherlands, 10-13 October, 2004. Vol. 3 2004 / p. 2266-2271 : ill https://www.researchgate.net/profile/E-Rustern/publication/4126700_Heuro-fuzzy_extraction_of_interpretable_fuzzy_rules_from_data/links/00463524db07f8c32e000000/Heuro-fuzzy-extraction-of-interpretable-fuzzy-rules-from-data.pdf

A hierarchical algorithm for moving vehicle identification based on acoustic noise analysis

Astapov, Sergei; Riid, Andri Proceedings of the 19th International Conference Mixed Design of Integrated Circuits and Systems : MIXDES 2012 : Warsaw, Poland, 24-26 May, 2012 2012 / p. 467-472 : ill <https://ieeexplore.ieee.org/document/6226235>

Häigus loogika ja automaatjuhtimine : ettekanne XXXIX automaatikapäeval 12. märtsil TTÜ aulas

Riid, Andri Tallinna Tehnikaülikooli aastaraamat 2001 2003 / lk. 262-266

Identification of drivable road area from orthophotos using a convolutional neural network

Riid, Andri; Pihlak, Rene; Liinev, Raul 2020 17th Biennial Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2020 / 5 p. : ill <https://doi.org/10.1109/BEC49624.2020.9277392>

Identification of numerically accurate first-order Takagi-Sugeno systems with interpretable local models from data

Riid, Andri; Rüstern, Ennu Journal of advanced computational intelligence and intelligent informatics 2005 / 5, p. 526-533

Identification of transparent, compact, accurate and reliable linguistic fuzzy models

Riid, Andri; Rüstern, Ennu Information sciences 2011 / p. 4378-4393

<https://www.sciencedirect.com/science/article/pii/S0020025511000685>

Image-Based pavement type classification with convolutional neural networks

Riid, Andri; Manna, Davide Liberato; Astapov, Sergei INES 2020 : IEEE 24th International Conference on Intelligent Engineering Systems, July 8-10, 2020, Reykjavik, Iceland : proceedings 2020 / p. 55-60 : ill <https://doi.org/10.1109/INES49302.2020.9147199>

Industrial process monitoring by multi-channel acoustic signal analysis

Astapov, Sergei; Riid, Andri; Preden, Jürjo-Sören; Aruväli, Tanel BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia 2014 / p. 209-212 : ill

Interpretability improvement of fuzzy rule-based classifiers via rule compression

Riid, Andri; Preden, Jürjo-Sören International Joint Conference IFSA-EUSFLAT : June 30th - July 3rd, Gijon, Asturias (Spain) 2015 / p. 162-169 : ill <http://dx.doi.org/10.2991/ifsa-eusflat-15.2015.26>

Interpretability improvement of Fuzzy systems : reducing the number of unique singletons in Zeroth order Takagi-Sugeno systems

Riid, Andri; Rüstern, Ennu WCCI 2010 IEEE World Congress on Computational Intelligence : July, 18-23, Barcelona, Spain : proceedings 2010 / p. 2913-2018 : ill <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=2d2002fb7518da488fde49a2eeeb7a109438a04c>

Interpretability of Fuzzy Systems and its application to process control

Riid, Andri; Rüstern, Ennu Proceedings of the 2007 IEEE International Conference on Fuzzy Systems : FUZZ-IEEE 2007 : London, 23.-26. July 2007 2007 / [6] p <https://ieeexplore.ieee.org/document/4295370>

Interpretability versus adaptability in fuzzy systems

Riid, Andri; Rüstern, Ennu Proceedings of the Estonian Academy of Sciences. Engineering 2000 / 2, p. 76-95 : ill https://artiklid.elnet.ee/record=b1004039*est

Interpretability, interpolation and rule weights in linguistic Fuzzy modeling

Riid, Andri; Rüstern, Ennu Fuzzy Logic and Applications : 9th International Workshop, WLF 2011 : Trani, Italy, August 29-31, 2011 : proceedings 2011 / p. 91-98 : ill https://link.springer.com/chapter/10.1007/978-3-642-23713-3_12

A method for heuristic fuzzy modeling in noisy environment

Riid, Andri; Rüstern, Ennu 5th IEEE International Conference on Intelligent Systems (IS 2010) : London, 7-9 July 2010 : proceedings 2010 / p. 468-473 : ill <https://ieeexplore.ieee.org/document/5548337>

Military vehicle acoustic pattern identification by distributed ground sensors

Astapov, Sergei; Riid, Andri; Preden, Jürjo-Sören BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 167-170 : ill http://www.ester.ee/record=b2150914*est

Morphological cross entropy loss for improved semantic segmentation of small and thin objects

Pihlak, Rene; Riid, Andri Procedia computer science 2021 / p. 582-591 <https://doi.org/10.1016/j.procs.2021.08.060> [Conference proceeding at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Mugavam elu kõigile: Eestis arendatud tehnoloogia aitab luua teid, mis ei löhu autot

geenius.ee 2023 [Mugavam elu kõigile: Eestis arendatud tehnoloogia aitab luua teid, mis ei löhu autot](#)

Multi-modal sensor data fusion in city environment monitoring projects SMENETE and IMO

Kaugerand, Jaanus; Ehala, Johannes; Riid, Andri; Preden, Jürjo-Sören; Udal, Andres COST Action CA16101 MULTI-modal : Imaging of FOREnsic SciEnce Evidence tools for Forensic Science : Grant Period 2 Conference, 5-8 November 2018, Dubrovnik, Croatia. Forensic Imaging Techniques - an exploration of their potential as standalone tools and within a multimodal approach : book

A multistage procedure of mobile vehicle acoustic identification for single-sensor embedded device

Astapov, Sergei; Riid, Andri International journal of electronics and telecommunications 2013 / p. 151-160 : ill
<https://doi.org/10.2478/eletel-2013-0018> [Journal metrics at Scopus](#) [Article at Scopus](#)

Object detection for military surveillance using distributed multimodal smart sensors

Astapov, Sergei; Preden, Jürjo-Sören; Ehala, Johannes; Riid, Andri 19th International Conference on Digital Signal Processing 2014 / p. 366-371 : ill

On the representation and interpretation of linguistic fuzzy systems

Riid, Andri; Rüstern, Ennu Proceedings of the third IASTED International Conference on Artificial Intelligence and Applications - AIA 2003 : Benalmadena, Spain, September 8-10, 2003 2003 / p. 88-93

Pavement defect segmentation in orthoframes with a pipeline of three convolutional neural networks

Lõuk, Roland; Riid, Andri; Pihlak, Rene; Tepljakov, Aleksei Algorithms 2020 / art. 198, 27 p. : ill <https://doi.org/10.3390/a13080198>
[Journal metrics at scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Pavement distress detection with deep learning using the orthoframes acquired by a mobile mapping system

Riid, Andri; Lõuk, Roland; Pihlak, Rene; Tepljakov, Aleksei; Vassiljeva, Kristina Applied sciences 2019 / art. 4829, 22 p. : ill
<https://doi.org/10.3390/app9224829> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Performing feature extraction and selection for pattern discovery in noisy acoustic data

Astapov, Sergei; Riid, Andri; Preden, Jürjo-Sören Doctoral School in Information and Communication Technology : proceedings of doctoral session of BEC 2014 : October 6-8 2014, Laulasmaa 2014 / p. 3-6 : ill

Redundancy detection and removal in Mamdani Fuzzy Systems

Riid, Andri; Saastamoinen, Kalle; Rüstern, Ennu Proceedings of the Eighth International Conference on Applications of Fuzzy Systems and Soft Computing : Helsinki, Finland, 1-3 September 2008 2008 / p. 131-140

Redundancy detection and removal tool for transparent Mamdani systems

Riid, Andri; Saastamoinen, Kalle; Rüstern, Ennu Intelligent systems : from theory to practice 2010 / p. 397-415
https://link.springer.com/chapter/10.1007/978-3-642-13428-9_19

Simultaneous road edge and road surface markings detection using convolutional neural networks

Pihlak, Rene; Riid, Andri Databases and Information Systems : 14th International Baltic Conference, DB&IS 2020, Tallinn, Estonia, June 16-19, 2020 : Proceedings 2020 / p. 109-121 https://doi.org/10.1007/978-3-030-57672-1_9 [Conference proceeding at Scopus](#)
[Article at Scopus](#)

Situation awareness for networked systems

Preden, Jürjo-Sören; Mõtus, Leo; Meriste, Merik; Riid, Andri 2011 IEEE International Multi-Disciplinary Conference on Cognitive Methods in Situation Awareness and Decision Support : CogSIMA : Miami, USA, 22-24 Februar 2011 2011 / p. 123-130 : ill

Situation awareness via Internet of things and in-network data processing

Ehala, Johannes; Kaugerand, Jaanus; Pahtma, Raido; Astapov, Sergei; Riid, Andri; Tomson, Timo; Preden, Jürjo-Sören; Mõtus, Leo International journal of distributed sensor networks 2017 / p. 1-21 : ill <https://doi.org/10.1177/1550147716686578> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Smart elevator with unsupervised learning for visitor profiling and personalised destination prediction

Leier, Mairo; Riid, Andri; Alumäe, Tanel; Pihlak, Rene; Udal, Andres; Heinsar, Risto; Vainküla, Sven 2021 IEEE International Conference on Cognitive and Computational Aspects of Situation Management (CogSIMA) : Virtual Conference, 14-22 May 2021 : proceedings 2021 / p. 9-16 <https://doi.org/10.1109/CogSIMA51574.2021.9475921>

S-type Lukasiewicz equivalences in medical data classification

Saastamoinen, Kalle; Riid, Andri Proceedings of the Eighth International Conference on Applications of Fuzzy Systems and Soft Computing : Helsinki, Finland, 1-3 September 2008 2008 / p. 231-238

Supervisory fed-batch fermentation control on the basis of linguistically interpretable fuzzy models

Riid, Andri; Rüstern, Ennu Proceedings of the Estonian Academy of Sciences. Engineering 2000 / 2, p. 96-112 : ill
https://artiklid.elnet.ee/record=b1004040*est

Taevarahvas : Poul Andersoni parimad jutud

Anderson, Poul 2008 https://www.ester.ee/record=b2335964*est

Takagi-Sugeno systems with improved interpretability and interpolation using a complementary interpolation model

Riid, Andri; Rüstern, Ennu Proceedings of the IEEE 4th International Conference on Intelligent System Design and Applications :

Budapest, Hungary, 2004. Vol. 1 2004 / p. 259-264 : ill https://conf.uni-obuda.hu/isda2004/43_ISDA2004.pdf

Tehistaip aitab ehitada autosõbralikke teid

Imeline Teadus 2023 / lk. 21 : fot https://www.ester.ee/record=b2747925*est

The benefits of self-awareness and attention in fog and mist computing

Preden, Jürjo-Sören; Tammemäe, Kalle; Jantsch, Axel; Leier, Mairo; Riid, Andri; Calis, Emine Computer 2015 / p. 37-45 : ill
<https://doi.org/10.1109/MC.2015.207> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Transparency analysis of first-order Takagi-Sugeno systems

Riid, Andri; Isotamm, Raul; Rüstern, Ennu 10th International Conference on System-Modeling-Control : Zakopane, Poland, May 21-25, 2001 : proceedings. Vol. 2 2001 / p. 165-170 : ill
https://www.researchgate.net/publication/2491497_Transparency_Analysis_Of_First-Order_Takagi-Sugeno_Systems

Transparency enhancement of first order Takagi-Sugeno systems: promoting of the competition between the rules by controlling the overlap of input fuzzy sets

Riid, Andri; Isotamm, Raul; Rüstern, Ennu BEC 2002 : proceedings of the 8th Biennial Baltic Electronics Conference : October 6-9, 2002, Tallinn, Estonia 2002 / p. 137-140 : ill

Transparent fuzzy systems : modeling and control

Riid, Andri 2002 https://www.ester.ee/record=b1646015*est

Transparent fuzzy systems and modelling with transparency protection

Riid, Andri; Rüstern, Ennu IFAC Symposium on Artificial Intelligence in Real Time Control : AIRTC-2000 : October 2-4, 2000, Budapest, Hungary : preprints 2000 / p. 229-234 : ill

Transparent fuzzy systems in modeling and control

Riid, Andri; Rüstern, Ennu Interpretability issues in fuzzy modeling 2002 / p. 452-476 https://link.springer.com/chapter/10.1007/978-3-540-37057-4_19

A two-stream context-aware ConvNet for pavement distress detection

Lõuk, Roland; Tepljakov, Aleksei; Riid, Andri 2020 43rd International Conference on Telecommunications and Signal Processing : TSP 2020, Milan, Italy, July 7-9, 2020 2020 / p. 270-273 : ill <https://doi.org/10.1109/TSP49548.2020.9163538>

Unsupervised learning of well drilling operations : fuzzy rule-based approach

Riid, Andri; Saadallah, Nejm Proceedings : INES 2012 : IEEE 16th International Conference on Intelligent Engineering Systems : June 13-15, 2012 Lisbon, Portugal 2012 / p. 375-380 : ill
https://www.researchgate.net/publication/258568174_Unsupervised_Learning_of_Well_Drilling_Operations_Fuzzy_Rule-Based_Approach

Vehicle guidance systems in NEC context

Preden, Jürjo-Sören; Serg, Risto; Riid, Andri; Mötus, Leo; Pahtma, Raido Proceedings : SCI-202 Symposium on Intelligent Uninhabited Vehicle Guidance Systems : München, 30 June - 2 July 2009 2009 / p. 4-1 - 4-13