

DAFTAR PUSTAKA

- Ahmed, T., Ahsan, A., Khan, M. H. R. B., Nahian, T. K., Antar, R. H., Hasan, A., Karim, M. R., Shafiquzzaman, M., & Imteaz, M. (2024). Comprehensive study on the selection and performance of the best electrode pair for electrocoagulation of textile wastewater using multi-criteria decision-making methods (TOPSIS, VIKOR and PROMETHEE II). *Journal of Environmental Management*, 363. <https://doi.org/10.1016/j.jenvman.2024.121337>
- Alrababah, S. A. A., & Gan, K. H. (2023). Effects of the Hybrid CRITIC–VIKOR Method on Product Aspect Ranking in Customer Reviews. *Applied Sciences (Switzerland)*, 13(16). <https://doi.org/10.3390/app13169176>
- Anculle-Arauco, V., Krüger-Malpartida, H., Arevalo-Flores, M., Correa-Cedeño, L., Mass, R., Hoppe, W., & Pedraz-Petrozzi, B. (2024). Content validation using Aiken methodology through expert judgment of the first Spanish version of the Eppendorf Schizophrenia Inventory (ESI) in Peru: A brief qualitative report. *Spanish Journal of Psychiatry and Mental Health*, 17(2), 110–113. <https://doi.org/10.1016/j.rpsm.2022.11.004>
- Andjelković, D., Stojić, G., Nikolić, N., Das, D. K., Subotić, M., & Stević, Ž. (2024). A Novel Data-Envelopment Analysis Interval-Valued Fuzzy-Rough-Number Multi-Criteria Decision-Making (DEA-IFRN MCDM) Model for Determining the Efficiency of Road Sections Based on Headway Analysis. *Mathematics*, 12(7). <https://doi.org/10.3390/math12070976>
- Ayan, B., Abacioğlu, S., & Basilio, M. P. (2023). A Comprehensive Review of the Novel Weighting Methods for Multi-Criteria Decision-Making. In *Information (Switzerland)* (Vol. 14, Number 5). MDPI. <https://doi.org/10.3390/info14050285>
- Ayyildiz, E., Murat, M., Imamoglu, G., & Kose, Y. (2023). A novel hybrid MCDM approach to evaluate universities based on student perspective. *Scientometrics*, 128(1), 55–86. <https://doi.org/10.1007/s11192-022-04534-z>
- Başaran, S., & Ighagbon, O. A. (2024). Enhanced FMEA Methodology for Evaluating Mobile Learning Platforms Using Grey Relational Analysis and

- Fuzzy AHP. *Applied Sciences (Switzerland)*, 14(19).
<https://doi.org/10.3390/app14198844>
- Baydaş, M., Yılmaz, M., Jović, Ž., Stević, Ž., Özuyar, S. E. G., & Özçil, A. (2024). A comprehensive MCDM assessment for economic data: success analysis of maximum normalization, CODAS, and fuzzy approaches. *Financial Innovation*, 10(1). <https://doi.org/10.1186/s40854-023-00588-x>
- Bornmann, L. (2024). Skewed distributions of scientists' productivity: a research program for the empirical analysis. *Scientometrics*, 129(4), 2455–2468. <https://doi.org/10.1007/s11192-024-04962-z>
- Brans, J. P., & Vincke, Ph. (1985). Note—A Preference Ranking Organisation Method. *Management Science*, 31(6), 647–656. <https://doi.org/10.1287/mnsc.31.6.647>
- Chen, F., Bulgarova, B. A., & Kumar, R. (2025). Prioritizing Generative Artificial Intelligence Co-Writing Tools in Newsrooms: A Hybrid MCDM Framework for Transparency, Stability, and Editorial Integrity. *Mathematics*, 13(23), 3791. <https://doi.org/10.3390/math13233791>
- Cinelli, M., Kadziński, M., Gonzalez, M., & Słowiński, R. (2020). How to support the application of multiple criteria decision analysis? Let us start with a comprehensive taxonomy. In *Omega (United Kingdom)* (Vol. 96). Elsevier Ltd. <https://doi.org/10.1016/j.omega.2020.102261>
- Coban, M., Karakas, F., & Akbulut Coban, N. (2023). Quantitative analysis of healthcare waste generation and composition in Antalya, Turkey. *Waste Management*, 160, 80–89. <https://doi.org/10.1016/j.wasman.2023.02.008>
- Coquelet, B., Dejaegere, G., & De Smet, Y. (2025). Evaluating the Promethee ii Ranking Quality. *Algorithms*, 18(10), 597. <https://doi.org/10.3390/a18100597>
- Daraio, C., Di Leo, S., & Leydesdorff, L. (2023). A heuristic approach based on Leiden rankings to identify outliers: evidence from Italian universities in the European landscape. *Scientometrics*, 128(1), 483–510. <https://doi.org/10.1007/s11192-022-04551-y>
- Demeter, M., Jele, A., & Major, Z. B. (2022). The model of maximum productivity for research universities SciVal author ranks, productivity, university

- rankings, and their implications. *Scientometrics*, 127(8), 4335–4361. <https://doi.org/10.1007/s11192-022-04432-4>
- Demir, G., Chatterjee, P., & Pamucar, D. (2024). Sensitivity analysis in multi-criteria decision making: A state-of-the-art research perspective using bibliometric analysis. *Expert Systems with Applications*, 237. <https://doi.org/10.1016/j.eswa.2023.121660>
- Deng, J., Zhan, J., & Wu, W. Z. (2022). A ranking method with a preference relation based on the PROMETHEE method in incomplete multi-scale information systems. *Information Sciences*, 608, 1261–1282. <https://doi.org/10.1016/j.ins.2022.07.033>
- Doan, N. A. V., & De Smet, Y. (2018). An alternative weight sensitivity analysis for PROMETHEE II rankings. *Omega (United Kingdom)*, 80, 166–174. <https://doi.org/10.1016/j.omega.2017.08.017>
- Doğan, G., & Al, U. (2019). Is it possible to rank universities using fewer indicators? A study on five international university rankings. *Aslib Journal of Information Management*, 71(1), 18–37. <https://doi.org/10.1108/AJIM-05-2018-0118>
- El Gibari, S., Gómez, T., & Ruiz, F. (2018). Evaluating university performance using reference point based composite indicators. *Journal of Informetrics*, 12(4), 1235–1250. <https://doi.org/10.1016/j.joi.2018.10.003>
- Elevli, S., & Elevli, B. (2024). A study of entrepreneur and innovative university index by entropy-based grey relational analysis and PROMETHEE. *Scientometrics*, 129(6), 3193–3223. <https://doi.org/10.1007/s11192-024-05033-z>
- Erbey, A., Fidan, Ü., & Gündüz, C. (2025). A Robust Hybrid Weighting Scheme Based on IQRBOW and Entropy for MCDM: Stability and Advantage Criteria in the VIKOR Framework. *Entropy*, 27(8). <https://doi.org/10.3390/e27080867>
- Esangbedo, M. O., & Wei, J. (2023). Grey hybrid normalization with period based entropy weighting and relational analysis for cities rankings. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-40954-4>

- Esangbedo, M. O., Xue, J., Bai, S., & Esangbedo, C. O. (2024). Relaxed Rank Order Centroid Weighting MCDM Method with Improved Grey Relational Analysis for Subcontractor Selection: Photothermal Power Station Construction. *IEEE Transactions on Engineering Management*, 71, 3044–3061. <https://doi.org/10.1109/TEM.2022.3204629>
- Ezell, B., Lynch, C. J., & Hester, P. T. (2021). Methods for weighting decisions to assist modelers and decision analysts: A review of ratio assignment and approximate techniques. In *Applied Sciences (Switzerland)* (Vol. 11, Number 21). MDPI. <https://doi.org/10.3390/app112110397>
- Farnè, M., & Vouldis, A. (2024). ROBOUT: a conditional outlier detection methodology for high-dimensional data. *Statistical Papers*, 65(4), 2489–2525. <https://doi.org/10.1007/s00362-023-01492-3>
- Freyer, L. (2014). Robust rankings: Review of multivariate assessments illustrated by the Shanghai rankings. *Scientometrics*, 100(2), 391–406. <https://doi.org/10.1007/s11192-014-1313-8>
- Gagolewski, M., Żogała-Siudem, B., Siudem, G., & Cena, A. (2022). Ockham's index of citation impact. *Scientometrics*, 127(5), 2829–2845. <https://doi.org/10.1007/s11192-022-04345-2>
- Gao, L., Tian, T., & Wen, L. (2025). Study on outlier detection algorithm based on tightest neighbors. *Expert Systems with Applications*, 290. <https://doi.org/10.1016/j.eswa.2025.128385>
- Goodarzi, F., Abdollahzadeh, V., & Zeinalnezhad, M. (2022). An integrated multi-criteria decision-making and multi-objective optimization framework for green supplier evaluation and optimal order allocation under uncertainty. *Decision Analytics Journal*, 4, 100087. <https://doi.org/10.1016/j.dajour.2022.100087>
- Gul, M., Celik, E., Gumus, A. T., & Guneri, A. F. (2018). A fuzzy logic based PROMETHEE method for material selection problems. *Beni-Suef University Journal of Basic and Applied Sciences*, 7(1), 68–79. <https://doi.org/10.1016/j.bjbas.2017.07.002>

- Gul, M., & Yucesan, M. (2022). Performance evaluation of Turkish Universities by an integrated Bayesian BWM-TOPSIS model. *Socio-Economic Planning Sciences*, 80. <https://doi.org/10.1016/j.seps.2021.101173>
- Guo, Z., Liu, J., Liu, X., Meng, Z., Pu, M., Wu, H., Yan, X., Yang, G., Zhang, X., Chen, C., & Chen, F. (2024). An integrated MCDM model with enhanced decision support in transport safety using machine learning optimization. *Knowledge-Based Systems*, 301. <https://doi.org/10.1016/j.knosys.2024.112286>
- Gyorffy, B., Weltz, B., & Szabó, I. (2023). Supporting grant reviewers through the scientometric ranking of applicants. *PLoS ONE*, 18(1 January). <https://doi.org/10.1371/journal.pone.0280480>
- Hasson, F., Keeney, S., & McKenna, H. (2025). Revisiting the Delphi technique - Research thinking and practice: A discussion paper. In *International Journal of Nursing Studies* (Vol. 168). Elsevier Ltd. <https://doi.org/10.1016/j.ijnurstu.2025.105119>
- Hesselink, G., Verhage, R., van der Horst, I. C. C., van der Hoeven, H., & Zegers, M. (2024). Consensus-based indicators for evaluating and improving the quality of regional collaborative networks of intensive care units: Results of a nationwide Delphi study. *Journal of Critical Care*, 79. <https://doi.org/10.1016/j.jcrc.2023.154440>
- Ishizaka, A., Pickernell, D., Huang, S., & Senyard, J. M. (2020). Examining knowledge transfer activities in UK universities: advocating a PROMETHEE-based approach. *International Journal of Entrepreneurial Behaviour and Research*, 26(6), 1389–1409. <https://doi.org/10.1108/IJEBR-01-2020-0028>
- Ishizaka, A., & Resce, G. (2021). Best-Worst PROMETHEE method for evaluating school performance in the OECD's PISA project. *Socio-Economic Planning Sciences*, 73. <https://doi.org/10.1016/j.seps.2020.100799>
- Jamshaid, H., Khan, A. A., Mishra, R. K., Ahmad, N., Chandan, V., Kolář, V., & Müller, M. (2025). Taguchi Grey relational analysis (GRA) based multi response optimization of flammability, comfort and mechanical properties in station suits. *Heliyon*, 11(4). <https://doi.org/10.1016/j.heliyon.2025.e42508>

- Jamwal, A., Agrawal, R., Sharma, M., & Kumar, V. (2021). Review on multi-criteria decision analysis in sustainable manufacturing decision making. In *International Journal of Sustainable Engineering* (Vol. 14, Number 3, pp. 202–225). Taylor and Francis Ltd. <https://doi.org/10.1080/19397038.2020.1866708>
- Ju-Long, D. (1982). *Control problems of grey systems*.
- Kabassi, K., & Martinis, A. (2021). Sensitivity analysis of promethee ii for the evaluation of environmental websites. *Applied Sciences (Switzerland)*, 11(19). <https://doi.org/10.3390/app11199215>
- Keenan, P. (2024). A scientometric analysis of multicriteria decision-making research. *Journal of Decision Systems*, 33(sup1), 78–88. <https://doi.org/10.1080/12460125.2024.2354642>
- Kheybari, S., Javdanmehr, M., Rezaie, F. M., & Rezaei, J. (2021). Corn cultivation location selection for bioethanol production: An application of BWM and extended PROMETHEE II. *Energy*, 228. <https://doi.org/10.1016/j.energy.2021.120593>
- Kumar, V., Balaji, B. P., & Monika. (2021). Correlates of the national ranking of higher education institutions and funding of academic libraries: An empirical analysis. *Journal of Academic Librarianship*, 47(1). <https://doi.org/10.1016/j.acalib.2020.102264>
- Li, H. (2024). Evaluation system of vocational education construction in China based on linked TOPSIS analysis. *Heliyon*, 10(21). <https://doi.org/10.1016/j.heliyon.2024.e39369>
- Li, P., Xu, Z., Wei, C., Bai, Q., & Liu, J. (2022). A novel PROMETHEE method based on GRA-DEMATEL for PLTSs and its application in selecting renewable energies. *Information Sciences*, 589, 142–161. <https://doi.org/10.1016/j.ins.2021.12.090>
- Li, X., Han, Z., Yazdi, M., & Chen, G. (2022). A CRITIC-VIKOR based robust approach to support risk management of subsea pipelines. *Applied Ocean Research*, 124. <https://doi.org/10.1016/j.apor.2022.103187>

- Li, Z., & Zhang, L. (2023). An Ensemble Outlier Detection Method Based on Information Entropy-Weighted Subspaces for High-Dimensional Data. *Entropy*, 25(8). <https://doi.org/10.3390/e25081185>
- Liang, F., Brunelli, M., & Rezaei, J. (2020). Consistency issues in the best worst method: Measurements and thresholds. *Omega (United Kingdom)*, 96. <https://doi.org/10.1016/j.omega.2019.102175>
- Liu, N., & Xu, Z. (2021). An overview of ARAS method: Theory development, application extension, and future challenge. *International Journal of Intelligent Systems*, 36(7), 3524–3565. <https://doi.org/10.1002/int.22425>
- Liu, X., & Liu, Y. (2024). Sensitivity analysis of the parameters for preference functions and rank reversal analysis in the PROMETHEE II method. *Omega (United Kingdom)*, 128. <https://doi.org/10.1016/j.omega.2024.103116>
- Lopez-Rodriguez, V., & Ceballos, H. G. (2022). Modeling scientometric indicators using a statistical data ontology. *Journal of Big Data*, 9(1). <https://doi.org/10.1186/s40537-022-00562-x>
- Lovakov, A., & Teixeira da Silva, J. A. (2025). Scientometric indicators in research evaluation and research misconduct: analysis of the Russian university excellence initiative. *Scientometrics*, 130(3), 1813–1829. <https://doi.org/10.1007/s11192-025-05269-3>
- Loyola-Gonzalez, O., Medina-Perez, M. A., Valdez, R. A. C., & Choo, K. K. R. (2020). A contrast pattern-based scientometric study of the QS world university ranking. *IEEE Access*, 8, 206088–206104. <https://doi.org/10.1109/ACCESS.2020.3037665>
- Lukić, N., & Tumbas, P. (2019). Indicators of global university rankings: The theoretical issues. *Strategic Management*, 24(3), 43–54. <https://doi.org/10.5937/straman19030431>
- Mahmoudi, A., Javed, S. A., Liu, S., & Deng, X. (2020). Distinguishing coefficient driven sensitivity analysis of gra model for intelligent decisions: Application in project management. *Technological and Economic Development of Economy*, 26(3), 621–641. <https://doi.org/10.3846/tede.2020.11890>

- Makki, A. A., & Abdulaal, R. M. S. (2023). A Hybrid MCDM Approach Based on Fuzzy MEREC-G and Fuzzy RATMI. *Mathematics*, 11(17). <https://doi.org/10.3390/math11173773>
- Malekpoor, H., Chalvatzis, K., Mishra, N., Mehlawat, M. K., Zafirakis, D., & Song, M. (2018). Integrated grey relational analysis and multi objective grey linear programming for sustainable electricity generation planning. *Annals of Operations Research*, 269(1–2), 475–503. <https://doi.org/10.1007/s10479-017-2566-4>
- Maral, M. (2024). Examining the Research Performance of Universities with Multi-Criteria Decision-Making Methods. *SAGE Open*, 14(4). <https://doi.org/10.1177/21582440241300542>
- Moslem, S., Farooq, D., Ghorbanzadeh, O., & Blaschke, T. (2020). Application of the AHP-BWM model for evaluating driver behavior factors related to road safety: A case study for Budapest. *Symmetry*, 12(2). <https://doi.org/10.3390/sym12020243>
- Mukhametzhanov, I., & Pamucar, D. (2018). A sensitivity analysis in mcdm problems: A statistical approach. *Decision Making: Applications in Management and Engineering*, 1(2), 51–80. <https://doi.org/10.31181/dmame1802050m>
- Nguyen, H. K., & Nhieu, N. L. (2025). Comparative Sustainability Efficiency of G7 and BRICS Economies: A DNMEREC-DNMARCOS Approach. *Mathematics*, 13(22). <https://doi.org/10.3390/math13223640>
- Olivero, M. A., Bertolino, A., Dominguez-Mayo, F. J., Matteucci, I., & Escalona, M. J. (2022). A Delphi study to recognize and assess systems of systems vulnerabilities. *Information and Software Technology*, 146. <https://doi.org/10.1016/j.infsof.2022.106874>
- Oubahman, L., & Duleba, S. (2024). Fuzzy PROMETHEE model for public transport mode choice analysis. *Evolving Systems*, 15(2), 285–302. <https://doi.org/10.1007/s12530-023-09490-4>

- Pala, O. (2024). Assessment of the social progress on European Union by logarithmic decomposition of criteria importance. *Expert Systems with Applications*, 238. <https://doi.org/10.1016/j.eswa.2023.121846>
- Papapostolou, A., Karakosta, C., Mexis, F. D., Andreoulaki, I., & Psarras, J. (2024). A Fuzzy PROMETHEE Method for Evaluating Strategies towards a Cross-Country Renewable Energy Cooperation: The Cases of Egypt and Morocco. *Energies*, 17(19). <https://doi.org/10.3390/en17194904>
- Paradowski, B., Wątróbski, J., & Sałabun, W. (2025). Novel coefficients for improved robustness in multi-criteria decision analysis. *Artificial Intelligence Review*, 58(10). <https://doi.org/10.1007/s10462-025-11307-6>
- Paulillo, A., Kim, A., Mutel, C., Striolo, A., Bauer, C., & Lettieri, P. (2021). Influential parameters for estimating the environmental impacts of geothermal power: A global sensitivity analysis study. *Cleaner Environmental Systems*, 3. <https://doi.org/10.1016/j.cesys.2021.100054>
- Pinochet, L. H. C., Moreira, M. Â. L., Fávero, L. P., Santos, M. dos, & Pardim, V. I. (2023). Collaborative Work Alternatives with ChatGPT Based on Evaluation Criteria for its Use in Higher Education: Application of the PROMETHEE-SAPEVO-M1 Method. *Procedia Computer Science*, 221, 177–184. <https://doi.org/10.1016/j.procs.2023.07.025>
- Pohl, E., & Geldermann, J. (2024). PROMETHEE-Cloud: A web app to support multi-criteria decisions. *EURO Journal on Decision Processes*, 12. <https://doi.org/10.1016/j.ejdp.2024.100053>
- Pulvera, E. V. J., & Lao, D. M. (2024). Enhancing Deep Learning-Based Breast Cancer Classification in Mammograms: A Multi-Convolutional Neural Network with Feature Concatenation, and an Applied Comparison of Best-Worst Multi-Attribute Decision-Making and Mutual Information Feature Selections. *International Conference on Intelligent Informatics and BioMedical Sciences, ICIIBMS*, (2024), 511–518. <https://doi.org/10.1109/ICIIBMS62405.2024.10792816>
- Raed, L., Mahdi, I., Ibrahim, H. M. H., Tolba, E. R., & Ebid, A. M. (2025). Innovative BWM–TOPSIS-based approach to determine the optimum

- delivery method for offshore projects. *Scientific Reports*, 15(1).
<https://doi.org/10.1038/s41598-025-95710-7>
- Rahman, S., Alali, A. S., Baro, N., Ali, S., & Kakati, P. (2024). A Novel TOPSIS Framework for Multi-Criteria Decision Making with Random Hypergraphs: Enhancing Decision Processes. *Symmetry*, 16(12).
<https://doi.org/10.3390/sym16121602>
- Rezaei, J. (2015). Best-worst multi-criteria decision-making method. *Omega (United Kingdom)*, 53, 49–57. <https://doi.org/10.1016/j.omega.2014.11.009>
- Schlögl, C., Stock, W. G., & Reichmann, G. (2025). Scientometric Evaluation of Research Institutions: Identifying the Appropriate Dimensions and Attributes for Assessment. *Journal of Information Science Theory and Practice*, 13(2), 49–68. <https://doi.org/10.1633/JISTaP.2025.13.2.4>
- Schmoch, U. (2020). Mean values of skewed distributions in the bibliometric assessment of research units. *Scientometrics*, 125(2), 925–935.
<https://doi.org/10.1007/s11192-020-03476-8>
- Shang, Z. (2023). Use of Delphi in health sciences research: A narrative review. *Medicine (United States)*, 102(7), E32829.
<https://doi.org/10.1097/MD.00000000000032829>
- Shi, H., Huang, L., Li, K., Wang, X. H., & Liu, H. C. (2022). An Extended Multi-Attributive Border Approximation Area Comparison Method for Emergency Decision Making with Complex Linguistic Information. *Mathematics*, 10(19).
<https://doi.org/10.3390/math10193437>
- Siler, K., & Larivière, V. (2022). Who games metrics and rankings? Institutional niches and journal impact factor inflation. *Research Policy*, 51(10).
<https://doi.org/10.1016/j.respol.2022.104608>
- Szluka, P., Csajbók, E., & Györffy, B. (2023). Relationship between bibliometric indicators and university ranking positions. *Scientific Reports*, 13(1).
<https://doi.org/10.1038/s41598-023-35306-1>
- Torkayesh, A. E., Tirkolaei, E. B., Bahrini, A., Pamucar, D., & Khakbaz, A. (2023). A Systematic Literature Review of MABAC Method and Applications: An

- Outlook for Sustainability and Circularity. *Informatica (Netherlands)*, 34(2), 415–448. <https://doi.org/10.15388/23-INFOR511>
- Trung Do, D. (2024). Assessing the Impact of Criterion Weights on the Ranking of the Top Ten Universities in Vietnam. *Engineering, Technology and Applied Science Research*, 14(4), 14899–14903. <https://doi.org/10.48084/etasr.7607>
- Turskis, Z., & Keršulienė, V. (2024). SHARDA–ARAS: A Methodology for Prioritising Project Managers in Sustainable Development. *Mathematics*, 12(2). <https://doi.org/10.3390/math12020219>
- Wachowicz, T., & Roszkowska, E. (2025). Enhancing TOPSIS to Evaluate Negotiation Offers with Subjectively Defined Reference Points. *Group Decision and Negotiation*. <https://doi.org/10.1007/s10726-025-09929-w>
- Watrianthos, R., Ritonga, W. A., Rengganis, A., Wanto, A., & Isa Indrawan, M. (2021). Implementation of PROMETHEE-GAIA Method for Lecturer Performance Evaluation. *Journal of Physics: Conference Series*, 1933(1). <https://doi.org/10.1088/1742-6596/1933/1/012067>
- Wątróbski, J. (2023). Temporal PROMETHEE II — New multi-criteria approach to sustainable management of alternative fuels consumption. *Journal of Cleaner Production*, 413. <https://doi.org/10.1016/j.jclepro.2023.137445>
- Więckowski, J., & Sałabun, W. (2023). Sensitivity analysis approaches in multi-criteria decision analysis: A systematic review. In *Applied Soft Computing* (Vol. 148). Elsevier Ltd. <https://doi.org/10.1016/j.asoc.2023.110915>
- Wu, H., Han, X., Yang, Y., Hu, A., & Li, Y. (2025). A contribution-driven weighted grey relational analysis model and its application in identifying the drivers of carbon emissions. *Expert Systems with Applications*, 287. <https://doi.org/10.1016/j.eswa.2025.128039>
- Wu, R. M. X., Zhang, Z., Yan, W., Fan, J., Gou, J., Liu, B., Gide, E., Soar, J., Shen, B., Fazal-E-Hasan, S., Liu, Z., Zhang, P., Wang, P., Cui, X., Peng, Z., & Wang, Y. (2022). A comparative analysis of the principal component analysis and entropy weight methods to establish the indexing measurement. *PLoS ONE*, 17(1 January). <https://doi.org/10.1371/journal.pone.0262261>

- Wu, Y., Zhang, T., & Yi, L. (2020). An Internal Type-2 Trapezoidal Fuzzy Sets-PROMETHEE-II based Investment Decision Framework of Compressed Air Energy Storage Project in China under the Perspective of Different Investors. *Journal of Energy Storage*, 30. <https://doi.org/10.1016/j.est.2020.101548>
- Wulf, C., Zapp, P., Schreiber, A., & Kuckshinrichs, W. (2021). Setting thresholds to define indifferences and preferences in promethee for life cycle sustainability assessment of european hydrogen production. *Sustainability (Switzerland)*, 13(13). <https://doi.org/10.3390/su13137009>
- Yedjour, D., Yedjour, H., Amri, M. B., & Senouci, A. (2024). Rule extraction based on PROMETHEE-assisted multi-objective genetic algorithm for generating interpretable neural networks. *Applied Soft Computing*, 151. <https://doi.org/10.1016/j.asoc.2023.111160>
- Yu, T., Tang, Y., Cui, H., & Kang, B. (2025). A novel BWM-based conflict management method for interval-valued belief structure. *Information Sciences*, 721, 122617. <https://doi.org/10.1016/j.ins.2025.122617>
- Yudhoyono, A. H., Sukoco, B. M., Maharani, I. A. K., Putra, I. K., & Suhariadi, F. (2025). Bridging the gap: Indonesia's research trajectory and national development through a scientometric analysis using SciVal. *Journal of Open Innovation: Technology, Market, and Complexity*, 11(1). <https://doi.org/10.1016/j.joitmc.2025.100505>
- Zhang, C., Jiang, N., Su, T., Chen, J., Streimikiene, D., & Balezentis, T. (2022). Spreading knowledge and technology: Research efficiency at universities based on the three-stage MCDM-NRSDEA method with bootstrapping. *Technology in Society*, 68. <https://doi.org/10.1016/j.techsoc.2022.101915>
- Zheng, K., Fang, J., Li, J., Shi, H., Xu, Y., Li, R., Xie, R., & Cai, G. (2025). Robust Grey Relational Analysis-Based Accuracy Evaluation Method. *Applied Sciences (Switzerland)*, 15(9). <https://doi.org/10.3390/app15094926>
- Zhu, B., Wang, T., Liu, G., & Zhou, C. (2024). Revealing dynamic goals for university's sustainable development with a coupling exploration of SDGs. *Scientific Reports*, 14(1). <https://doi.org/10.1038/s41598-024-73702-3>

- Ziemba, P. (2022). Application Framework of Multi-Criteria Methods in Sustainability Assessment. *Energies*, 15(23). <https://doi.org/10.3390/en15239201>
- Živković, Ž., Nikolić, D., Savić, M., Djordjević, P., & Mihajlović, I. (2017). Prioritizing Strategic Goals in Higher Education Organizations by Using a SWOT–PROMETHEE/GAIA–GDSS Model. *Group Decision and Negotiation*, 26(4), 829–846. <https://doi.org/10.1007/s10726-017-9533-y>
- Zoraghi, N., Amiri, M., Talebi, G., & Zowghi, M. (2013). *A fuzzy MCDM model with objective and subjective weights for evaluating service quality in hotel industries*. <http://www.jiei-tsb.com/content/9/1/38>