

## BIBLIOGRAPHY

- Angelidis, P., Maris, F., Kotovinos, N., & Hrissanthou, V. (2012). *Computation of Drought Index SPI with Alternative Distribution Functions*. 2453–2473. <https://doi.org/10.1007/s11269-012-0026-0>
- Arthana, I. K. R. (2024). Optimizing Dropout Prediction in University Using Oversampling Techniques for Imbalanced Datasets. *International Journal of Information and Education Technology*, 14(8), 1052–1060. <https://doi.org/10.18178/ijiet.2024.14.8.2133>
- Arunkumar, K. E., Kalaga, D. V., Mohan, C., Kumar, S., Kawaji, M., & Brenza, T. M. (2021). Forecasting of COVID-19 using deep layer Recurrent Neural Networks (RNNs) with Gated Recurrent Units (GRUs) and Long Short-Term Memory (LSTM) cells. *Chaos, Solitons and Fractals: The Interdisciplinary Journal of Nonlinear Science, and Nonequilibrium and Complex Phenomena*, 146, 110861. <https://doi.org/10.1016/j.chaos.2021.110861>
- ASEAN. (2022). *Agriculture Sector Brief, Thailand*. [https://www.aseanaccess.com/images/pdf/agriculture/THAILAND\\_AGRI\\_update.pdf](https://www.aseanaccess.com/images/pdf/agriculture/THAILAND_AGRI_update.pdf)
- Bansal, N., Defo, M., & Lacasse, M. A. (2021). Application of Support Vector Regression to the Prediction of the Long-Term Impacts of Climate Change on the Moisture Performance of Wood Frame and Massive Timber Walls. *Buildings*, 11(5), 188. <https://doi.org/10.3390/buildings11050188>
- Baroudy, A. A. El, Ali, A. M., Mohamed, E. S., Moghanm, F. S., Shokr, M. S., Savin, I., Poddubsky, A., Ding, Z., Kheir, A. M. S., Aldosari, A. A., Elfadaly, A., Dokukin, P., & Lasaponara, R. (2020). Modeling Land Suitability for Rice Crop Using Remote Sensing and Soil Quality Indicators: The Case Study of the Nile Delta. *Sustainability*, 12(22), 9653. <https://doi.org/10.3390/su12229653>
- Berhail, S., & Katipoğlu, O. M. (2023). Comparison of the SPI and SPEI as drought assessment tools in a semi-arid region: case of the Wadi Mekerra basin (northwest of Algeria). *Theoretical and Applied Climatology*, 154(3–4), 1373–1393. <https://doi.org/10.1007/s00704-023-04601-2>
- Botchkarev, A. (2018). Evaluating Performance of Regression Machine Learning Models Using Multiple Error Metrics in Azure Machine Learning Studio. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3177507>
- Buddhaboon, C., Sankum, Y., Tongnoy, S., & Jintrawet, A. (2022). Adaptation of Rice Production System to Climate Change in Thailand : Trend and Policy. *FFTC Agricultural Policy Platform*, 1–14. <https://ap.fftc.org.tw/article/3072>
- Chai, T., & Draxler, R. R. (2014). Root mean square error (RMSE) or mean absolute error (MAE)? – Arguments against avoiding RMSE in the literature. *Geoscientific Model Development*, 7, 1247–1250. <https://doi.org/10.5194/gmd-7-1247-2014>

- Chakraborty, D., & Elzarka, H. (2018). *Performance testing of energy models : are we using the right statistical metrics?* 1493. <https://doi.org/10.1080/19401493.2017.1387607>
- Chen, C., Zhang, Q., Kashani, M. H., Jun, C., Bateni, S. M., Band, S. S., Dash, S. S., & Chau, K. (2022). Forecast of rainfall distribution based on fixed sliding window long short-term memory. *Engineering Applications of Computational Fluid Mechanics*, 16(1), 248–261. <https://doi.org/10.1080/19942060.2021.2009374>
- Dai, A., Zhao, T., & Chen, J. (2018). Climate Change and Drought: a Precipitation and Evaporation Perspective. *Current Climate Change Reports*, 4(3), 301–312. <https://doi.org/10.1007/s40641-018-0101-6>
- Das, S., Tariq, A., Santos, T., Kantareddy, S. S., & Banerjee, I. (2023). Recurrent Neural Networks (RNNs): Architectures, Training Tricks, and Introduction to Influential Research. In *Colliot, O. (eds) Machine Learning for Brain Disorders* (Vol. 197, pp. 117–138). Humana, New York, NY. [https://doi.org/10.1007/978-1-0716-3195-9\\_4](https://doi.org/10.1007/978-1-0716-3195-9_4)
- Devasthale, A., Karlsson, K.-G., Andersson, S., & Engström, E. (2023). Difference between WMO Climate Normal and Climatology: Insights from a Satellite-Based Global Cloud and Radiation Climate Data Record. *Remote Sensing*, 15(23), 5598. <https://doi.org/10.3390/rs15235598>
- Dewi, N. P. N. P., & Adi Nugroho, R. (2021). OPTIMASI GENERAL REGRESSION NEURAL NETWORK DENGAN FRUIT FLY OPTIMIZATION ALGORITHM UNTUK PREDIKSI PEMAKAIAN ARUS LISTRIK PADA PENYULANG. *Komputasi: Jurnal Ilmiah Ilmu Komputer Dan Matematika*, 18(1), 1–12. <https://doi.org/10.33751/komputasi.v18i1.2144>
- Dewi, N. P. N. P., Kertiasih, N. K., & Sintiari, N. L. D. S. (2022). Modifikasi Fruit Fly Optimiziation Algorithm untuk Optimasi General Regression Neural Network pada Kasus Prediksi Time-Series. *Jurnal Nasional Pendidikan Teknik Informatika (JANAPATI)*, 11(3), 192–204. <https://doi.org/10.23887/janapati.v11i3.54521>
- Dharma, A. W. (2021). *Scoping Study Climate Smart Rice, Country report – Thailand. Promoting Global Best Practices and Scaling of Low Emissions Technologies by Engaging the Private and Public Sectors in the Paddy Rice Sector*. <https://www.ccacoalition.org/resources/country-report-scoping-study-climate-smart-rice-thailand>
- Dikshit, A., Pradhan, B., & Huete, A. (2021). An Improved SPEI Drought Forecasting Approach Using the Long Short-Term Memory Neural Network. *Journal of Environmental Management*, 283, 111979. <https://doi.org/10.1016/j.jenvman.2021.111979>
- Dodge, Y. (2008). *The Concise Encyclopedia of Statistics* (1st ed.). Springer New York. <https://doi.org/10.1007/978-0-387-32833-1>
- Domingos, P., & Provost, F. (2003). Tree Induction for Probability-Based Ranking.

- Machine Learning*, 52(3), 199–215.  
<https://doi.org/10.1023/A:1024099825458>
- Edwards, D. C., & McKee, T. B. (1997). *Characteristics of 20th Century Drought in the United States at Multiple Time Scales*. 634.
- F, A., & Loon, V. (2015). Hydrological drought explained. *Wiley Interdisciplinary Reviews: Water*, 2(4), 359–392. <https://doi.org/10.1002/WAT2.1085>
- Fick, S. E., & Hijmans, R. J. (2017). WorldClim 2: new 1-km spatial resolution climate surfaces for global land areas. *International Journal of Climatology*, 37(12), 4302–4315. <https://doi.org/10.1002/joc.5086>
- Gajic, B., Amato, A., Baldrich, R., Weijer, J. van de, & Gatta, C. (2022). Area Under the ROC Curve Maximization for Metric Learning. *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*, 2807–2816.  
[https://openaccess.thecvf.com/content/CVPR2022W/ECV/html/Gajic\\_Area\\_Under\\_the\\_ROC\\_Curve\\_Maximization\\_for\\_Metric\\_Learning\\_CVPRW\\_2022\\_paper.html](https://openaccess.thecvf.com/content/CVPR2022W/ECV/html/Gajic_Area_Under_the_ROC_Curve_Maximization_for_Metric_Learning_CVPRW_2022_paper.html)
- Gao, S., Huang, Y., Zhang, S., Han, J., Wang, G., Zhang, M., & Lin, Q. (2020a). Short-term runoff prediction with GRU and LSTM networks without requiring time step optimization during sample generation. *Journal of Hydrology*, 589(December 2019), 125188. <https://doi.org/10.1016/j.jhydrol.2020.125188>
- Gao, S., Huang, Y., Zhang, S., Han, J., Wang, G., Zhang, M., & Lin, Q. (2020b). Short-term runoff prediction with GRU and LSTM networks without requiring time step optimization during sample generation. *Journal of Hydrology*, 589(June), 125188. <https://doi.org/10.1016/j.jhydrol.2020.125188>
- González-sopeña, J. M., Pakrashi, V., & Ghosh, B. (2021). An overview of performance evaluation metrics for short-term statistical wind power forecasting. *Renewable and Sustainable Energy Reviews*, 138(December 2019), 110515. <https://doi.org/10.1016/j.rser.2020.110515>
- Haben, S., Voss, M., & Holderbaum, W. (2023). Core Concepts and Methods in Load Forecasting. In *Springer Nature*. Springer International Publishing. <https://doi.org/10.1007/978-3-031-27852-5>
- Hao, Z., Hao, F., Xia, Y., Singh, V. P., Hong, Y., Shen, X., & Ouyang, W. (2016). A statistical method for categorical drought prediction based on NLDAS-2. *Journal of Applied Meteorology and Climatology*, 55(4), 1049–1061. <https://doi.org/10.1175/jamc-d-15-0200.1>
- Harris, I., Osborn, T. J., Jones, P., & Lister, D. (2020). Version 4 of the CRU TS monthly high-resolution gridded multivariate climate dataset. *Scientific Data*, 7(1), 1–18. <https://doi.org/10.1038/s41597-020-0453-3>
- Hayes, M., Svoboda, M., Wall, N., & Widhalm, M. (2011). The Lincoln Declaration on Drought Indices: Universal Meteorological Drought Index Recommended. *Bulletin of the American Meteorological Society*, 92(4), 485–488. <https://doi.org/10.1175/2010BAMS3103.1>

- Hochreiter, S., & Schmidhuber, J. (1997). Long Short-Term Memory. *Neural Computation*, 9(8), 1735–1780. <https://doi.org/10.1162/neco.1997.9.8.1735>
- Homdee, T., Pongput, K., & Kanae, S. (2016). A comparative performance analysis of three standardized climatic drought indices in the Chi River basin, Thailand. *Agriculture and Natural Resources*, 50(3), 211–219. <https://doi.org/10.1016/j.anres.2016.02.002>
- Huang, S., Huang, Q., Chang, J., Leng, G., & Xing, L. (2015). The response of agricultural drought to meteorological drought and the influencing factors: A case study in the Wei River Basin, China. *Agricultural Water Management*, 159, 45–54. <https://doi.org/10.1016/j.agwat.2015.05.023>
- Jadon, A., Patil, A., & Jadon, S. (2024). A Comprehensive Survey of Regression-Based Loss Functions for Time Series Forecasting. *International Conference on Data Management, Analytics & Innovation*, 117–147. [https://doi.org/10.1007/978-981-97-3245-6\\_9](https://doi.org/10.1007/978-981-97-3245-6_9)
- Jenkins, J. (2021). *Thailand Rice: Recent Dry Conditions After a Promising Start; Optimism Still Remains for this Crop Season.*
- Ji, L., & Peters, A. J. (2003). Assessing vegetation response to drought in the northern Great Plains using vegetation and drought indices. *Remote Sensing of Environment*, 87(1), 85–98. [https://doi.org/10.1016/S0034-4257\(03\)00174-3](https://doi.org/10.1016/S0034-4257(03)00174-3)
- Kaur, M., & Mohta, A. (2019). A Review of Deep Learning with Recurrent Neural Network. *Proceedings of the 2nd International Conference on Smart Systems and Inventive Technology, ICSSIT 2019, Icssit*, 460–465. <https://doi.org/10.1109/ICSSIT46314.2019.8987837>
- Laimighofer, J., & Laaha, G. (2022). How standard are standardized drought indices? Uncertainty components for the SPI & SPEI case. *Journal of Hydrology*, 613(PA), 128385. <https://doi.org/10.1016/j.jhydrol.2022.128385>
- Lara-Benítez, P., Carranza-garcía, M., Luna-romera, J. M., & Riquelme, J. C. (2020). Temporal Convolutional Networks Applied to Energy-Related Time Series Forecasting. *Applied Sciences*, 10, 2322. <https://doi.org/10.3390/app10072322>
- Limsakul, A., Change, C., Kammuang, A., Aroonchan, N., & Paengkaew, W. (2023). Enhancing climate-resilient Thailand's rice production. *16th THAICID National Symposium 2023, July*. [https://www.researchgate.net/publication/372061701\\_Enhancing\\_climate-resilient\\_Thailand's\\_rice\\_production](https://www.researchgate.net/publication/372061701_Enhancing_climate-resilient_Thailand's_rice_production)
- Lindemann, B., Müller, T., Vietz, H., Jazdi, N., & Weyrich, M. (2023). A survey on long short-term memory networks for time series prediction. *14th CIRP Conference on Intelligent Computation in Manufacturing Engineering, CIRP ICME '20*, 99, 650–655. <https://doi.org/10.1016/j.procir.2021.03.088>
- Liu, X., Zhu, X., Pan, Y., Li, S., Liu, Y., & Ma, Y. (2016). Agricultural drought monitoring: Progress, challenges, and prospects. *Journal of Geographical Sciences*, 26(6), 750–767. <https://doi.org/10.1007/s11442-016-1297-9>

- Mahendra, G. S., Kusumastuti, S. Y., Naufal, N., Seru, F., & Allo, C. B. G. (2024). *Buku Ajar Probabilitas dan Statistika*. PT. Sonpedia Publishing Indonesia.
- Malhi, G. S., Kaur, M., & Kaushik, P. (2021). Impact of Climate Change on Agriculture and Its Mitigation Strategies: A Review. *Sustainability*, 13, 1318. <https://doi.org/10.3390/su13031318>
- Masson-Delmotte, V., P. Z., Pirani, A., Connors, S. L., Péan, C., Berger, S., Caud, N. Y., Chen, L., Goldfarb, M. I., Gomis, M., Huang, K., Leitzell, E., Lonnoy, J. B. R., Matthews, T. K., Maycock, T., Waterfield, O., Yelekçi, R., & Yu, and B. Z. (2021). Summary for Policymakers. In *Climate Change 2021: The Physical Science Basis*. In Press.
- Mikhaeil, J. M., Monfared, Z., & Durstewitz, D. (2022). On the difficulty of learning chaotic dynamics with RNNs. *36th Conference on Neural Information Processing Systems (NeurIPS 2022)*, 35, 11297–11312. <https://arxiv.org/abs/2110.07238>
- Mishra, A. K., Singh, V. P., & Desai, V. R. (2009). Drought characterization : a probabilistic approach. *Stoch Environ Res Risk Assess*, 41–55. <https://doi.org/10.1007/s00477-007-0194-2>
- Mokhtar, A., Jalali, M., He, H., Al-Ansari, N., Elbeltagi, A., Alsafadi, K., Abdo, H. G., Sammen, S. S., Gyasi-Agyei, Y., & Rodrigo-Comino, J. (2021). Estimation of SPEI Meteorological Drought Using Machine Learning Algorithms. *IEEE Access*, 9, 65503–65523. <https://doi.org/10.1109/ACCESS.2021.3074305>
- Momin, B., & Chavan, G. (2018). Univariate time series models for forecasting stationary and non-stationary data: A brief review. *Smart Innovation, Systems and Technologies*, 84, 219–226. [https://doi.org/10.1007/978-3-319-63645-0\\_24](https://doi.org/10.1007/978-3-319-63645-0_24)
- Muangthong, S., Chaowiwat, W., Sarinnapakorn, K., & Chaibandit, K. (2020). Prediction of Future Drought in Thailand under Changing Climate by Using SPI and SPEI Indices. *Mahasarakham International Journal of Engineering Technology*, 6(October).
- Mukherjee, S., Mishra, A., & Trenberth, K. E. (2018). Climate Change and Drought: a Perspective on Drought Indices. *Current Climate Change Reports*, 4(2), 145–163. <https://doi.org/10.1007/s40641-018-0098-x>
- N N, A., Bhavya, N., Kasturappa, G., N, U. K. S., & Murthy, R. K. (2023). Climate Change's Threat to Agriculture: Impacts, Challenges and Strategies for a Sustainable Future. *Climate Change and Agriculture (Volume - 9)*. <https://doi.org/10.22271/ed.book.2395>
- Naumann, G., Cammalleri, C., Mentaschi, L., & Feyen, L. (2021). Increased economic drought impacts in Europe with anthropogenic warming. *Nature Climate Change*, 11(6), 485–491. <https://doi.org/10.1038/s41558-021-01044-3>
- Ndayiragije, J. M., & Li, F. (2022). Effectiveness of Drought Indices in the Assessment of Different Types of Droughts, Managing and Mitigating Their

- Effects. *Climate*, 10(9). <https://doi.org/10.3390/cli10090125>
- Niu, K., Lu, G., Peng, X., Zhou, Y., Zeng, J., & Zhang, K. (2023). CNN autoencoders and LSTM-based reduced order model for student dropout prediction. *Neural Computing and Applications*, 35(30), 22341–22357. <https://doi.org/10.1007/s00521-023-08894-2>
- Orachos Napasintuwong. (2019). Rice Economy of Thailand. In *Agricultural and Resource Economics Working Paper* (ARE Working Paper No. 2562/1). <https://ageconsearch.umn.edu/record/284119/>
- Pascima, I. B. N., & Putrama, I. M. (2021). Forecasting foreign exchange rate using a combination of linear regression and flower pollination algorithm. *Journal of Physics: Conference Series*, 1810(1), 012021. <https://doi.org/10.1088/1742-6596/1810/1/012021>
- Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., Blondel, M., Müller, A., Nothman, J., Louppe, G., Prettenhofer, P., Weiss, R., Dubourg, V., Vanderplas, J., Cournapeau, D., Brucher, M., & Perrot, M. (2011). Scikit-learn: Machine Learning in Python Pedregosa, Varoquaux, Gramfort et al. *Journal of Machine Learning Research*, 12, 2825–2830. <https://doi.org/10.48550/arXiv.1201.0490>
- Rahayu, P. W., Sudipa, I. G. I., Suryani, S., Surachman, A., Ridwan, A., Darmawiguna, I. G. M., Sutoyo, M. N., Slamet, I., Harlina, S., & Maysanjaya, I. M. D. (2024). *Buku Ajar Data Mining*. PT. Sonpedia Publishing Indonesia.
- Ramachandran, K. M., & P.Tsokos, C. (2015). *Mathematical Statistics with Applications in R*. Elsevier. <https://doi.org/10.1016/C2012-0-07341-3>
- Ribeiro, A. H., Tiels, K., Aguirre, L. A., & Schön, T. B. (2020). Beyond exploding and vanishing gradients: analysing RNN training using attractors and smoothness. *International Conference on Artificial Intelligence and Statistics (AISTATS) 2020*, 2370–2380. <https://proceedings.mlr.press/v108/ribeiro20a.html>
- Robeson, S. M., & Willmott, C. J. (2023). Decomposition of the mean absolute error (MAE) into systematic and unsystematic components. *PLOS ONE*, 18(2). <https://doi.org/10.1371/journal.pone.0279774>
- Ruwanza, S., Thondhlana, G., & Falayi, M. (2022). Research Progress and Conceptual Insights on Drought Impacts and Responses among Smallholder Farmers in South Africa: A Review. *Land*, 11(2). <https://doi.org/10.3390/land11020159>
- Salehin, I., & Kang, D.-K. (2023). A Review on Dropout Regularization Approaches for Deep Neural Networks within the Scholarly Domain. *Electronics*, 12(14), 3106. <https://doi.org/10.3390/electronics12143106>
- Sedana, N. M. K., Wijaya, I. N. S. W., & Arthana, I. K. R. (2024). Analisis Sentimen Berbahasa Inggris Dengan Metode Lstm Studi Kasus Berita Online Pariwisata Bali. *Jurnal Teknologi Informasi Dan Ilmu Komputer*, 11(6), 1325–1334. <https://doi.org/10.25126/jtiik.1168792>

- Song, X., Liu, Y., Xue, L., Wang, J., Zhang, J., Wang, J., Jiang, L., & Cheng, Z. (2020). Time-series well performance prediction based on Long Short-Term Memory (LSTM) neural network model. *Journal of Petroleum Science and Engineering*, 186, 106682. <https://doi.org/10.1016/j.petrol.2019.106682>
- Srisopa, S., Luamka, P., Rattanawan, S., Somtrakoon, K., & Busababodhin, P. (2023). Analyzing Spatial Dependence of Rice Production in Northeast Thailand for Sustainable Agriculture: An Optimal Copula Function Approach. *Sustainability*, 15(20), 14774. <https://doi.org/10.3390/su152014774>
- Stagge, J. H., Kingston, D. G., Tallaksen, L. M., & Hannah, D. M. (2017). Observed drought indices show increasing divergence across Europe. *Scientific Reports*, July, 1–10. <https://doi.org/10.1038/s41598-017-14283-2>
- Stagge, J. H., Tallaksen, L. M., Gudmundsson, L., & Loon, F. Van. (2015). Candidate Distributions for Climatological Drought Indices (SPI and SPEI). 4040(February), 4027–4040. <https://doi.org/10.1002/joc.4267>
- Svoboda, M., Hayes, M., & Wood, D. A. (2012). Standardized Precipitation Index User Guide. In *World Meteorological Organization*, 1090. <https://library.wmo.int/idurl/4/39629>
- Tam, B. Y., Cannon, A. J., & Bonsal, B. R. (2023). Standardized precipitation evapotranspiration index (SPEI) for Canada: assessment of probability distributions. *Canadian Water Resources Journal / Revue Canadienne Des Ressources Hydriques*, 48(3), 283–299. <https://doi.org/10.1080/07011784.2023.2183143>
- Taylan, E. D. (2024). An Approach for Future Droughts in Northwest Türkiye: SPI and LSTM Methods. *Sustainability*, 16(16), 6905. <https://doi.org/10.3390/su16166905>
- Tharwat, A. (2021). Classification assessment methods. *Applied Computing and Informatics*, 17(1), 168–192. <https://doi.org/10.1016/j.aci.2018.08.003>
- Thomas B. McKee, N. J. D. and J. K. (1993). The relationship of Drought Frequency and Duration to Time Scales. *Eighth Conference on Applied Climatology*. <https://doi.org/10.1002/jso.23002>
- Thornthwaite, C. W. (1948). *An Approach toward a Rational Classification of Climate*. 38(1), 55–94. <https://doi.org/10.2307/210739>
- Tirivarombo, S., Osupile, D., & Eliasson, P. (2018). Drought monitoring and analysis: Standardised Precipitation Evapotranspiration Index (SPEI) and Standardised Precipitation Index (SPI). *Physics and Chemistry of the Earth, Parts A/B/C*, 106, 1–10. <https://doi.org/10.1016/j.pce.2018.07.001>
- Tsanterkidis, A., Passalis, N., & Tefas, A. (2022). Recurrent neural networks. In *Deep Learning for Robot Perception and Cognition* (pp. 101–115). Deep Learning for Robot Perception and Cognition, Academic Press. <https://doi.org/10.1016/B978-0-32-385787-1.00010-5>
- Tsay, R. S. (2010). Linear Time Series Analysis and Its Applications. In *Analysis*

- of Financial Time Series (pp. 29–108). Wiley.  
<https://doi.org/10.1002/9780470644560>
- Udeh, A. I., Imarhiagbe, O. J., Omietimi, E. J., Mohammed, A. O., & Andre-Obayanju, O. (2024). Machine Learning and Statistical Analysis in Groundwater Monitoring for Total Dissolved Solids Assessment in Winkler County, Texas. *Journal of Geoscience and Environment Protection*, 12(06), 1–29. <https://doi.org/10.4236/gep.2024.126001>
- Verbois, H., Blanc, P., Huva, R., Saint-drenan, Y., Rusydi, A., & Thiery, A. (2020). Beyond quadratic error: Case-study of a multiple criteria approach to the performance assessment of numerical forecasts of solar irradiance in the tropics. *Renewable and Sustainable Energy Reviews*, 117(April 2019), 109471. <https://doi.org/10.1016/j.rser.2019.109471>
- Vicente-Serrano, S. M., Beguería, S., & López-Moreno, J. I. (2010). A multiscalar drought index sensitive to global warming: The standardized precipitation evapotranspiration index. *Journal of Climate*, 23(7), 1696–1718. <https://doi.org/10.1175/2009JCLI2909.1>
- Vicente-Serrano, S. M., Beguería, S., Lorenzo-Lacruz, J., Camarero, J. J., López-Moreno, J. I., Azorin-Molina, C., Revuelto, J., Morán-Tejeda, E., & Sanchez-Lorenzo, A. (2012). Performance of drought indices for ecological, agricultural, and hydrological applications. *Earth Interactions*, 16(10), 1–27. <https://doi.org/10.1175/2012EI000434.1>
- Wang, H., Chen, Y., Pan, Y., Chen, Z., & Ren, Z. (2019). Assessment of candidate distributions for SPI/SPEI and sensitivity of drought to climatic variables in China. *International Journal of Climatology*, 39(11), 4392–4412. <https://doi.org/10.1002/joc.6081>
- Wang, S., Li, H., Zhang, M., Duan, L., Zhu, X., & Che, Y. (2022). Assessing Gridded Precipitation and Air Temperature Products in the Ayakkum Lake, Central Asia. *Sustainability*, 14(17), 10654. <https://doi.org/10.3390/su141710654>
- Wang, Z., Su, X., & Ding, Z. (2020). Long-Term Traffic Prediction Based on LSTM Encoder-Decoder Architecture. *IEEE Transactions on Intelligent Transportation Systems*, 22(10). <https://doi.org/10.1109/TITS.2020.2995546>
- World Meteorological Organization (WMO), G. W. P. (GWP). (2016). *Handbook of Drought Indicators and Indices* (Issue 1173). <https://doi.org/10.1201/9781315265551-12>
- Wright, S. (1921). Correlation and causation. *Journal of Agricultural Research*, 20, 557.
- Xu, L., Zhang, H., Wang, C., Wei, S., Zhang, B., Wu, F., & Tang, Y. (2021). Paddy Rice Mapping in Thailand Using Time-Series Sentinel-1 Data and Deep Learning Model. *Remote Sensing*, 13(19). <https://doi.org/10.3390/rs13193994>
- Yimer, E. A., Van Schaeybroeck, B., Van de Vyver, H., & van Griensven, A. (2022). Evaluating Probability Distribution Functions for the Standardized

- Precipitation Evapotranspiration Index over Ethiopia. *Atmosphere*, 13(3), 364. <https://doi.org/10.3390/atmos13030364>
- Zargar, A., Sadiq, R., Naser, B., & Khan, F. I. (2011). A review of drought indices. *Environmental Reviews*, 19(1), 333–349. <https://doi.org/10.1139/a11-013>
- Zhang, A., Lipton, Z. C., Li, M., & Smola, A. J. (2021). Modern Recurrent Neural Networks: Long Short-Term Memory (LSTM). In *Dive Into Deep Learning* (pp. 380–387). <https://doi.org/10.48550/arXiv.2106.11342>
- Zhang, R., Bento, V. A., Qi, J., Xu, F., Wu, J., Qiu, J., Li, J., Shui, W., & Wang, Q. (2023). The first high spatial resolution multi-scale daily SPI and SPEI raster dataset for drought monitoring and evaluating over China from 1979 to 2018. *Big Earth Data*, 7(3), 860–885. <https://doi.org/10.1080/20964471.2022.2148331>

